Windows 95
Support Assistant

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Windows 95 Support Assistant

How to Use the Support Assistant

Use the Microsoft Windows 95 Support Assistant to help you resolve problems with setting up and running Windows 95.

To use the Support Assistant

- Before installing Windows 95, click "Common Questions and Answers About Windows 95" on the Contents screen. This section lists common questions and answers that will help you before you begin.
- To search for the information you want, click Search (in Windows 3.x) or Index (in Windows 95).
- To return to the Support Assistant Contents, click Contents.
- To move back a screen, click Back.
- To move through the Support Assistant sequentially, click the << or >> button.

Windows 95 Frequently Asked Questions

Here are the most commonly asked questions about Windows 95.   For your convenience, they are grouped into the following areas:

Configuring Windows 95.

How do I...?

Joining a Network with Windows 95.

Setting up Windows 95.

Configuring Windows 95

How do I…?

[?]   How do I install MS-FAX?

[?]   How do connect to the Internet with Windows 95?

[?]   How do I create shortcuts on the desktop?

[?]   How do I get animated cursors with my mouse?

[?]   How do I setup my Windows 95 machine for a TCP/IP network?

[?]   How do I setup Netware support?

[?]   How do I setup dial-up networking to a Novell(r) server?

[?]   How do I setup Windows 95 with Lantastic 6.0?

[?]   How do I install a PPP dial-up network connection?

[?]   How do I configure TCP/IP in order to connect to the Internet?

[?]   Setup did not detect my network card. How do I get my network card installed?

[?]   How do I configure my machine to answer dial-up networking calls?

[?]   How do I install Windows 95 from a CD-ROM drive?

[?]   How do I install Windows 95 from a remote CD-ROM drive?

[?]   How do I setup Windows 95 into a different subdirectory?

[?]   How do I uninstall Windows 95?

[?]   How do I boot to an MS-DOS prompt?

[?]   How do I boot to my previous DOS?

[?]   I have installed Windows 95 into a different directory than Windows3.x or Windows for Workgroups3.x. How do I setup dual boot between them?

[?]   How do I setup Windows 95 on a machine with Windows NT?

[?]   How do I setup Windows 95 into a different subdirectory?

[?]   How do I make backup copies of my original diskettes?

[?]   Can I make floppy disk images from the CD?

Setting up Windows 95

[?]   Is Windows 95 safe to setup? Do I need a separate partition?

[?]   Should I install into my existing Windows directory, or a different directory?

[?]   I want to have a smooth install of Windows 95. What are some things I can do in order to make it easier to install Windows 95?

[?]   How do I make backup copies of my original diskettes?

[?]   Can I make floppy disk images from the CD?

[?]   What do I need to do to my system for a clean installation of Windows 95?

[?]   How do I install Windows 95 from a CD-ROM drive?

[?]   How do I install Windows 95 from a remote CD-ROM drive?

[?]   Can I setup Windows 95 from a network?

[?]   How do I setup Windows 95 into a different subdirectory?

[?]   How do I setup Windows 95 on a machine with Windows NT?

[?]   Can I install Windows 95 on an OS/2 and MS-DOS/Windows dual-boot machine? Can I still dual boot?

[?]   What files does Windows 95 modify during setup?

[?]   Can I run Windows 95 setup from MS-DOS? Do I lose any functionality?

[?]   I have 25 megabytes free on my hard drive and when I try to upgrade to Windows 95 it tells me that I do not have enough disk space. How much do I need for Windows 95 if I am upgrading?

[?]   Setup hangs after the first reboot, why wont it boot?

[?]   I am installing Windows 95 from CD-ROM, and the system hangs on the first boot. Why?

[?]   Setup keeps hanging during the "Gathering Information" section. How do I get setup to bypass the problem?

[?]   I was running setup for the first time and it hung during hardware detection. What do I do now?

Joining a Network with Windows 95

[?]   How do I setup Netware support?

[?]   How do I install Windows 95 from a remote CD-ROM drive?

[?]   Can I setup Windows 95 from a network?

[?]   How do connect to the Internet with Windows 95?

[?]   How do I setup Windows 95 with Lantastic 6.0?

[?]   How do I setup my Windows 95 machine for a TCP/IP network?

[?]   How do I configure TCP/IP in order to connect to the Internet?

[?]   I am running a non-Microsoft network and I cannot connect to my network resources. Why?

[?]   How do I install a PPP dial-up network connection?

[?]   Setup did not detect my network card. How do I get my network card installed?

[?]   I cannot setup my PCMCIA network adapter.

[?]   How do I setup dial-up networking to a Novell(r) server?

[?]   Why does my system hang at the networks login script?

[?]   Why do the applications from my Netware server give an "incorrect MS-DOS version"?

How do I get animated cursors with my mouse?

Note: Animated cursors are available in Microsoft Plus!.

Color cursors require a Windows 95 version display driver running at 256 or more colors. They are not supported for the following display types in this release: ATI Ultra (mach8), Chips & Technologies, XGA.

For more specific information about how to change the appearance of your mouse pointer, refer to Windows 95 on-line help topic, "Changing the appearance of your mouse pointer".

If you are currently viewing this in Windows 95, Click here to display the help topic.

I am having a problem with the refresh rate of my monitor. How do I fix it?

Selecting your monitor type in the Windows 95 Display control panel does not affect the refresh rate used by your display adapter. To adjust this, you must specify your monitor type in an adapter setup program supplied by your display adapter or PC manufacturer. Some utilities must be run in <u>AUTOEXEC.BAT</u>. On some PCs, monitor type is set in <u>BIOS</u> configuration programs. Examples of utilities from adapter manufacturers include:

ATI	INSTALL.EXE
Cirrus Logic	MONTYPE.EXE, CLMODE.EXE, WINMODE.EXE
Diamond Stealth	STLMODE.EXE
Diamond Stealth 64	S64MODE.EXE
Matrox	\MGA\SETUP\SETUP.EXE
Tseng Labs	VMODE.EXE
Western Digital	VGAMODE.EXE

How do I uninstall Windows 95?

Windows 95 contains uninstall functionality. To return to a previously installed version of Windows 3.1 run the Uninstall utility

To uninstall Windows 95, "Save System Files" must be chosen during the Setup process. To run the uninstall program:

If Windows 95 is running:

1 Click on the Start menu, choose Settings, then choose Control Panel.

2 Double Click Add-Remove Programs.

3 In the Add-Remove Programs Properties choose the "Install/Uninstall" tab.

4 From "The Following Software can be removed by Windows..." choose Windows 95 from the list of items.

5 Click the "Add/Remove" button, and follow the directions in the screens that follow.

The Uninstall program will remove all Long File Name entries from your hard disk, and then run an MS-DOS program to remove Windows 95 and restore your previous MS-DOS and Windows 3.x files.

If Windows 95 is not running:

1 Boot from the Windows 95 Emergency Repair Disk if you if one was created during setup.

2 Type UNINSTAL at the A:\ prompt.

     OR

1 Boot from and MS-DOS boot disk.

2 Type the following at the A:\ prompt:

     C:\windows\Command\uninstall.exe

Where C:\ is the drive letter where Windows 95 is installed, and \windows is the name of your Windows 95 directory.

Note

 It is recommended to run uninstall from Windows 95, otherwise all Long File Name information may not be completely removed from your hard disk.

How do I boot to an MS-DOS prompt (C:\>)?

If you wish to boot to an MS-DOS prompt to use MS-DOS utilities or applications, refer to the Windows 95 on-line help topic, "Restarting in MS-DOS mode".   If you are currently viewing this in Windows 95, Click here to display the help topic

How do I install Windows 95 from a CD-ROM drive?

Windows 95 can be installed from a CD-ROM drive at MS-DOS or a from an existing installed version of Windows. The preferred and most reliable method of installing Windows 95 is from an existing Windows installation.

To install from your current version of Windows:

1 Start Windows and insert the Windows 95 CD-ROM in the appropriate drive.
2 From the File Manager, or Program Manager, click on the File Menu choose the Run command.
3 Type "D:\setup" where "D" is the drive letter of your CD-ROM.
4 Follow the instructions display on the screen.
5 Click Next to continue through the setup process.

To set up Windows 95 from MS-DOS:

1 Boot to a C prompt, insert the Windows 95 CD-ROM in the CD-ROM drive.
2 At the command prompt, type the drive letter followed by a colon (:) and a backslash (\), and the word setup. For example:

   D:\setup

3 Press ENTER, then follow the instructions displayed on your screen.
4 Click Next to continue through the setup process, and follow the instructions on the screens that follow.

net use * \\machine\cdshare

net use   -   use the following resource on the network
*   -   map to the first available drive letter
\\machine   -   computer name of the system to which you will be connecting
\cdshare   -   share name on the remote system you will be accessing.

How do I install Windows 95 from a remote CD-ROM drive?

If the machine with the CD-ROM drive is running Windows for Workgroups or Windows 95, share the CD-ROM drive. Assuming that it is possible to connect to this machine:

1 Connect to the shared CD-ROM by connecting to a <u>network drive</u> in file manager or by using the Windows Network "net use" syntax at the MS-DOS prompt - e.g. "<u>net use * \\machine\cdshare</u>".
2 Click on SETUP.EXE or type Setup at the prompt.

How do I set up Windows 95 into a separate subdirectory?

During the first part of setup "Collecting information from you and your computer" - Windows 95 will ask for confirmation of the directory in which to install Windows 95. By default the directory containing the existing version of Windows is selected.

 Installing Windows 95 in a separate subdirectory will require that all applications be re-installed, and may require that drivers for hardware peripherals (i.e. sound cards, tape drives, etc.) be re-installed.

To install Windows 95 into a new directory:

1 Click the Other Directory option.
2 Click Next.

   The next screen displayed a field where you can enter a new directory.

3   Enter a new directory, for example, **C:\win95**.

What do I need to do to my system for a clean installation of Windows 95?

Windows 95 will install over MS-DOS, as well as existing versions of Windows and Windows for Workgroups.

 From the File Manager in Windows or Windows for Workgroups:

1 Choose the drive letter for the drive that Windows 95 will be installed from, for example:

> **a:** (diskette users)

> **d:** (CD-ROM users)

2 <u>Double-click</u> on SETUP.EXE to start the installation process.

During the installation process Windows 95 will check for available disk space. If the requested amount of hard disk space is not available Windows 95 will provide a message with the amount of free space available, and the amount of disk space required. To free up space on the hard disk, remove any unnecessary files from your hard disk.

Will Windows 95 work if I have compressed my hard drive using Stac Electronics Stacker software?

Yes, Windows 95 is fully compatible with Stacker versions 2.x and greater, as well as all versions of Superstore. Older compression drivers from third party disk compression utilities function in real mode only. For upgraded Windows 95 drivers please contact your software compression vendor for availability of newer protected mode drivers.

Windows 95 supplies built-in, 32-bit, protect modedisk compression called DriveSpace.

The advantages of running DriveSpace are:

- Compression through protected mode is faster.
- DriveSpace is built into the operating system.

For more information on DriveSpace, refer to the Windows 95 on-line help topic, "Compressing disks to create more free space".   If you are currently viewing this in Windows 95, Click here to display the help topic.

Do I need to reinstall my applications when I install Windows 95?

Windows 95 will   preserve application settings and will convert the programs icons to <u>Shortcuts</u> when an existing version of Windows or Windows for Workgroups is upgraded.   If Windows 95 is installed to a separate, or clean, directory, all Windows applications will need to be re-installed in order to work within Windows 95.

How do I setup Windows 95 on a machine with Windows NT?

The Windows NT machine must be configured multi-boot between Windows NT and MS-DOS.

To install Windows 95:

1   Boot the Windows NT machine to MS-DOS.

2   Run Windows 3.x, and <u>open</u> Program Manager.

3 Choose the Run command from the File Menu.

4   Type **A:\Setup.exe** where A is the drive letter containing your Windows 95 setup disk or CD-ROM.

5   Install Windows 95 to a new directory.

Notes

   Windows 95 cannot be installed into the same directory as Windows NT or a shared Windows NT/Windows 3.x directory.

   A FAT partition is required for Windows 95 / Windows NT dual boot configuration to work.

   Windows 95 must be installed into a separate directory on the FAT partition.

   The Windows NT OS Loader automatically provides a choice for "Windows 95" or "MS-DOS" on the menu. Selecting Windows 95 from the OS Loader menu will boot the machine into the Windows 95 operating system.

Can I install Windows 95 on an OS/2 and MS-DOS/Windows dual-boot machine? Can I still dual boot?

Installing Windows 95 over OS/2

The Windows 95 SETUP.EXE will not run on OS/2. To install Windows 95, boot the machine to MS-DOS and run SETUP.EXE from the MS-DOS prompt.   This can be done in a number of ways:

If you are upgrading over OS/2 on an HPFS partition:

you will need to have your OS/2 disk 1 available during Setup.

If you are using OS/2 Boot Manager to choose operating systems at startup:

Setup will disable Boot Manager to insure that Windows 95 can reboot the system and complete its installation. Boot Manager can be reactivated by running the FDISK utility that comes with Windows 95 (see procedure at the end of this section).

If you are not using OS/2 Boot Manager:

You should configure your machine to use Boot Manager, and then follow the instructions above. Consult your OS/2 documentation for information on Boot Manager.

If you boot MS-DOS from a floppy and run Setup:

You will no longer be able to boot OS/2 after Windows 95 has been installed. You will need to delete the AUTOEXEC.BAT and CONFIG.SYS files that OS/2 uses before running Windows 95 Setup.

If you want to remove OS/2 from your computer after you have installed Windows 95, follow these steps:

1   Back up the data files you want to keep onto a floppy disk or network drive.
2   Delete the files in each of your OS/2 directories and subdirectories, and then delete the OS/2 directories.
3   In the root directory, the following files are marked as hidden system files and need to be deleted:

>   EA DATA.SF
>
>   OS2LDR.MSG
>
>   OS2KRNL
>
>   OS2BOOT
>
>   WP DATA.SF

In My Computer or Windows Explorer, make sure hidden files are visible. To do this, click the View menu and then click Options. Then click "Show All Files". Then delete the OS/2 files listed above.

Note

[?]   If you have a version of OS/2 other than version 2.0, the names of the OS/2 files on your hard disk may differ from those that appear in this procedure. Also, depending on which version of OS/2 you have, you may see the following files in your root directory which you can delete:
OS2DUMP
OS2LDR
OS2LOGO
OS2VER

4 Empty the Recycle Bin to permanently remove the files from your computer.
5 If you had Boot Manager installed and want to remove it, restart your computer and then complete the following steps. (It is recommended that you print this file before restarting your computer.)
6 When you see the Boot Manager menu, choose to boot to MS-DOS and run FDISK.
7 Choose to make the MS-DOS partition (C) your "active" partition.
8 Quit FDISK and then restart your computer.

If you want to reinstate Boot Manager after you install Windows 95, follow these steps:

1 From the Windows 95 Start menu, click Run and then type FDISK.

2 Choose Option #2 "Set Active Patition".

3 Enter number of Boot Manager Partition. This partition will be the 1 megabytes Non-DOS partition usually placed at the top or bottom.

4 Quit FDISK, and restart your computer as instructed. You can now boot OS/2 at any time and change labels of partitions in Boot Manager through the OS/2 FDISK program.

How do I make backup copies of my original diskettes?

The DMF Disk format used on the Windows installation diskettes increases the amount of data stored on a standard 1.44/3.5" diskette.   It uses a unique formatting scheme that is not compatible with the DISKCOPY or other disk utility programs.   While the COPY command will allow you to duplicate files, there is no way to make a direct copy of these diskettes.

Can I make Floppy Disk images from the CD?

The CD-ROM contains cabinet files (*.CAB) files. These files are 2.0 megabytes in size, and will not copy onto a floppy disk.   You can, however, copy them to other media such as a hard drive or tape backup.   If you wish to use Windows Backup to copy files, refer to Windows 95 on-line help topic, "Using Backup to back up your files."

If you are currently viewing this in Windows 95, Click here [?] to display the help topic.

I have installed windows 95 into different directory than Windows 3.x or Windows for Workgroups 3.1x. How do I setup to dual boot between them?

When installing Windows 95 into a different directory, dual booting is enabled by default. Dual boot is only available if the existing version of MS-DOS is version 5.0 or greater. If this criteria is met, dual booting to a previous version of MS-DOS is accomplished by:

1 Pressing the F8 key when you see the "Starting Windows 95" at startup

2 From the boot menu select the Previous version of MS-DOS

I want to have a smooth installation of Windows 95. What are some things I can do in order to make it easier to install Windows 95?

Generally, Windows 95 should setup problem free with a majority configurations. Some of steps to follow to ensure a trouble free installations are:

[?]   Run a virus scan before running setup.

[?]   Run ScanDisk or Chkdsk before running setup.

[?]   Make sure you have at least 40-45 megabytes free disk space (50-55 megabytes if you want to back up your previous MS-DOS and Windows system files so you can uninstall windows 95 if needed).

[?]   If you have had any problems with your machine (hardware, software) fix them before installing Windows 95.

[?]   Turn off any screen savers or utilities that are running.

[?]   Backup your AUTOEXEC.BAT and CONFIG.SYS to a floppy disk.

[?]   Remove any unnecessary programs from the machines CONFIG.SYS and AUTOEXEC.BAT. These may include undelete programs, anti-virus software, boot configuration programs, or any disk utilities..

[?]   Remark the load= and run= lines in your WIN.INI file by placing a semi colon in front of the run and load lines,   e.g. - ;load=c:\msoffice\msoffice.exe.

[?]   Shut down any anti-virus software you have running If you attempt to install Windows 95 on a machine that has a CMOS or system BIOS based anti-virus setting
‒ an error message will result and the Windows 95 installation will be terminated.

[?]   Consult the hardware documentation for information on system BIOS or CMOS enabled settings such as virus detection .

[?]   Run setup from Windows or Windows for Workgroups.

[?]   Shut down any running programs.

[?]   It is recommended that programs be removed from the Startup Group before installation.

Why does my system hang at the networks login script?

Generally, the <u>login script</u> processor can hang for the following reasons:

[?]   TSRs loading in the login script

[?]   The <u>server</u> is not running Bindery Emulation (Netware 4.x servers only)

[?]   Netware 4.x specific login commands are being used

[?]   The network may be unavailable

To test any of the above scenarios:

1 Log into the network with the Novell real mode components from the command prompt..   Consult the Novell system administrator documentation for instructions on the procedures and   files necessary   connect to the Novell Network.

2 If the login is successful utilizing the Novell real mode drivers.   Check with the Novell system administrator to verify, that the <u>login script</u> is free of Novell Netware 4.x Commands, and that Bindery Emulation is enabled when running a Novell Netware 4.x <u>server</u>.

3 If the login script continues to hang, the problem is mostly likely with the login script itself.

Tip

[?]   Consult the system administrator for the Novell Network and verify that the Network is available, and verify the commands within the login script.

Windows 95 does not detect my CD-ROM. Why is this? How do I get my CD-ROM to work?

CD-ROMs may be <u>SCSI</u>, proprietary, or IDE controller based devices.

Windows 95 only performs detection for the most common proprietary controller-based CD-ROMS (specifically Panasonic, Mitsumi, and Sony brands).   In the case of <u>SCSI</u> controller-based CD-ROMs, Windows 95 only needs to detect the controller一 the SCSI drivers and SCSI controller's own intelligence will detect and use the CD-ROM.   Since IDE controller-based CD-ROMS do not follow a   defined standard like <u>SCSI</u>,   they often need to have real mode drivers loaded to be detected   by Windows 95.   Some IDE CD-ROM may require protected-mode drivers from the   CD-ROM manufacturer .

The following procedure can assist you in   troubleshooting CD-ROM detection problems and is derived from the general Hardware Troubleshooter found in Windows 95 on-line help.   If you are currently viewing this in Windows 95 and wish to learn more about the Hardware Troubleshooter, Click here🔲 to display the help topic.

🔲   Start the CD-ROM Detection Troubleshooter

Setup keeps hanging during the Gathering Information section. How do I get setup to bypass the problem?

When setting up Windows 95, occasionally it can hang while detecting a device on the system.

1 Turn the computer off for 10 seconds then turn it back on.

2 Rerun setup to bypass the problem causing the hang by choosing Safe Recovery from the setup screen.

3   Setup will continue bypassing the detection problem it encountered on the previous attempt.

4 Restart the system as described in step 1, and rerun setup as needed until the Windows 95 finally completes the setup process.

Note

    If you have already run safe recovery several times, you can choose to manually select the hardware in your system.   This will minimize the chances of hanging, since setup will detect only the hardware you select.

How do I get my PCMCIA cards to work in protected mode?

Double click the PCMCIA <u>Wizard</u> in Control Panel   if present and carefully follow the instructions on the screens that appear.   You may access the PCMCIA Wizard from the Windows 95 on-line help topic "Enabling 32-bit PC card support".

If you are currently viewing this in Windows 95, click here to display the help topic.   If you cannot access the PCMCIA Wizard through Control Panel or on-line help, reinstall your real mode PCMCIA driver and insure that they work correctly.

You may be asked to <u>select</u> the PCMCIA network or <u>SCSI</u> card you are using during this process. Once the Wizard has run, you will no longer be loading the device drivers in your configuration files, and you will be running with protected mode drivers from within Windows 95.

Is NTFS supported by Windows 95?

NTFS is not directly supported under Windows 95. NTFS volumes can only be accessed by Windows NT locally. If Windows 95 is installed on a machine already running Windows NT with an NTFS volume, it will not be able to access any information that volume contains. Windows 95 can access NTFS volumes across a network connection.

Is Windows 95 safe to set up? Do I need a separate partition?

As with any software package, it is always a good idea to have a backup before installing any new software. Windows 95 has been tested by thousands of test sites on many different platforms and system configurations with a very high rate of success, so we feel very confident that you will have very few problems, if any, installing Windows 95. There is an uninstall feature which can be enabled during setup. The uninstall will copy your previous MS-DOS and Windows 3.x and keep a log, so that in the event you do wish to go back to your previous environment, Windows 95 can remove itself and copy the old files back to where they were before Windows 95 was installed.

It does not require its own partition, however, it can be installed if you wish to be able to dual boot between your current Windows 3.x and Windows 95. For more information on the uninstall feature refer to " How do I uninstall Windows 95?."

Should I install into my existing Windows directory, or a different directory?

Both are valid choices for setup.   Using your existing installation of Windows and upgrading on top of it is highly recommended as setup is using your existing configuration files (config.sys, autoexec.bat, system.ini, win.ini, protocol.ini) for more accurate detection and installation.

The advantage of installing into your existing Windows directory is that the previous settings and applications are migrated to the new installation. The advantage to installing Windows 95 into a different directory is that it preserves your previous DOS/Windows configuration, allowing you to dual boot between both versions.

The biggest disadvantage is that all Windows applications, and possibly drivers for hardware peripherals (i.e. sound cards, tape drives, etc.) will need to be re-installed in order to put the proper support files in place as well as the application settings in the INI files and/or the Registry .

What files do I backup to preserve Windows 95 settings?

Use the Windows 95 Backup utility to preserve all settings.   You must back up your entire hard drive to save Windows 95 configuration files using the full backup set.   Windows 95 backup does not show hidden files so there is no option to back them up except for the full backup set.

(A possible workaround would be to change the attributes of your configuration files so they would appear in backup.)

What files does Windows 95 modify during setup?

Windows 95 is a new operating system, and will affect many files on the system.

The following MS-DOS utility files will be deleted after you upgrade from an earlier version of Windows:

Defrag.hlp

Mwundel.exe

Mwundel.hlp

Networks.txt

OS2.txt

The following MS-DOS utility files will be upgraded after you upgrade from an earlier version of Windows:

Ansi.sys

Attrib.exe

Chkdsk.exe

Choice.com

Country.sys

Debug.exe

Deltree.exe

Diskcopy.com

Display.sys

Doskey.com

Edit.com

Ega.cpi

Fc.exe

Fdisk.exe

Find.exe

Format.com

Keyb.com

Keyboard.sys

Label.exe

Mem.exe

Mode.com

More.com

Move.exe

Mscdex.exe

Nlsfunc.exe

Scandisk.exe

Scandisk.ini

Share.exe

Sort.exe

Subst.exe

Sys.com

Xcopy.exe

Defrag.exe

Drvspace.exe

Emm386.exe

Ramdrive.sys

Readme.txt

Setver.exe

Smartdrv.exe

Can I run the Windows 95 setup program from MS-DOS? Do I loose any functionality?

If you have a running installation of Windows 3.x or Windows for Workgroups 3.x1, it is strongly recommended to run Setup from your existing version of Windows. This will provide the safest and smoothest installation. If you do run Setup from MS-DOS, and it detects Windows on the system, it will recommend quitting setup, and rerunning it from Windows. If you do choose to run Setup from MS-DOS, Setup may run slower (especially if installing from floppy disks).

How do I boot to my previous DOS?

In order to boot to the previous operating system, you need to have had a version of MS-DOS 5.0 or greater on your system in order to have this option.

If Windows 95 has been installed to a separate directory then your existing Windows version, you will have the option to dual boot by default.   If you installed over your existing version of Windows you may need to modify the MSDOS.SYS file to enable dual boot.

Modify the MSDOS.SYS file

1 Click the primary mouse button on Start, choose Programs, MS-DOS Prompt.

2 Type CD\ then press enter. Type attrib -r -s -h msdos.sys then press enter.

3 Type edit msdos.sys then press enter.

      OR

1 Click the Start button, and select Find/File or Folders.

2 In the Named box, type in MSDOS.SYS and press enter.

3 In the results windows, secondary mouse click on the MSDOS.SYS file and select properties.

4 In the Properties dialog, you will see an attributes section. Click the Hidden and Read Only attributes, so that there are not any check marks in the boxes.

5 Click Apply and/or Ok. Then, double click the MSDOS.SYS file in the results window.

Find the section [Options], place your cursor right after the last bracket, press enter. You now have a blank line to add the following string:

      BootMulti=1

Then save the file.

Now when you turn the computer on or restart from within Windows 95 you can press the F8 key when you see Starting Windows 95..., which will bring up the Windows 95 Startup menu. Select the option Previous version of MS-DOS to boot to your previous operating system.

You can also boot to your previous operating system by pressing the F4 key when you see Starting Windows 95. This will bypass the Windows 95 Startup menu and boot you directly into your previous operating system.

Will I be able to multiboot PC-DOS 7.0?

Yes, PC-DOS 7.0 is a supported as a multiboot option.

Can I setup Windows 95 from a network?

Yes, it is possible to set up Windows 95 from a network location. There are two methods to accomplish this:

1 Create a Windows 95 flat directory by either using the COPY command in the case of a CD-ROM, or using the EXTRACT command for diskettes. Connect to the shared directory, run setup and choose directory on your computer to setup to.

2 Go to Nettools directory (CD-ROM only) to use the Netsetup Utility

Click here for more information on the EXTRACT command.

How do I setup my Windows 95 machine for a TCP/IP network?

First, you need to know if your network is using a DHCP <u>server</u> to allocate IP Addresses automatically or if you have been assigned a specific <u>IP Address</u>. Consult your system administrator to determine which way your network is setup. Once you have this information, go to the Network Properties and <u>select</u> Add, Protocol, Microsoft, <u>TCP/IP</u>. Once you have installed it, select TCP/IP and go to Properties. Here you can configure your <u>protocol</u> per instructions from your system administrator.

How do I setup Netware support?

There are three different ways to access a Novell Network with Windows 95. If you are using Novell Netware 3.x or if you have bindery services enabled with 4.x, then you can use the Microsoft <u>client</u> for Netware. This is installed from the Network properties by clicking Add, <u>select</u> Client, select Microsoft, select Microsoft Client for Netware.

If you need to load real mode TSRs from your <u>login script</u>, then you must use the real mode shell NETX or VLM, available through Novell. If you are using NDS services with 4.x, then you must install the VLM client.

If you are using NETX, then you need to install the Novell Workstation Shell 3.x from Network Properties/Add/Client/Novell property sheet. If you are using the VLM client, then you need to install the Novell Workstation Shell4.x client.

Note

    Regarding the last two options, you must have the proper version of the Windows support files from Novell in order to user either Workstation Shell option.

How do I setup Windows 95 with Lantastic 6.0?

To configure Windows 95 to support an Artisoft Lantastic network, contact thevendor and request a Windows 95 Lantastic *.INF.

Note

 Network Neighborhood will not be used to view Lantastic resources. You must use the Lantastic utilities located in the Lantastic program group.

Setup hangs after the first reboot, why won't it boot?

There are a variety of reasons this may occur, ranging from Video problems to Disk access issues. Essentially, here are some steps to troubleshoot a no- boot situation:

Restart Windows 95. Press the F8 key when you see the "Starting Windows 95" message.· Choose Safe Mode from the Microsoft Windows 95 Startup menu. If Windows 95 starts, change the video driver to the standard VGA driver by following these steps:

1 Click the Start button, point to Settings, then click Control Panel.

2 Double-click the Display icon.

3 Click the Settings tab, then click the Change Display Type button.

4 Click the Change button in the Adapter Type section, then click the

5 Show Compatible Devices option button.

6 Click "(Standard Display Types)" then double-click Standard Display

7 Adapter (VGA). Click OK.

8 Restart Windows 95 normally.

If Windows 95 still hangs during boot:

1 Rename CONFIG.SYS and AUTOEXEC.BAT.

 and/or

2 Go to Control Panel, select the System Icon.

3 Go to the Performance tab.

4 Click the File System button.

5 Select the Troubleshooting tab.

6 Check all of the available boxes and click Ok to all dialog boxes and reboot.

How do I configure TCP/IP in order to connect to the Internet?

Refer to the Windows 95 on-line help topic, " Connecting to the Internet". This topic can walk you through the necessary steps.   If you are currently viewing this in Windows 95, Click here to display the help topic.

How do I install a PPP dial-up network connection?

You will need a modem installed and configured correctly. If the <u>Dial Up Networking</u> option is not installed, add it through Control Panel/ Add/Remove Programs/Windows Setup in the Communications section.

Once installed - <u>open</u> the Dial up networking <u>folder</u> in 'My Computer'. The connection wizard will prompt you for connection information. The <u>PPP</u> Connection <u>Protocol</u> will be installed by default because it is the most flexible - being able to work over NetBeui, IPX SPX and <u>TCP/IP</u>.

How do I setup Dial-Up Networking to connect to a Novell server?

Install the following components from Control Panel Networks:

      Microsoft Client for Netware Networks

      IPX/SPX compatible protocol bound to the Microsoft Dial-up Adapter driver.

To use Dial-up networking to connect to a Netware Connect Server , you must specify Netware Connect as the server type in a Dial Up Networking connection's property sheets.

How do I connect to the Internet with Windows 95?

Refer to the Windows 95 on-line help topic, " Connecting to the Internet". This topic can walk you through the necessary steps.   If you are currently viewing this in Windows 95, Click here to display the help topic.

Why don't I get 32-bit disk access on my two 1 gigabyte hard drives?

Most problems with 32-bit disk access on larger hard drives tend to be hardware based, with occasional problems with driver conflicts or viruses.

Note

 Some controllers have built in <u>BIOS</u> settings which will need to be considered in troubleshooting. Make sure there is no conflict between the motherboard CMOS setup and the controller BIOS settings. (i.e. - if both the motherboard and the controller have settings for Logical Block Addressing (LBA), make sure only one is in use.)

The following technical topics may assist you in understanding hardware issues relating to 32-bit disk access:

Enhanced IDE Basics

What is LBA (Logical Block Addressing?

Enabling and setup of LBA

PCI_EIDE Controllers

EIDE Support Troubleshooting Checklist

I was running setup for the first time and it hung during hardware detection. What do I do now?

If your computer stops responding during the hardware detection phase of setup, simply turn off the power on your system, wait 10 seconds, and turn the power back on. Do not press Ctrl-Alt-Del. When your system reboots, re-start Windows, and re-run setup and choose to use Safe Recovery. Windows 95 "Safe recovery" will skip the portion of detection that caused a problem on your system. If your system hangs again, it will be in a different detection module. Performing the same steps outlined above as many times as necessary should allow your system to complete detection.

Setup did not detect my network card, how do I get my network card installed?

There are two ways of adding the Network adapter.

1 From Control Panel, double click Add New Hardware, and let Windows 95 automatically try to detect the Network card. If it does not, it will let you manually select it in a similar manner listed below.

2 From Control Panel, double click Network and then the following:

[?]   From the Network Properties select 'Add', 'Adapter'.

[?]   From the list of manufacturers, find your particular make and model.

[?]   Change the displayed settings to match your card's configuration

[?]   If it is not a listed network adapter, check the diskette that came with your adapter. If the driver came with Windows or Lanman (NDIS compatible) diskettes, then select 'Have Disk' and point it to the path of the OEMSETUP.INF file.

[?]   If there are only Novell ODI drivers available, install the driver in the AUTOEXEC.BAT using the LSL.COM and the <nic_odi>.COM (provided by Novell and the network card manufacturer) and select 'Existing ODI Driver' from '(detected net drivers)'.

For more information on how to install the ODI driver, consult your network card manufacturer.

My modem won't dial or connect. Why?

Note: There is a troubleshooter for modem problems in Windows Help.

If your modem is not setup up correctly, communications features may not function properly. The following procedures list steps in verify the correct operation of your modem and the Windows 95 communications subsystem.   Because some communications programs designed for Windows 3.1 install incompatible driver files, which may cause COM ports and modems to stop working, start by verifying that the correct Windows 95 files are being loaded.

To verify that the required communications files are present,

1 Verify the files sizes and dates of COMM.DRV and SERIAL.VXD in the SYSTEM directory against the original versions of from the Windows 95 floppy diskettes or CD-ROM.

2 Confirm that the following lines are present in the SYSTEM.INI:

    [boot]

    Comm.drv=Comm.drv

    [386enh]

    device=*vcd

3 To revert to the default communications drivers for Windows 95, select communications port entries in Device Manager

4 Run the Add New Hardware Wizard in Control Panel to detect and install the Windows 95 drivers.

Note
[?]   Windows 95 does not load the SERIAL.VXD driver in the SYSTEM.INI. Rather, Windows 95 loads it on demand using the Registry. Also, there is no corresponding file for the *vcd entry in the SYSTEM.INI. This is an internal file built into VMM32.VXD.

To verify the modem configuration

1 From the Control Panel, double-click the Modems icon.

2 Verify that the manufacturer and model for your modem is correct. If not, you might have changed the modem and failed to reconfigure it. In this case, run the Install New Modem wizard to detect the modem and confirm it with the current Registry configuration.

3 If your current modem does not appear in the list of installed modems, click Add, and then select the appropriate modem.

4 If the manufacturer and model are not correct and are not available from the list, try the Hayes-compatible option for Generic Modem driver option, set to the maximum baud rate supported by the modem, and click OK to accept the settings.

Try removing any other modem entries in the list of eliminate conflicts.

To verify the modem is enabled

1 Double-click the System icon in Control Panel, and then click the Device Manager tab.

2 Select your modem from the list and click Properties.

3 Click in The Device Is Present, Please Use It, if this is not already selected.

To verify that the port is correct

1 Double-click the Modems icon in the Control Panel.

2 Select your modem, and then click the Properties button.

3 On the General property sheet, verify that the listed port is correct. If not select the correct port. Click OK.

To determine if a serial port I/O address and IRQ settings are properly defined

1 Double-click the System icon in the Control Panel.

2 Click the Device Manager tab, and then click Ports.

3 Select a specific port (such as COM2), and click the Properties button.

4 Click the Resources tab to display the current resource settings (IRQ, I/O) for that port. To find out the correct settings, consult the modem manual.

5 In the Resources dialog box, check the Conflicting Devices List to see if the modem is using resources in conflict with other devices.

6 If the modem is in conflict with other devices, click the Change Setting button, and then click a Basic Configuration that does not have resource conflicts. Physical hardware adjustments may be required since changing the basic configuration will not actually change the IRQ or I/O address for the port itself.

Note

[?]   Do not try to use a modem on COM3 if there is a serial mouse or other device on COM1. Usually, COM1 and COM3 ports use the same IRQ, meaning that they cannot be used simultaneously on most computers. The COM2 and COM4 port have the same problem. If possible, change the COM3 and COM4 port to and IRQ setting that is not in conflict. Also, some display adapters have an address conflict with COM4 ports. The best way to work around this conflict is to use another COM port, or, replace your graphics adapters.

To check the port settings

1 In the modems option in Control Panel, click a modem, and then click Properties.

2 In the modem's property sheets, click the Connection tab to check the current port settings, such as bits per second (baud rate), data bits, stop bits, and parity. Click the Advanced button to check error control and flow control. If you are using Win 16-based application, turn off these advanced features.

3 Verify the UART type

Data transmission problems may occur when a baud rate greater than 9600 is selected on a slower 80386-based computer not equipped with a 16550 UART, or when performing other tasks during a file download. If problem or error occur during transmission, try lowering the baud rate. Attempting to use baud rates greater than 9600 on computers equipped with 8250 or 16450 UARTs will probably result in dropped characters.

To check modem baud rate

1 Double-click   the Modems icon in Control Panel.

2 Select the specific modem, and click Properties button.

3 Click the General tab.

4 Set the baud rate to the correct speed. Lower speeds may work, especially when using an older, slower computer.

5 Click Only Connect At This Speed if it is not already selected.

Notes

[?]   If the host system you are calling cannot communicate at the initial baud rate, it may or may not be able to negotiate a slower baud rate.

[?]   To optimize communications performance, you can set the baud rate higher if your computer has an 80486 or a Pentium processor.

To disable hardware flow control if your modem cable does not support it

1 Double-click the Modems icon in Control Panel.

2   Click a modem, and then click the Properties button.

3 Click the Connections tab, and then click the Advanced button.

4 If a check appears in the Use Flow Control check box, click the box to clear it.

How do I install MS Fax?

To install Microsoft Fax during setup, when the accessories screen is displayed, go to MS Fax and put a check in the box. If you have not already selected MS Exchange, it will notify you of this and require that you <u>select</u> that option as well.

To install Microsoft Fax after setup, go to Control Panel, double click Add/Remove Programs, and select the Windows Setup tab. From that tab, <u>scroll</u> the accessories box to MS Fax and put a check in the box. If you have not already selected MS Exchange, it will notify you of this and require that you <u>select</u> that option as well.

Note

 Adding MS Exchange and MS Fax will require at least 10 megabytes of free space to install.

I cannot set up my PCMCIA network adapter.

To use a protected mode PCMCIA net card, your socket services must match your net card.   If you use a real mode net card driver, you must use real mode socket services. If you use a protected mode net card driver, you must use protected mode socket services. To determine what kind of net card driver you're using, go to the Driver Type property page for your net adapter, in the network control panel. The radio button allows you to choose a driver type. To enable protected mode socket services, run the PCMCIA Wizard from Control Panel.

I am installing Windows 95 from CD-ROM, and the system hangs on the 1st boot. Why?

The most likely reason in this case is the fact that there may be a real mode and protected mode conflict with the CD-ROM <u>driver</u>, and setup is unable to continue. Try remarking out the CD-ROM drivers in CONFIG.SYS. If this does not solve the problem, then standard troubleshooting procedures should be adopted.

Can you boot into Windows in <u>Safe Mode</u>?

If not, reinstall.

If you can:

[?]   Create a bootlog.txt file to see where it failed

[?]   Check for the existence of detcrash.log file, if this is present the problem is with hardware detection.

[?]   Check the IOS.INI and remark out the drivers that are loading in the config.sys in case there is a problem with these protect mode drivers.

[?]   Check device manager for any problems - i.e. conflicts. Don't be afraid to remove any device from here if you suspect it is the troublemaker.

[?]   Change the display driver to standard VGA.

[?]   Try the step by step boot.

[?]   Rename the autoexec.bat and the config.sys so they don't load on the next boot.

Copy the system.cb to system.ini - here very few drivers are loading (not even the mouse) - If this solves the problem, check your system.ini for any entries made by any third party applications e.g.- Adobe Type Manager.

Setup didn't detect my modem, how do I install it?

To install a modem in Windows 95, go to Control Panel, and double click the Modem icon. This will start the Modem installation <u>Wizard</u>. From there, it will guide you through the installation of your modem.

Note

[?]　　　This procedure is for internal or external modems. PCMCIA modems will automatically be installed when an insertion event takes place (requires protected mode PCMCIA drivers)

I am running a non-Microsoft network, and I cannot connect to my network resources, why?

If it is a real mode network, then the network <u>client</u> must be loaded from the AUTOEXEC.BAT and/or CONFIG.SYS before Windows 95 loads. If it is a network that we do not recognize, then all drive mappings and resource connections may need to be done before going into Windows 95. Resource mappings done in an MS-DOS Prompt may only be accessible while that MS-DOS Prompt is running. If it is a supported network, then check to make sure the client support is installed in Network Properties.

Why do the applications from my Novell server give an "Incorrect MS-DOS version?"

There are two possible reasons. Novell Netware uses an environment variable %OSVersion to track what versions of MS-DOS the clients are running, and point to a directory on the Novell server that contains a copy of that version of DOS. Your network administrator needs to insure that the same has been done for Windows 95, which will report a version of 7.0. You should also check the SETVER table and see what version is being reported for the particular applications, and you may need to modify the table in order to reflect the proper version to be reported to the system.

How do I create shortcuts on the Desktop?

There are two ways to create a shortcut on the <u>Desktop</u>:

1 Secondary mouse click on the Desktop (not on an icon or other <u>object</u>), and <u>select</u> New/Shortcut. Windows 95 will then ask you for the command line for the shortcut, type in the correct command along with any special parameters or browse to find the application you want the shortcut to. Click the Next button, and you will be prompted for a name for the shortcut.   Enter a name you will recognize, and click Finish.

2 Open <u>Explorer</u>, and find the application you want to create a shortcut for. Once you have found it, click the primary mouse button and hold down while dragging the pointer to the Desktop. This will create a shortcut on the Desktop with a name of "Shortcut to <app-name>".

After running setup I can no longer access my CD-ROM, why?

If your CD-ROM is proprietary, (Sony, Mitsumi and Panasonic) Windows 95 will install the drivers for them. If the CD-ROM is not being detected, there is a conflict with the Device or the controller. and the settings should be reverified, checked for conflicts in the Device Manager in Control Panel and then installed by using Install New Hardware in Control Panel.

How do I configure my machine to answer Dial Up Networking calls?

Dial-Up Networking <u>server</u> capabilities are available with Microsoft Plus!.

How much free space do I need on my hard drive for Windows 95 if I am upgrading?

I have 25 megabytes free on my hard drive and when I try to upgrade to Windows 95 it tells me I do not have enough disk space.   How much do I need for Windows 95 if I am upgrading?

When you upgrade Windows 95 over a previous version of Windows, you will want to have 35 to 40 megabytes of free disk space, as opposed to 50 megabytes to 55 megabytes for a full installation to a different directory.

Note

   Actual numbers will vary depending on options and accessories selected during the setup process.   If you are using disk compression (like MS-DOS DoubleSpace or DriveSpace, or Stacker) , Setup may require more that 35-40 megabytes to install Windows 95.   This is due to the way that disk compression estimates available space.   Setup will adjust the required free space to ensure that Windows 95 does not run out of disk space during Setup.

Enhanced IDE Basics

A disk drive defined as using the EIDE specification is : greater than 528 megabytes, <u>supporting LBA (logical block addressing),</u> and able to operate at faster transfer modes.

Some drive vendors will use the term "EIDE" to just cover a drive being able to support LBA for >528 megabyte drives. The vendor may use the term Fast-ATA (faster transfer modes, like mode 4) indicate its ability to run at higher transfer rates.

Possible conversion types of large hard drives we can have:

[?]   System <u>BIOS</u> to drive (motherboard capable of LBA)

[?]   Card BIOS to drive (for EIDE cards with LBA built into the BIOS. In some cases, a real mode driver may be needed to turn on specific functions like LBA and other cards just use a physical jumper or switch on the EIDE card to enable LBA.)

[?]   DOS driver to drive (software driver utilities such as Ontrack or EZDrive)- Windows driver to driver (Usually added to the SYSTEM.INI, [386enh] section. Windows 95's ESDI_506.PDR driver supports this.)

For information on PCI Controllers, see <u>PCI EIDE Controllers</u>

For information on configuration of LBA, see "<u>Enabling and setup of LBA</u>" or "<u>EIDE Support Troubleshooting Checklist</u>"

What is LBA (Logical Block Addressing)

LBA (logical block addressing) is an addressing scheme to get past the 528 megabyte limit imposed on the current addressing standard of an IDE disk drive.

There are other addressing schemes in the market seen usually in recent BIOS manufactures extended CMOS setup. Examples of others are:

- ECHS (Extended Cylinder, Head, Sector addressing scheme and sometimes seen as just "CHS" listed in the CMOS setup).
- Large.
- Big IDE.

All of which achieve the same end results as LBA but are not as widely used. All of these methods work with Windows 95 because the translation is taking place at the hardware level and the Installable File System (IFS) understands it.

For information on configuration of LBA, see "Enabling and setup of LBA" or "EIDE Support Troubleshooting Checklist"

Enabling and setup of LBA

When enabling LBA on a EIDE controller including those built into the motherboard, the drive will usually need to be repartitioned (FDISK or equivalent FDISK utility that came with controller / computer) and formatted after enabling LBA. If you are not seeing the whole drive's capacity, verify that the these steps have taken place. (Refer to the manufacturers manual for more information on the setup if needed.)

Note

   Some controllers will sense the larger capacity drives over 528 megabytes and automatically use the motherboard for LBA. If using LBA, and both the controller and the motherboard support LBA, make sure only one is in use, not both.

   Important: Both the IDE drive and the controller or BIOS have to be LBA capable in order for LBA to work. Most IDE drives today are LBA capable. For example, all Western Digital Caviar drives are LBA capable. But, if you have an older IDE drive that is not capable of LBA, then a controller or BIOS capable of LBA will not be able to enable LBA on that older IDE drive.

Most EIDE controllers only support LBA on the primary or first chain. If you have an older drive, try moving it to the secondary chain to eliminate incompatibilities on the primary chain..

Timing issues of drives can become an issue with setting up Master and Slave IDE drives on a chain. If you run into an issue with Windows 95 not enabling 32 bit protect mode support and you know it should, try reversing the Master and Slave drives. You will need to re-do the partition information again after doing this.

PCI EIDE Controllers

If the controller card is a PCI EIDE card, check to make sure the PCI controller slot configuration in the extended CMOS is set up correctly (IRQ assigned to slot which does not conflict with other devices). PCI device are designed to share IRQ's and Windows 95 supports this but only when sharing between PCI devices, not between PCI and ISA. If a PCI card has not been enabled in extended CMOS, Windows 95 will enable the device. This is a safeguard against access failure to hardware connected to this device and to follow the Plug 'N Play specification.

A PCI controller should be enumerated and working following the second boot during a Windows 95 installation. If the controller (PCI or other) is disabled within CMOS, it should still be enabled and either work correctly or display and error code within device manager. If the controller isn't intended to be used, the device should then be disabled in CMOS and from the "current configuration" (Not Removed) within device manager to avoid allocation of resources to it. This is because in the case of a PCI controller, if it is removed, it will be re-enumerated following the next boot and reappear within device manager.

Dual port PCI controllers will typically not show the secondary port within device manager. This is because either no devices are attached to the secondary port or the BIOS on the controller card cannot be read correctly to determine this information.

In some cases, a real mode driver in the CONFIG.SYS file may be needed in order to see the second chain after it is set up in extended CMOS (ex. if a drive on the secondary port exceeds 528 megabytes in size). Make sure the set up for the real mode drivers do not conflict with any other settings or resources.

Many PCI controllers (almost all add-on's) require a "paddle" card. PCI cards use interrupts A through D, 'ethereal' interrupts that must be mapped to a real interrupt line. While many BIOS's can do this, two port IDE cards present a possible conflict. Most PCI BIOS's allow you to redirect just one IRQ per card, but Dual port IDE cards need to redirect two. Some other BIOS's will initiate the mapping after they have seeked the drivers (i.e. too late).

Note

 A paddle card is a small attachment that runs the interrupt lines from the PCI card directly to the real interrupt lines in an adjoining ISA slot.   Paddle cards typically occupy just the last portion of an ISA slot.

Troubleshooting Strategy

To establish your troubleshooting strategy after gathering information, follow these basic steps.

Analyze symptoms and develop a strategy

[?] Analyze the symptoms to determine your approach to resolving the problem. Under what conditions does the problem occur and not occur? Which aspects of the system control those conditions? Is the problem specific to a subsystem (for example, networks or video)?

[?] Modify your system or the program, and then test again. Minimize the number of things you change between tests. If you find the problem goes away at some point, try adding things back in until you isolate the cause of the problem.

Isolate the error condition

[?] Try to isolate the specific cause of the error by changing a specific value, and then testing for whether the error condition is corrected or altered. For example, if you suspect the system registry is corrupted, you might want to rename the system registry (SYSTEM.DAT) and replace it with SYSTEM.NEW, and then test again.

[?] If a component fails after you have upgraded to a new driver, replace the new driver with the original driver,   and then retest. If startup hangs on a real-mode device driver, or if you suspect that any device driver is causing the error condition, you can restart your computer, press F8 when you see the "Starting Windows 95" message, and then choose "Step-by-Step Confirmation" to test the effect of not loading a suspect device driver.

Test and then write down the results

[?] Test each modification individually to see if it fixed the problem.

[?] Note all symptoms, causes, and solutions. This will provide you with the information you need if you have to contact product support personnel, and it also provides an excellent reference for future troubleshooting.

Check to see if the problem you're having is a known problem

[?] Make sure you check the Release Notes, the online Help, and the Frequently Asked Questions (FAQs) posted in the Windows 95 CompuServe forum, plus the README.TXT, PRINTERS.TXT, NETWORKS.TXT, and/or FLASH.TXT files included on the Windows 95 distribution disks.

[?] For persistent problems, you may want to post the problem on the appropriate CompuServe forum. Other users may already have discovered, reported, and found workarounds for your problem. Suggestions from others may save you time tracking down the source of the problem and give you ideas that can help you.

Verify software fixes

[?] If you are told that a problem is fixed in a new file or release, its important to verify that the original problem has been fixed.

[?] If you used a workaround for a specific problem, make sure you try removing the workaround when you receive updated software. It's easy to forget that you've changed the system to allow something to work and forget to test the original problem after it's been fixed.

Restore the system

[?] Before you leave a computer that you are troubleshooting, return the computer to a state that is as close as possible to the way you found it. Obviously, you will have made changes that affect the computer; but you should make sure the computer is entirely operational.

Tips for troubleshooting

[?] Always make backup copies of configuration files (especially the SYSTEM.DAT file).

[?] Create and maintain a startup disk.

[?] Test your startup disk for complete functionality before you need it.

Assessing the Operational Impact of the Problem

Ask these questions to get a general idea of the problem and to assess the operational impact

- How many computers are affected? Does the problem occur on just one computer or device?
- Is mission-critical data at risk? Is any data at risk?
- Are backups of critical information available? If not, can backups be performed immediately?
- What are the costs of the system being down?
- What are the primary and secondary effects that the system being down has upon your operations?
- Does the problem prevent necessary tasks from being completed? If so, what workarounds are available?

Technical Assessment

First, determine the general nature of the problem

[?]   Does the error occur only within a specific program? Under what conditions does the problem occur and not occur ?

[?]   Which aspects of the system control those conditions?

[?]   Is the problem specific to a subsystem (for example, networks, printing, or video)?

[?]   If it is a network problem, check the following:

[?]   Is it a network printing problem?

[?]   Is it a network connectivity problem?

[?]   If it is a printing problem, check the following:

[?]   Is it a local or network printing problem?

[?]   Is the printing problem specific to this computer ?

[?]   Is the problem more general, such as that a computer won't start or Windows 95 won't run?

[?]   Is it a General Protection Fault?

After determining the nature of the problem, identify the symptoms

[?]   Is the error condition reproducible or random?

[?]   If the problem seems to be program-specific, determine the following:

[?]   Has the program ever worked? If so, what changed?

[?]   What hardware and other software are involved?

[?]   Does the problem occur in just one program?

[?]   Does the order in which you start programs make a difference?

[?]   Does the error still occur when you restart the computer in <u>F5-Safe Mode Start</u> or <u>F6-Safe Mode Start with Networks?</u>

[?]   If you restart the computer by using <u>SHIFT-F8 Interactive Start,</u> can you identify any errors when drivers are loaded?

Windows 95 Startup Menu

When you start Windows 95, it typically displays the Windows 95 logo and starts the load process. But if you are having problems, you may want to use one of the startup options.

To use a Windows 95 startup option

▶   Restart your computer. When you see the "Starting Windows 95" message, press F8, and then choose an option from the Windows Startup menu.

The following table describes the options in the Windows Startup menu.

Startup Menu option	Description
Normal	Runs system startup as usual.
Logged (.TXT)	Logs system driver and boot information into BOOTLOG.TXT.
Safe Mode	Starts Windows 95 using Safe Mode, which limits the amount of configuration information that is processed during Startup. This is the equivalent of pressing F5.
Safe Mode With Network Support (option appears only on networked systems)	Start Windows 95 using Safe Mode, but allowing Network connectivity. This is the equivalent of pressing F6. This option is available only if the computer is on a network.
Step by Step Confirmation	Enables you to step through each part of the Startup process, responding [Enter=Y or Esc=N] for each line in the CONFIG.SYS and AUTOEXEC.BAT files, as well as the loading of compression drivers and WIN.COM. This is the equivalent of pressing SHIFT+F8.
Command Prompt Only	Enables you to use the WIN.COM command-line switches to start Windows 95. This is the equivalent of pressing ALT+F5.
Safe Mode Command Prompt Only	Clean boots to MS-DOS, bypassing the CONFIG.SYS and AUTOEXEC.BAT files. This is the equivalent of pressing CTRL-F5.
Previous Version of MS-DOS	Starts the previous version of MS-DOS that was on your computer before you installed Windows 95. This option appears only if **BootMulti=1** is added in the [Options] section of the MSDOS.SYS file. This is the equivalent of pressing F4.

Note

    You can control whether the Windows Startup menu is displayed, the options available on the menu, and

the selected default by defining values in the Windows 95 MSDOS.SYS file.

Safe Mode Start

You can use Safe Mode start to get Windows 95 running when normal system startup fails. Windows 95 automatically initiates a Safe Mode start if it detects that system startup failed, the registry is corrupted, or a program requests Safe Mode start.

Safe Mode start loads only the mouse, keyboard, standard VGA, and Device Manager drivers. The Safe Mode start function keys can be used when a Windows 95 computer is using incorrect drivers or settings, so that you can start Windows 95 and reconfigure the computer by using the options in Control Panel. Safe Mode start can also be used to avoid loading drivers from the AUTOEXEC.BAT or CONFIG.SYS files.

You can also choose to use Safe Mode start in the following ways:

[?]	When you restart the computer, wait until the message "Starting Windows 95" appears, and then press F8. Choose Safe Mode.

[?]	When you restart the computer, wait until the message "Starting Windows 95" appears, and then press F5 to start Safe Mode without networking.

[?]	When you restart the computer, wait until the message "Starting Windows 95" appears, and then press F6 to start Safe Mode with networking.

Each function key sequence disables a different combination of portions of the startup process.

Action	Normal start	F5	SHIFT +F5	CTRL +F5
Process CONFIG.SYS and AUTOEXEC.BAT	Y	N	N	N
Load HIMEM.SYS and IFSHLP.SYS	Y	Y	N	N
Process Registry information	Y	N	Y	N
Load COMMAND.COM	Y	Y	Y	Y
Load DoubleSpace or DriveSpace if used	Y	Y	Y	N
Automatically execute Windows 95	Y	Y	N	N

If your registry has been deleted or badly corrupted, then Safe Mode will not start automatically. If this happens, copy the files IFSHLP.SYS and HIMEM.SYS from the Windows directory into the root directory. When you press F5, the startup sequence may stop if Windows cannot find the WIN.COM file. To continue Safe Mode start, change to the Windows directory, and then type **win /d:m** at the command prompt. This should be necessary only when the registry is very badly damaged.

Using Safe Mode Start with Networks

In corporate networking environments, users often require network connectivity to recover from a system problem. Therefore, Windows 95 provides a way to start in Safe Mode and still have network connectivity.

To use Safe Mode Start with networking

▶   When you restart the computer, wait until the message "Starting Windows 95" appears, and then press F8. Choose Safe Mode With Network Support. Or, you can press F6 when the "Starting Windows 95" message appears.

Also, Windows 95 automatically initiates a Safe Mode start if it detects that system startup failed, if the registry is corrupted, or if a program requests Safe Mode start. In this case, you can choose to press F6 to use Safe Mode with networking.

When you use Safe Mode with networking, Windows 95 completes the following startup actions:

- Loads HIMEM.SYS and IFSHLP.SYS, regardless of CONFIG.SYS settings
- Processes registry information
- Loads DoubleSpace or DriveSpace, if present
- Loads Windows 95
- Loads network drivers

Safe Mode with networking does not process the CONFIG.SYS and AUTOEXEC.BAT files, and it does not load the COMMAND.COM file.

The following Safe Mode with network scenarios are supported

Computer configuration	Run with F6	Run automatically	Run due to corrupt registry
STANDALONE COMPUTER:			
Protected mode	Supported	Supported	Not supported (1).
Common real mode	Supported	Supported	Supported
Other real mode	Use F8 (2)	Use F8 (2)	Use F8 (2).
NETWORK CLIENT:			
Real and protected mode	Supported	Supported	Not supported
Common real mode	Supported	Supported	Supported
Other real mode	Supported	Supported	Supported

1 Protected-mode networks cannot be supported if Safe Mode start is used when the registry is corrupted, because the registry is used to load drivers for the protected-mode network.

2 On computers running a third-party real-mode network, Safe Mode start cannot be supported except by using the F8 key at startup because Windows 95 will not know how to start the network outside of AUTOEXEC.BAT and CONFIG.SYS.

Safe Mode Start with Protected-Mode Networks

To support loading the protected-mode network during Safe Mode start, all network components are flagged in the registry as required for startup. Plug and Play runs normally, but loads only devices that have this flag set.

In a normal Safe Mode start, the registry is not available during protected-mode startup. Thus, there is no way to load the network in protected mode. Safe Mode start with networking enables you to access the registry and to use Configuration Manager to load only the network-related drivers. The network will load as if it were loading

normally.

Safe Mode Start with Real-Mode Networks

All real-mode networks start from AUTOEXEC.BAT or CONFIG.SYS. In a Safe Mode start, however, AUTOEXEC.BAT and CONFIG.SYS normally are not run. But clients that run from the network must start the network. Safe Mode start for standalone computers is handled differently than Safe Mode start for computers that run Windows 95 from the network.

The commands to start networks that Windows 95 knows how to start (such as Microsoft, NetWare, and Banyan) are placed in a batch file named NETSTART.BAT in the Winboot directory so that IO.SYS can find it. This allows Windows 95 to start most real-mode networks on standalone computers without running AUTOEXEC.BAT and CONFIG.SYS.

Other networks run only from AUTOEXEC.BAT and CONFIG.SYS. The only way to start these networks in Safe Mode is to carry out the following procedure:

1 When the "Starting Windows 95" message appears, press F8.

2 Choose Step-by-Step Confirmation.

3 Step through each line of the CONFIG.SYS and AUTOEXEC.BAT files, answering Yes to all network lines.

4 Answer Yes when prompted to use Safe Mode start.

Because of this, although Windows 95 can automatically detect that a Safe Mode start should occur, automatic Safe Mode start does not start the network on these computers.

Safe Mode Start for Windows 95 Running from the Network

A number of issues affect computers that run Windows 95 from the network:

   Without starting the network, the computer cannot access Windows 95 and thus cannot start in Safe Mode.

   For an automatic Safe Mode start, Windows 95 must be able to write to a file somewhere to indicate that the next system startup should be a Safe Mode start. On diskless workstations or computers that start from read-only floppy disks (the most common scenario), there is nowhere locally to store this information. The network must be started to read or write the information.

   All of these computers use some real-mode network that runs from AUTOEXEC.BAT and CONFIG.SYS.These files are needed to start the network to determine whether a Safe Mode start must occur. Because Safe Mode start does not execute CONFIG.SYS and AUTOEXEC.BAT, Safe Mode start cannot work.

For all of these reasons, Safe Mode start on client computers that run Windows 95 from the network always run CONFIG.SYS, AUTOEXEC.BAT, and NETSTART.BAT. This implies that the real-mode portion of system startup is not causing the problem that requires a Safe Mode start. This should be true almost all of the time.

Administrators can set up and debug the startup floppy disk that contains all the real mode components the computer uses. After this disk is debugged, the startup disk is usually made read-only. Thus, the startup disk will usually not be the source of the problem.

In the rare case that the startup disk is the problem, little can be done, because almost all of the operating system is stored on the network. In this case, the administrator can put a different startup disk in the computer or, if it is a diskless workstation, point it at another disk image.

Computers that transition from real-mode to protected-mode networks work under this scheme. Windows 95 can start both real-mode and protected-mode networks, as described earlier in this section. Both types of networks start normally, so they automatically handle the transition.

Reading the SETUPLOG.TXT file

[?]   Click here if you want to view the SETUPLOG.TXT file.

What is the SETUPLOG.TXT file?

The SETUPLOG.TXT file is an ASCII text file created during Windows 95 installation that contains Setup information. As Windows 95 is installed, corresponding entries are being written to the SETUPLOG.TXT file providing information on the specific steps, sequence, and error conditions encountered. This file can be useful for troubleshooting if Setup errors during installation.

Setup also uses this file if it needs to perform a Smart Recovery after an installation fails to make sure that the installation does not fail twice for the same problem. If Setup fails, you can restart the computer. Setup reviews the SETUPLOG.TXT file to determine what steps were successfully completed. If a process has a start indication but no complete indication, that part of the installation process is skipped and the next part is processed.

The SETUPLOG.TXT file can be found in the root directory.

Structure of the SETUPLOG.TXT file

The SETUPLOG.TXT file is structured in the order of the installation information written into it (as each step of the installation process is carried out, a corresponding entry is written into the SETUPLOG.TXT file).

If the system errors during installation, you can determine the probable cause of the error by examining the last entries written in the SETUPLOG.TXT file.

The structure of the SETUPLOG.TXT file can be subdivided into these basic categories:

Setup Start Parameters

[?]   Directory Selection

[?]   Begin Installation Process

[?]   Queue Needed Files

[?]   Copy Needed Files

[?]   Prepare for Reboot

Selected Setup Sections (can be copied to an MSBATCH.INF file)

[Optional Components]

[System]

[NameAndOrg]

[] batch settings: [Setup] section in an MSBATCH.INF

Setup Start Parameters

[Started]

[Dummy]

[Dialogues]

Load SETUPPP.INF as main INF

Directory Selection

[Choose Directory]

Begin installation process

[Setup]

InstallDir

Create LDIDs

Initialize Registry

Load INFs

Selected component messages

[Detection]

[Dummy]

SUEXPAND.DLL

Queue Needed Files

Node Duplicate

Node Dup-ldid!

Unique

Copy Needed Files

[FileCopy]

<srcfile>=Fully qualified destination pathname, compressed size, extracted size

Marked

Failed to mark

[Disk #]

CAB

Next Cabinet

DCsuccess

DC::Read

DC::Written

DCstart

LDID x set to

Prepare for Reboot

[Reboot]

SrcLdid

ERROR:

TPS_Flush Rename didn't succeed

VcpClose

Resolve Conflict

RootFilesRenamed

Safe Mode Command Line Start (SHIFT+F5)

If you start Windows 95 in Safe Mode at the command prompt by pressing SHIFT+F5 when the "Starting Windows 95" message appears, the registry is not accessed. HIMEM.SYS and IFSHLP.SYS are not loaded. Windows 95 is not loaded, though the registry is processed. Use this option when you want to use the MS-DOS Editor to change a configuration file when you're having problems while working in the Windows 95 graphical interface.

Note that when you do not allow the system to read the registry , IO.SYS has no information about the location of the Windows 95 directory.

Safe Mode Start without D??SPACE (CTRL+F5)

If you start Windows 95 in Safe Mode at the command prompt by pressing CTRL+F5 , DoubleSpace or DriveSpace drivers are not loaded, AUTOEXEC.BAT and CONFIG.SYS are not processed, and the registry is not examined. Use this option any time you are trying to eliminate all possible variables, but in particular to identify problems related to DoubleSpace or DriveSpace.

Check for Disk Corruption

To check for disk corruption from within Windows 95

1 In Windows Explorer, use the right mouse button to click a drive, and then click Properties.
2 Click the Tools tab.
3 In the Error-checking Status box, click Check Now.

To check for corruption from MS-DOS

1 Shut down and restart your computer.
2 When the "Starting Windows 95" message appears, press SHIFT+F5 to bypass your startup files and start in MS-DOS.
3 Change to the \WINDOWS\COMMAND directory, and then type **scandisk**.

   WARNING   Do not run any disk utilities that are not specifically designed for Windows 95.

To check for disk corruption from an MS-DOS prompt within Windows 95

1 Click the Start button, point to Programs, and then click MS-DOS Prompt.
2 To prevent conflicts with other programs, type **lock** at the command prompt.
3 Change to the \WINDOWS\COMMAND directory, and then type **scandisk** at the command prompt.
4 When Scandisk has finished, type **unlock** at the command prompt.

   WARNING   Do not run any disk utilities that are not specifically designed for Windows 95.

If the system boot software or operating system data on the disk has become corrupted, the computer will probably not start properly. Key operating system data structures that may prevent successful startup if damaged are the master boot record, the boot sector, the file allocation table, and the core operating system files.

To rewrite the master boot record

1 Insert the startup disk (created during Windows 95 Setup) in your startup drive.
2 Restart your computer.
3 Change to your startup drive (or to the \WINDOWS\COMMAND directory), and then type **fdisk /mbr** at the command prompt.

To rewrite the boot sector and the real-mode operating system files

1 Insert the startup disk (created during Windows 95 Setup) in your startup drive.
2 Restart your computer.
3 Change to your startup drive, and then type **sys c:** at the command prompt.

To detect and repair a damaged File Allocation Table (FAT)

1 Shut down and restart your computer.
2 When the "Starting Windows 95" message appears, press SHIFT+F5 to bypass your startup files and start in MS-DOS.
3 Change to the \WINDOWS\COMMAND directory, and then type **scandisk** at the command prompt.

Reading the Windows 95 DETLOG.TXT file

What is the DETLOG.TXT file?

DETLOG.TXT is an ASCII text file that contains hardware detection information created during Windows 95 Setup. The file contains information about IO ranges queried, device resources used (if detected), and error conditions encountered during detection. This file can be useful for troubleshooting if Setup fails during the detection process.

Structure of the DETLOG.TXT file

As each step of the detection process is carried out, a corresponding entry is written into DETLOG.TXT. If the computer hangs during hardware detection, you can determine the probable cause of the error by examining the last entries written in DETLOG.TXT.

Start of DETLOG.TXT file

[System Detection: 10/12/94 - 13:40:01]

      Provides the date and time that the detection was performed.

Parameters="xxxxxx"

      Shows the switches specified in the SETUP command line (i.e., SETUP /p xxxxxx).

Parameters "", Flags=01002233

SDMVer = ########

      Shows the version of SYSDETMG.DLL. The upper word is the Windows version (usually 0400), the lower word is the build number in hexadecimals. For this release of WIndows 95, the SDMVer should always be 040000bd.

SDMVer=040000bd,

WinVer = ########

      Shows the environment in which detection is run. The MS-DOS version is in the high word and the Windows version in the low word. For example, Windows 3.1 will have the low word 030a, Windows for Workgroups 3.11 will have the low word 030b, and Windows 95 will have the low word 0400.

WinVer=0614030b,

WinFlags =00000#1#

or   =00000#2#

      1 =   Run in standard mode. Detection was probably run from Mini-Windows (i.e. SETUP).

      2 =   Run in Enhanced mode.   Detection was run from Windows 3.1, Windows for Workgroups 3.1, Windows for Workgroups 3.11, orWindows 95.

WinFlags=00000c29

AvoidMem=#####h-#####h

      If these lines appear at the beginning of the DETLOG.TXT file, specifies upper memory blocks (UMBs). Detection avoids UMBs.

For example: AvoidMem=cd4a0-cd50f

DetectClass: Skip Class Media

      Specifies that detection found no hints that the computer may have a sound card (no sound drivers in the CONFIG.SYS or SYSTEM.INI files), so it skips all the sound card detection modules.

For example: DetectClass: skip class MEDIA

DetectClass: Skip Class Adapter

Specifies that detection found no hints that the computer may have a proprietary CD-ROM adapter, such as Sony, Mitsumi, and Panasonic.

DetectClass: skip class ADAPTER

DetectClass: Skip Class Net

Specifies that detection found no hints that the computer may have a network adapter.

DetectClass: skip class NET

DetectClass Override:

If one or more skip-class lines mentioned above appears in DETLOG.TXT, you will see the detection wizard page to confirm skipping those classes. At that point, you can override the decision by checking the appropriate class boxes. For each class that you check, an override line is added to DETLOG.TXT.

Custom Mode:

In Detection dialog box in Setup, you may choose to change the hardware detected during installation. The devices you tell Windows 95 not to detect are shown in DETLOG.TXT as CustomMode entries.

CustomMode: resetting class MEDIA

CustomMode: resetting class ADAPTER

; Deselected via Detection Dialog

; Don't detect EtherLinkIII

CustomMode: DETECTELNK3=0

CustomMode: DETECTELNKII=0

CustomMode: DETECTELNKI=0

CustomMode: DETECTELNK16=0

CustomMode: DETECTELNKPLUS=0

; Don't detect The following video adapters

CustomMode: DETECTCIRRUSMMAPPED=0

CustomMode: DETECTWDLAPTOP=0

CustomMode: DETECTTSENG=0

CustomMode: DETECTTRIDENT=0

CustomMode: DETECTVGA=0

; Don't detect HardCard

CustomMode: DETECTHARDCARD=0

; Don't detect Parallel port

CustomMode: DETECTLPT=0

; Don't detect the following CD-ROM drives

CustomMode: DETECTMITSUMI=0

Devices verified =

Indicates the number of devices from the registry that have been verified. If the number is 0, it usually means there was no existing registry or that the registry was clean (if you did a clean install).

Devices verified: 0

Checking for system devices

Checking for:

When system detection looks for a device, a Checking for: entry is added to DETLOG.TXT, followed by a description of the device or class being looked for. When detection is checking for a device such as the

Programmable Interrupt Controller, the Checking For entry will be followed by a QueryIOMem entry specifying the IO range checked. If a device is detected, then a Detected entry specifying the device resource information is added.

Checking for: Manual Devices

Checking for: Programmable Interrupt Controller

QueryIOMem: Caller=DETECTPIC, rcQuery=0

    IO=20-21,a0-a1

Detected: *PNP0000000 = [1] Programmable Interrupt Controller

    IO=20-21,a0-a1

    IRQ=2

QueryIOMem:

Describes the Caller, rcQuery, and IO range examined by detection.

Detected:

Added when a device is detected and verified, followed by the Plug and Play device ID, device description, and assigned resources.

Checking for: Manual Devices

Checking for: Programmable Interrupt Controller

QueryIOMem: Caller=DETECTPIC, rcQuery=0

    IO=20-21,a0-a1

Detected: *PNP0000000 = [1] Programmable Interrupt Controller

    IO=20-21,a0-a1

    IRQ=2

Checking for: Direct Memory Access Controller

QueryIOMem: Caller=DETECTDMA, rcQuery=0

    IO=0-f,81-83,87-87,89-8b,8f-8f,c0-df

Detected: *PNP0200000 = [2] Direct Memory Access Controller

    IO=0-f,81-83,87-87,89-8b,8f-8f,c0-df

    DMA=4

Detecting Net Cards

Checking for: Network Cards using Novell ODI Driver

Checking for: Network Cards using Novell IPX.COM

Checking for: EISA Network Cards

Checking for: Network Cards using Microsoft Windows

Checking for: Network Cards using Microsoft LanMan

PROTOCOL.INI Section in DETLOG.TXT

If detection finds a PROTOCOL.INI file, it saves the net card section in DETLOG.TXT.

Checking for: Network Cards using Microsoft Windows For Workgroups

; path to WFW protocol.INI

WFW: path=d:.ini

; protocol.ini mac driver section

Protocol.ini: [MS$EE16]

Protocol.ini: DriverName=EXP16$

Protocol.ini: IRQ=10

Protocol.ini: IOADDRESS=0x300

Protocol.ini: IOCHRDY=Late

Protocol.ini: TRANSCEIVER=Twisted-Pair(TPE)

Protocol.ini: netcard key=ms$ee16

NCD: detecting net card

> Indicates that detection has found a net card via safe detection (usually PROTOCOL.INI), but since we have hardware detection code for this net card, we call the this code to verify the card. If the card is verified, a "Detected" line will follow.

NCD: detecting net card *pnp812d

QueryIOMem: Caller=DETECTWFW, rcQuery=0

> IO=300-30f

Detected: *PNP812D000 = [9] Intel EtherExpress 16 or 16TP

> IO=300-30f

> IRQ=10

Protocol.ini: [ASYMAC]

Protocol.ini: Ports=1

Protocol.ini: MaxFrameSize=1514

Protocol.ini: CompressSend=1

Protocol.ini: CompressRecv=1

Protocol.ini: FramesPerPort=2

Protocol.ini: XonXoff=0

Protocol.ini: CompressBCast=0

Protocol.ini: netcard key=asymac

Detected: *PNP8387000 = [10] Microsoft Remote Access Driver

Further checking for system devices

> The detection process continues examining system hardware. In the example below, the | in the IO= line (for exampleIO=200-201 | 3e0-3e1) is used to denote a range of IO entries checked during the detection process. The actual DETLOG.TXT file will contain a QueryIOMem: and an IO= line for each IO address checked.

> For most devices, muliple IO addresses are checked; and for some devices, many IO addresses are checked, which can result in a detailed and redundant device detection list. For the sake of brevity, these IO address ranges checked during detection are grouped on one IO line.

> Each IO= line usually has only a single address specified (for example, IO=200-201). If multiple addresses are specified, they are separated by a comma (for example, IO=3b0-3bb,3c0-3f).

Checking for SCSI adapters

Checking for: Acculogic EISApport SCSI Host Adapter

Checking for: UltraStor 24F/24FA EISA SCSI Host Adapter

Checking for: Adaptec AHA-174x EISA SCSI Host Adapter

Checking for: System Bus

Detected: *PNP0A03000 = [11] PCI Bus

Checking for: Advanced Power Management Support

Checking for: PS/2 Style Mouse

QueryIRQDMA: Caller=DETECTPS2MOUSE, rcQuery=0

      IRQ=12

Detected: *PNP0F0E000 = [12] PS/2 compatible mouse

      IRQ=12

Checking for: ATI Ultra Pro/Plus (Mach 32) Display Adapter

QueryIOMem: Caller=DETECTMACH32, rcQuery=0

      IO=3b0-3bb,3c0-3df

QueryIOMem: Caller=DETECTMACH32, rcQuery=0

      Mem=a0000-affff

Detected: *PNP090A000 = [13] ATI Ultra Pro (mach32)

      IO=3b0-3bb,3c0-3df

      Mem=a0000-affff

Checking for: Standard Floppy Controller

QueryIOMem: Caller=DETECTFLOPPY, rcQuery=0

      IO=3f0-3f5,3f7-3f7

QueryIOMem: Caller=DETECTFLOPPY, rcQuery=0

      IO=370-375,377-377

Detected: *PNP0700000 = [14] Standard Floppy Disk Controller

      IO=3f0-3f5,3f7-3f7

      IRQ=6

      DMA=2

Checking for: Serial Communication Port

QueryIOMem: Caller=DETECTCOM, rcQuery=0

      IO=3f8-3ff

Detected: *PNP0500000 = [15] Communications Port

      IO=3f8-3ff

      IRQ=4

QueryIOMem: Caller=DETECTCOM, rcQuery=0

      IO=2f8-2ff

Detected: *PNP0500001 = [16] Communications Port

      IO=2f8-2ff

      IRQ=3

QueryIOMem: Caller=DETECTCOM, rcQuery=0

      IO=3e8-3ef

QueryIOMem: Caller=DETECTCOM, rcQuery=0

      IO=2e8-2ef

Checking for: Serial Mouse

Checking for: Generic IDE/ESDI Hard Disk Controller

QueryIOMem: Caller=DETECTESDI, rcQuery=0

      IO=1f0-1f7 |3f6-3f6

Detected: *PNP0600000 = [17] Generic IDE/ESDI Hard Disk Controller

      IO=1f0-1f7,3f6-3f6

IRQ=14

Checking for: Bus Mouse

QueryIOMem: Caller=DETECTBUSMOUSE, rcQuery=0

        IO=23c-23f

Miscellaneous Notes

If you are setting up Windows 95 from within an earlier version of Windows, or if you are using the Add New Hardware wizard in Control Panel, detection calls the Configuration Manager to verify the existing detected devices in the registry.

If you run the Add New Hardware wizard in Control Panel and choose to detect your device automatically (which is recommended), detection will create a new DETLOG.TXT file.

Detection does not detect enumerated devices; for example, ISAPnP devices, PCI devices, and PCMCIA devices.

If the computer hangs or crashes during detection, and you choose Smart Recovery when you rerun Setup, detection will append new information to the previous DETLOG.TXT file instead of creating a new one. If you run Setup again without choosing Smart Recovery, and a DETLOG.TXT file already exists, the existing file is renamed DETLOG.OLD. Only one instance of the *.OLD file is saved.

If Setup produces errors during installation

To search for additional information about a Setup error message or problem, click Search at the top of this topic.

Check for missing or damaged file

If the error refers to a driver or system component file, check to see if the file exists, is in the expected location, and has the correct size, date, and version.

Check the Windows 95 Release Notes

Check the Windows 95 Release Notes for known information about hardware and software issues.

What to do if you expect Setup to conflict with a device

Start Setup by typing **setup /i,** or deselect the specific hardware device from the Detection dialog during Setup.

Check Windows 95 Smart Recovery, note the error, and then restart Setup

Setup will detect the failed installation and prompt you to run Smart Recovery.

Smart Recovery examines the SETUPLOG.TXT and DETCRASH.LOG files to determine what caused the failed installation (for example, device detection on a particular adapter may have caused the computer to hang). Smart Recovery uses this information and avoids performing detection on that specific device during Setup.

If Setup fails after using Smart Recovery, use Smart Recovery again

It is possible that more than one condition could interrupt the Setup process. However, each time Setup is run by using Smart Recovery, the error is noted in SETUPLOG.TXT so that it can be avoided in future attempts.

Make sure hardware and adapters are on the hardware compatibility list

     Click here if the system stops during the hardware detection process.

Use Setup error messages

If you have problems during Setup, you may be able to get useful troubleshooting information from the SETUPLOG.TXT log file that Setup creates. This file is located in the root directory of your startup drive. All errors that occur during Setup are logged in SETUPLOG.TXT.

WINBOOT.INI/MSDOS.SYS Entries

Windows 95 uses the MSDOS.SYS file to store INI entries that control startup factors. The MSDOS.SYS file is located in the root directory of your startup drive (and your startup host drive, if compressed), and it serves the same purpose as the WINBOOT.INI file in earlier versions of Windows.

Windows 95 IO.SYS will <u>open</u> this INI file as WINBOOT.INI or as MSDOS.SYS.

Reading the BOOTLOG.TXT file

[?]   Click here if to view the BOOTLOG.TXT file.

What is the BOOTLOG.TXT file?

BOOTLOG.TXT is an ASCII text file that contains Windows 95 startup information. During Setup and every time Windows 95 starts (if boot logging is selected), Windows 95 writes log entries that provide information about the specific steps in the startup sequence and any error conditions. This file can be useful for troubleshooting if Setup fails during startup.

BOOTLOG.TXT is created during installation. It can also be created by starting your computer and pressing F8 when you see the "Starting Windows 95" prompt, and then choosing the option to create a BOOTLOG.TXT file. BOOTLOG.TXT is located in the root directory of the startup drive (usually drive C).

Structure of the BOOTLOG.TXT file

As each step of the startup process occurs, a corresponding entry is added to BOOTLOG.TXT. If an error occurs, you may be able to determine the cause by examining the entries in BOOTLOG.TXT.

BOOTLOG.TXT is divided into five areas:

[?]   Loading of real-mode drivers

[?]   Loading of VxDs

[?]   System-critical initialization of VxDs

[?]   Device initialization of VxDs

[?]   Successful VxD initialization

Loading of real-mode drivers (example of section)

    ; Loading of real mode drivers.

    ; If W95 is unable to load due to lack of XMS memory, check the loading of HIMEM.SYS.

    Loading Device = G:\WIN95\HIMEM.SYS

    LoadSuccess   = G:\WIN95\HIMEM.SYS

    Loading Device = G:\WIN95\SETVER.EXE

    LoadSuccess   = G:\WIN95\SETVER.EXE

    Loading Device = G:\WIN95\EMM386.EXE

    LoadSuccess   = G:\WIN95\EMM386.EXE

    Loading Device = G:\WIN95\DBLBUFF.SYS

    LoadSuccess   = G:\WIN95\DBLBUFF.SYS

    ; If W95 on your SCSI HD is unable to load, check the loading of DBLBUFF.SYS.

    Loading Device = G:.SYS

    LoadSuccess   = G:.SYS

Loading of VxDs (example of section)

    ; Loading of W95 Virtual Device Drivers

    Loading Vxd = VMM

    LoadSuccess = VMM

    Loading Vxd = G:\DBLSPACE.BIN

    LoadSuccess = G:\DBLSPACE.BIN

    ; If you cannot access D??SPACE drives, check the loading of compression driver.

    Loading Vxd = CONFIGMG

    LoadSuccess = CONFIGMG

    Loading Vxd = IOS

LoadSuccess = IOS

Loading Vxd = <u>VFAT</u>

LoadSuccess = VFAT

Loading Vxd = <u>vserver</u>.vxd

LoadFailed   = vserver.vxd

--(the above is an example of load failure of a VxD)

System-critical initialization of VxDs (example of section)

SYSCRITINIT   = VMM

SYSCRITINITSUCCESS   = VMM

SYSCRITINIT   = CONFIGMG

SYSCRITINITSUCCESS   = CONFIGMG

SYSCRITINIT = VFAT

SYSCRITINITSUCCESS = VFAT

Device initialization of VxDs (example of section)

DEVICEINIT   = VMM

DEVICEINITSUCCESS   = VMM

DEVICEINIT   = CONFIGMG

DEVICEINITSUCCESS   = CONFIGMG

DEVICEINIT   = VFAT

DEVICEINITSUCCESS   = VFAT

Initialization success of VxDs (example of section)

INITCOMPLETE = VMM

INITCOMPLETESUCCESS = VMM

INITCOMPLETE = COMFIGMG

INITCOMPLETESUCCESS = CONFIGMG

INITCOMPLETE = SCSIPORT

INITCOMPLETESUCCESS = SCSIPORT

INITCOMPLETE = VFAT

INITCOMPLETESUCCESS = VFAT

Is there a "Bad or Missing COMMAND.COM" error?

Check the SHELL= line in the CONFIG.SYS file to verify that the path specified in the line is valid.

❓   Click here to check the current CONFIG.SYS file.

To replace the Windows 95 COMMAND.COM file

▶   Copy COMMAND.COM from the MS-DOS Setup Disk #1 to the host drive, and then restart your computer.

Is there a corrupt CVF error?

The DBLSPACE.CVF file apparently is damaged and is preventing the computer from starting. Restart the computer from an MS-DOS boot disk that does NOT contain DBLSPACE.BIN (or press SHIFT+F5 when you see the "Starting Windows 95" message), and then run ScanDisk on the damaged CVF.

Is a driver failing to load?

Verify the existence of the driver and the correct syntax for loading it. Replace or reinstall the failing driver.

Is a driver locking up during startup?

Restart the computer, and bypass the driver by pressing SHIFT+F8 - Step-by-Step confirmation. when you see the "Starting Windows 95" message. Verify whether the computer will start when that driver does not load.

Step-by-Step Confirmation (SHIFT+F8)

When you press F8 to display the Windows Startup menu, and then choose "Step-by-step confirmation," or press SHIFT-F8 when you see the "Starting Windows 95" message, you will receive the following prompts:

Load DoubleSpace (or DriveSpace) driver [Enter=Y, Esc=N]

Process the system registry [Enter=Y, Esc=N]

Create a startup log file (BOOTLOG.TXT)   [Enter=Y, Esc=N]

Process your startup device drivers (CONFIG.SYS) [Enter=Y, Esc=N]

(Each line from CONFIG.SYS is displayed with an [Enter=Y, Esc=N])

Process your startup command file (AUTOEXEC.BAT) [Enter=Y, Esc=N]

(Each line from AUTOEXEC.BAT is displayed with an [Enter=Y, Esc=N])

WIN.COM [Enter=Y, Esc=N]

Load all Windows drivers (only if you answer Yes to running WIN.COM)

If you answer Yes to each prompt or press TAB to automatically accept options at each stage, the result is the same as starting Windows 95 normally, with the exception that the logo is not displayed.

Answering No to "Load all Windows drivers" will load Windows in Safe Mode; Windows will not reference the registry, loading standard VGA drivers, the mouse and keyboard drivers, and device manager drivers. This is the same as loading windows with the /D:M switch, as described below.

You are also prompted if the registry is missing important keys (for example, SYSTEM) or if the previous system startup has failed (for example, if the WNBOOTNG.STS signature file still exists in the Windows directory). The message is similar to the following:

Windows has detected a registry/configuration error.

-or-

Windows did not finish loading on the previous attempt.

A clean start is recommended, to allow you to remove drivers or reconfigure your system. Do you wish to clean start [Y,N]?

If you answer "Yes", the computer restarts in Safe Mode.

WIN.COM Switches

The following switches can be used to start Windows 95 at the command prompt when you need to isolate a setting that was not configured correctly:

Syntax

>   WIN [/B] [/D:[F] [M] [N] [S] [V] [X]]

Parameters

/B

>   Creates a BOOTLOG.TXT file that records system messages generated during system startup.

/D

>   Used for troubleshooting when Windows 95 does not start correctly. The following switches are used with /D:

Switch	Meaning
F	Turns off 32-bit disk access. This is equivalent to 32BitDiskAccess=FALSE in SYSTEM.INI.
M	Enables Safe Mode. This is auto-matically enabled during Safe Mode Start (F5).
N	Enables Safe Mode mode with net-working. This is automatically enabled during Safe ModeStart (F6).
S	Specifies that Windows 95 should not use ROM address space between F000:0000 and 1 MB for a breakpoint. This is equivalent to SystemROMBreakPoint=FALSE in SYSTEM.INI. Use this switch if Windows 95 stalls during system startup.
V	Specifies that the ROM routine will handle interrupts from the hard-disk controller. This is equivalent to VirtualHDIRQ=FALSE in SYSTEM.INI. Use this switch if Windows 95 stalls during system startup.
X	Excludes all of the adapter area from the range of memory that Windows 95 scans to find unused space. This is equivalent to EMMExclude=A000-FFFF in SYSTEM.INI.

To Remove Unnecessary Drivers or TSRs

If you are using MS-DOS 6.2x, try temporarily removing specific drivers or TSRs from loading via the <u>CONFIG.SYS</u> and <u>AUTOEXEC.BAT</u> (and *.BAT files called from the AUTOEXEC.BAT), and then attempt to reproduce the problem. To prevent specific drivers from loading, restart your computer, and then press F8 when you see the "Starting Windows 95" message. Choose Step-By-Step Confirmation.

If you are using MS-DOS 6.0, choose Step-By-Step Confirmation to temporarily remove specific drivers or TSRs from the CONFIG.SYS. You can also choose to not run AUTOEXEC.BAT, but you cannot interactively disable specific drivers.

If you are using MS-DOS 5.0, or have determined which driver is producing the error, edit CONFIG.SYS and AUTOEXEC.BAT, remove or remark out all unnecessary drivers or TSRs, and then try again.

Required System Drivers

Do not remove or bypass the following drivers during the "Step by Step confirmation" menu option or while editing the CONFIG.SYS or AUTOEXEC.BAT.

Hard disk drivers

SQY55.SYS	SSTBIO.SYS	SSTDRIVE.SYS
AH1544.SYS	ILM386.SYS	ASPI4DOS.SYS
SCSIHA.SYS	SCSIDSK.EXE	SKYDRVI.SYS
ATDOSXL.SYS	NONSTD.SYS	

Partition drivers

DMDRVR.BIN	SSTOR.SYS	HARDRIVE.SYS
EVDR.SYS	FIXT_DRV.SYS	LDRIVE.SYS
ENHDISK.SYS		

Compression drivers

STACKER.COM	SSWAP.COM	SSTOR.EXE
DEVSWAP.COM	DBLSPACE.BIN	DRVSPACE.BIN

Device Configuration Tools

The following diagnostic tools may help you learn more about your computer and troubleshoot problems:

Microsoft Diagnostics

This MS-DOS utility shipped with versions of Windows 3.1, Windows for Workgroups, and MS-DOS 6.x. If MSD.EXE is available in your MS-DOS path, you can start it by clicking the following button.

          Microsoft Diagnostics

Microsoft System Information

This Windows utility shipped with versions of many Microsoft products. If MSINFO.EXE is available in your MS-DOS path, you can start   it by clicking the following button.

          Microsoft System Information

Windows 95 Device Manager

The Device Manager component in Windows 95 enables you to view device configuration information, as well as change that information. It should be used with caution. If you are viewing this topic in Windows 95, you can start Device Manager by clicking the following button. Otherwise, double-click the System icon in Control Panel, and then click the Device Manager tab.

          Windows 95 Device Manager

If your computer stops during hardware detection

Make sure that at least three minutes have passed with neither disk nor screen activity (signified by the moving magnifying glass). Some detection routines are lengthy, and the computer may appear to stop temporarily while they are running. If the computer has truly stopped, carry out the following procedure:

To restart Setup after a failure

1 Press F3 or the Exit button. If the computer responds to the Exit button, click No to continue the Setup process.

2 If the computer does not respond to the Exit button, try restarting your computer by pressing CTRL+ALT+DEL. If that method fails, then turn your computer off, wait at least 10 seconds, and then turn it back on again.

3 Rerun Setup. Setup will ask you whether you want to use Smart Recovery to recover the failed installation. Choose Smart Recovery, and then click Continue. The hardware detection will run, but it will skip the portion that caused the initial failure.

4 If the computer stops again during the hardware detection process, go back to step 2 and repeat the process until the hardware detection portion of Setup completes successfully.

Once Setup has finished and Windows 95 is running, you may want to look in the following files to find specific information about what caused the problem:

    C:\SETUPLOG.TXT
    C:\DETLOG.TXT
    C:\BOOTLOG.TXT
    SYSTEM.DAT

To copy the SYSTEM.DAT file, use the ATTRIB command at the MS-DOS prompt to remove the System and Hidden attributes. After you have copied the file, use the ATTRIB command again to reset the file attributes to their original state.

Error 1002 occurs during Setup

If you get Setup Error 1002 when running Setup, there might be a conflict with your <u>CD-ROM</u> drivers. Try carrying out the following procedure:

1 Use the XCOPY command to copy all of the files and subdirectories in the RETAIL directory on the CD-ROM to your hard disk or to a network drive.

2 Comment out all of the CD-ROM drivers (such as MSCDEX and ASPI drivers) from your <u>AUTOEXEC.BAT</u> and <u>CONFIG.SYS</u> files.

3 Install Windows 95 from the hard disk or network.

The error "Cannot open file *.INF..." occurs

If you receive this error during Setup, you may need to free up memory. You can do this by disabling SMARTDRV from AUTOEXEC.BAT or by quitting any running programs in Windows.

The error "Bad or Missing <Filename>" occurs when starting Windows 95

If you receive a "Bad or missing filename" message when the computer is starting, where filename may contain HIMEM.SYS, IFSHLP.SYS, or EMM386.EXE, your computer may need a device driver to access the drive Windows 95 is installed on. If this is the case, you will need to move the device= line that contains the device driver to the beginning of your CONFIG.SYS file so that the driver is available when CONFIG.SYS tries to load files from the Windows 95 directory.

Problems occur while Setup is copying files

If this occurs, exit Setup, restart your computer, and then rerun Setup. When you are asked whether you want to use Smart Recovery, <u>select</u> the Smart Recovery option, and then click Continue. The file-copying process should complete at this point.

The error "Incorrect MS-DOS version. MS-DOS 3.1 or greater required" occurs

You may see this error when starting Setup from MS-DOS if you are using the 386MAX software utility. If you receive this error, you will need to temporarily disable the 386MAX commands from AUTOEXEC.BAT and CONFIG.SYS, and then run Setup again.

Version conflicts occur when upgrading Windows for Workgroups 3.x

When installing over Windows for Workgroups 3.1 or 3.11, you may get warnings during Setup that the existing files on your computer are newer than the files that Windows 95 is trying to install. This error is incorrect, and you should answer YES or YES TO ALL, and install the Windows 95 files. You may see this error for the following files:

LOGONOFF.EXE   NETWATCH.EXE   NDIS.386

NDIS2SUP.386   NETBEUI.386   NWLINK.386

NWBLINK.386   VNETSETUP.386   VREDIR.386

VSERVER.386

The error "Setup unable to find valid Boot Partition" occurs

If you receive this error message, you may have disk-compression software or network components that are mapping over the startup drive. An example of this is if you are mapping a network drive to E:\, but E:\ is the hidden <u>host</u> drive for your disk-compression software. Another example is if you are using LANtastic Software, and your drive C is being <u>mapped</u> or <u>shared</u>. To work around these problems, remove the drivers from your <u>CONFIG.SYS</u> and <u>AUTOEXEC.BAT</u> files, and then run Setup again.

If you are using disk-compression software, ensure that none of your mapped network drive letters conflict with the host drive for your disk compression.

The error "IFSMGR Unable to Install Helper Hooks" occurs when starting Windows 95

[?]   Make sure that you have not made a connection to a network <u>server</u> in real mode.

[?]   Check your <u>AUTOEXEC.BAT</u> file to eliminate such things as net time commands.

Setup conflicts with virus protection software

If your computer stops responding after all files have been copied, or if you receive an error at this point, it may be due to virus protection software. Some computers have virus protection built into the ROM BIOS. You should disable the virus-protection software, or run your computer's configuration program to disable virus checking, and then rerun Setup.

The computer will not start after Windows 95 is installed

If your computer will not start after you install Windows 95, you may need to disable the ISA enumerator. This software detects a new type of PC adapter that can be detected and configured from the operating system. The detection sequence requires the ISA enumerator to do I/O on some ports. Although every effort has been made to avoid ports commonly in use, you may have hardware which is also trying to use these I/O ports.

To disable the ISA enumerator

    Remove the following line from the [386Enh] section of SYSTEM.INI:

   device = ISAPNP.386

Accessibility Features

The Accessibility Options icon in Control Panel provides properties that enable you to control most of the accessibility features in Windows 95. The properties you can set include turning the accessibility features on or off, in addition to customizing keyboard, sound, display, and mouse operation for your particular needs. For more specific information installing accessibility features, refer to the Windows 95 on-line help topic, "Adding accessibility options".

If you are currently viewing this in Windows 95, Click here to display the help topic.

All the features described in the following sections work with both Windows-based and MS-DOSbased programs. The behavior and hot-key activation sequences are designed to be compatible with earlier versions of Windows and with other operating systems that support these same features.

Keyboard Features

Mouse Features

Visual Features

Audio Features

Other Features

Getting More Information for People with Disabilities

Keyboard Features

In addition to the Accessibility keyboard features below available with Windows, many operations in Windows 95 have keyboard equivalents that enhance your productivity.   Click here [?] to display information on Keyboard Shortcuts for Windows 95".

[?]   FilterKeys

[?]   MouseKeys

[?]   SerialKeys

[?]   Show Extra Keyboard Help

[?]   StickyKeys

[?]   ToggleKeys

FilterKeys

The FilterKeys feature instructs your keyboard to ignore accidental or repeated keystrokes. You can also adjust the keyboard repeat rate, which is the rate at which a key repeats when you hold it down.

If you have Accessibility Features installed, and wish information on activating FilterKeys, refer to the Windows 95 on-line help topic, "Turning on FilterKeys"

If you are currently viewing this in Windows 95, Click here to display the help topic.

Toggle Keys

The ToggleKeys feature instructs your computer to play a high sound when the CAPS LOCK, SCROLL LOCK, or NUM LOCK key is toggled on and a low sound when any of those keys is toggled off.

People with visual impairments may not be able to see the lights on the keyboard that indicate CAPS LOCK, NUM LOCK and SCROLL LOCK status. ToggleKeys provides audio cues high and low beeps to tell you whether these keys are active or inactive. If ToggleKeys is enabled, when you press one of these keys and it turns on, you will hear a high beep. When you press one of these keys and it turns off, you will hear a low beep.

If you have Accessibility Features installed, and wish information on activating ToggleKeys, refer to the Windows 95 on-line help topic, "Turning on ToggleKeys"

If you are currently viewing this in Windows 95, Click here to display the help topic.

StickyKeys

Many software programs require you to press two or three keys at one time. For people who type using a single finger or a mouthstick, that isnt possible. StickyKeys allows you to press one key at a time and instructs Windows to respond as if the keys had been pressed simultaneously.

The StickyKeys feature enables you to press a modifier key (SHIFT, CTRL, or ALT) and have it remain active until a non-modifier key is pressed. Pressing a modifier key twice in a row locks the key down until it is tapped a third time. This is useful for people who have difficulty pressing two keys simultaneously.

When StickyKeys are active three rectangles, representing the SHIFT, CTRL and ALT keys, will appear in the System Tray on the Taskbar. As each modifier key is held down by the StickyKeys feature, the corresponding rectangle appears filled.

If you have Accessibility Features installed, and wish information on activating StickyKeys, refer to the Windows 95 on-line help topic, "Turning on StickyKeys "

If you are currently viewing this in Windows 95, Click here to display the help topic.

SerialKeys

This feature, in conjunction with a communications aid interface device, enables you to control the computer by using an alternative input device. Such a device needs only to send coded command strings through the computers serial port to specify keystrokes and mouse events, which are then treated as typical keyboard or mouse input. This feature is designed for people who are unable to use the computer's standard keyboard and mouse

If you have Accessibility Features installed, and wish information on setting up a serial input device, refer to the Windows 95 on-line help topic, "Using an alternative input device"

If you are currently viewing this in Windows 95, Click here to display the help topic.

MouseKeys

This feature lets you control the mouse pointer by using the keyboard. Although Windows 95 is designed to allow you to perform all actions without a mouse, some programs might still require one, and a mouse might be more convenient for some tasks. MouseKeys is also useful for graphic artists and others who need to position the pointer with great accuracy. You do not need to have a mouse to use this feature.

It can be useful to combine use of MouseKeys and a physical mouse. For example, you can use the standard mouse to move quickly around the screen, and then use MouseKeys to move more precisely (unit by unit) to your final destination. Some people cannot use the standard mouse while simultaneously holding down the mouse button, so you can use MouseKeys to lock down the currently active mouse button, then move the mouse cursor by using MouseKeys or the real mouse, and then release the mouse button by using MouseKeys.

Click   here for the numeric keyboard map used by MouseKeys.

When active, a mouse icon will appear in the System Tray of the Taskbar. The icon may show either the left or right button shaded, depending on which is selected for use with the MouseKeys feature. If you are working with both buttons (equivalent to using the middle button on a three-button mouse), both buttons are shaded. If you lock down one or more mouse buttons by using the INS key, the status indicator shows those buttons as filled, rather than shaded. (To release them, press DEL.)

If you have Accessibility Features installed and are viewing this in Windows 95, and wish more information on using MouseKeys, click here [?]   to refer to the Windows 95 on-line help topic, "Moving the mouse pointer by using MouseKeys"   If you wish information on activating MouseKeys, click here
[?] to refer to the Windows 95 on-line help topic, "Turning on MouseKeys"

MouseKeys Numeric Keypad Map
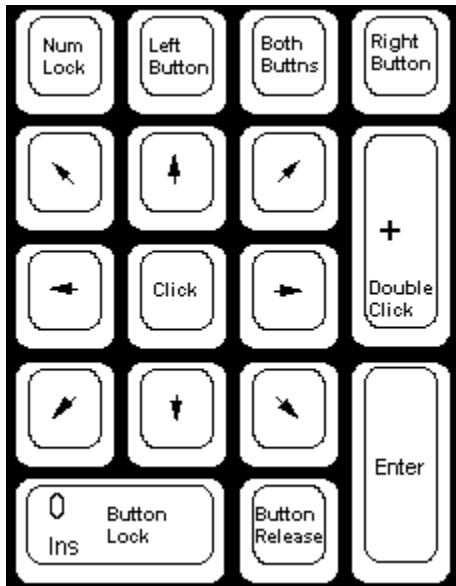
Show Extra Keyboard Help

Windows 95 enables you to specify a keyboard preference option that informs programs that you prefer to use the keyboard rather than the mouse. You can turn on this option to have programs that support this feature display any keyboard-related elements or instructions that might otherwise be hidden.

If you have Accessibility Features installed, and wish information on enabling this keyboard preference, refer to the Windows 95 on-line help topic, "Displaying extra keyboard Help in programs"

If you are currently viewing this in Windows 95, Click here to display the help topic.

Mouse Features

There are a number of options that permit you to use your mouse more effectively:

❓ Adjusting Window Borders

❓ MouseKeys

❓ IntelliType Users

❓ Pointer Appearance

❓ Pointer Speed

❓ Pointer Trails

Adjusting Window Borders

If you have trouble positioning the mouse on a windows border so that you can adjust the window size, or you cannot see the border of windows, you may benefit by changing the color and or size of the border.

If you would like more information on how to adjust windows borders, refer to the Windows 95 on-line help topic, " Changing the way the items on your desktop look "

If you are currently viewing this in Windows 95, Click here to display the help topic.

IntelliType Users

The Intellitype software that comes with the Microsoft Mouse 2.0 and the Microsoft Natural Keyboard provides a number of features that permit you locate and work with your mouse pointer better:

 PointerWrap

 SnapTo

 Sonar

 Vanish

Pointer Appearance

By changing your pointer's look, you can more easily locate it on screen or determine its state of operation:

 Pointer Animation

 Pointer Color

 Pointer Size

Pointer Animation

Windows 95 also features a set of animated pointers for better viewing. If desired, animated pointers can be created using the AniEdit program (available as one of the utilities with the Windows 95 Resource Kit). Microsoft Plus! contains a number of animated pointers which may enhance visibility of the mouse pointer.

For more specific information about how to change the appearance of your mouse pointer, refer to the Windows 95 on-line help topic, "Changing the appearance of your mouse pointer".

If you are currently viewing this in Windows 95, Click here to display the help topic.

Pointer Color

Changing the color of the mouse pointer may provide better visibility . If desired, colored pointers can be created using the ImageEdit program (available as one of the utilities with the Windows 95 Resource Kit). Users of Microsoft Plus! can install color schemes and <u>select</u> from red, gray, yellow, green, or violet 16-bit color schemes for the mouse pointer.

Pointer Size

Changing the size of the mouse pointer can make it easier to see. Windows 95 has three different sizes of the standard Windows Cursor Scheme which can improve the visibility of the mouse pointer.

For more specific information about how to change the appearance of your mouse pointer, refer to the Windows 95 on-line help topic, "Changing the appearance of your mouse pointer".

If you are currently viewing this in Windows 95, Click here to display the help topic.

Pointer Speed

Changing the pointer speed can make it easier to move the mouse pointer by adjusting the response time of the mouse.

For more specific information about how to change the speed of your mouse pointer, refer to the Windows 95 on-line help topic, "Adjusting the speed of your mouse pointer".

If you are currently viewing this in Windows 95, Click here to display the help topic.

Pointer Trails

The mouse trails feature can make it easier to see the mouse pointer while it is moving by leaving behind an animated trail of pointer images.

For more specific information about adding trails to your mouse pointer, refer to the Windows 95 on-line help topic, "To turn on and adjust the mouse pointer trail".

If you are currently viewing this in Windows 95, Click here to display the help topic.

Note:

    You can only turn on the mouse trails if the feature is supported by your display driver. If the mouse trails option is disabled, contact your display driver manufacturer to find out about availability of an updated driver.

PointerWrap

Users of the Microsoft IntelliType software can utilize the PointerWrap option to allow the mouse pointer to wrap past the edge of the screen.

SnapTo

Microsoft IntelliType software users can utilize the SnapTo option, allowing the pointer to snap to the <u>default button</u> in dialog boxes.

Sonar

Users of the Microsoft IntelliType software can utilize the Sonar option to provide better visibility of the mouse pointer. Sonar displays a series of concentric circles around your pointer when you press and release the CTRL key.   Sonar is especially useful on monochrome or laptop screens where the pointer may be hard to locate.

Vanish

Users of the Microsoft IntelliType software can utilize the Vanish option to make the mouse pointer disappear when you begin typing

Visual Features

By changing how Windows 95 looks on screen, you may find it easier to move around and work with screen objects:

     Adjusting the Desktop Pattern or Wallpaper

     Adjusting the Icon Size

     Adjusting the Rate at Which Objects Flash

     Adjusting Screen Font Size

     Adjusting Window Borders

     High-Contrast Mode

     Limiting the Number of Fonts

     Setting Size and Color Schemes

Adjusting the Desktop Pattern or Wallpaper

If the desktop pattern or <u>wallpaper</u> causes eye strain, you can adjust them using the Display icon in   Control Panel.

For more specific information about changing the desktop, refer to the Windows 95 on-line help <u>topic</u>, "Changing the background of the desktop".

If you are currently viewing this in Windows 95, Click here to display the help <u>topic</u>.

Adjusting the Icon Size

If you have difficulty seeing or recognizing the various icons that are displayed, you can adjust the display so that they will be larger.   You can increase the number of points used to display each icon using the Large Icon view.   Normally, icons are displayed 32 points wide and 32 points high.   Icons are always square.

If you are currently viewing this in Windows 95, you may find more specific information about changing items such as icons, click here [?] to refer to the Windows 95 on-line help topic, "Changing the way the items on your desktop look ".   For information on changing items in a folder , click here

[?] to refer to the Windows 95 on-line help topic, " Changing the appearance of items in a folder."

Adjusting the Rate at Which Objects Flash

Repetitive flashing signals can trigger seizures in some individuals. You can adjust the rate at which most objects flash to <u>select</u> a frequency that is less likely to trigger seizures. Programs are advised to tie all their flashing signals to the cursor blink rate.

For more specific information about changing the blinking cursor's rate, refer to the Windows 95 on-line help <u>topic</u>, "Adjusting the cursor blink rate".

If you are currently viewing this in Windows 95, Click here to display the help <u>topic</u>.

Adjusting Screen Font Size

Depending on the capabilities of your display adapter, you might be able to choose between two sizes for the Windows system <u>font</u> or specify a custom font size to scale information on screen.

You cannot choose a system font larger than the two choices offered. However, if Font Size choices are not available, or if the font still isnt large enough for you, consider using a commercial screen magnification utility. Such utilities provide pan and zoom capabilities to enable you to view a desktop thats larger than your actual display.

The system font is used to display information in some programs and dialog boxes. The system font is always available, even in low-<u>memory</u> situations and critical error conditions, so it cannot be scaled. You can <u>select</u> either a large or small font appropriate for your display settings.

If you are currently viewing this in Windows 95, you may find more specific information about changing items such as fonts in Windows 95 on-line help.

To size system fonts, click here to refer to the Windows 95 on-line help <u>topic</u>, "Using larger or smaller display fonts".

To change the look of your fonts, click here to refer to the Windows 95 on-line help <u>topic</u>, "Changing the way the items on your desktop look ".

To change to fonts for easier reading, click here to refer to the Windows 95 on-line help <u>topic</u>, "Turning on High Contrast."

Changing the font or color of a Help <u>topic</u>, click here to refer to the Windows 95 on-line help <u>topic</u>, "Changing the font or color of a Help <u>topic</u>."

Note:

Both the Font Size and Custom Font Size features may only be available for high-resolution displays. You can change the screen resolution using the Settings tab in the Display properties. However, not all display adapter/monitors support high-resolution mode.

High-Contrast Mode

Many people with low vision require a high degree of contrast between foreground and background objects, in order to distinguish the objects. For example, some people may not be able to easily read black text on a gray background, or text drawn over a picture. With one global setting, you can now instruct Windows 95 and programs to display information with a high degree of contrast. Activating high-contrast mode automatically enhances your current color scheme.

Windows 95 color schemes enable   you to choose from several well-designed sets of screen-color options, designed both to match users individual tastes and to meet their visual needs. The new color schemes in Windows 95 include high-contrast colors, such as white text on a black background, or black text on a white background. These high-contrast color schemes optimize the visibility of screen objects, making it easier for people with visual impairments.

For more specific information about changing contrast for easier reading, refer to the Windows 95 on-line help topic, "Turning on High Contrast."

If you are currently viewing this in Windows 95, click here to display the help topic.

Limiting the Number of Fonts

You can limit the number of fonts used throughout Windows to one or more of your own choosing. To do this, use the Fonts icon in Control Panel to remove all the fonts you dont want to appear. If you remove all TrueType® scaleable fonts and leave only raster fonts, you can also restrict the sizes that will be used. Removing fonts does not delete them from the hard drive, so the fonts can be reinstalled easily for later use.

[?]   To limit your system to a single font
[?]   To restore the fonts

To limit your system to a single font

1. Create a new <u>folder</u> on your desktop or hard disk, and give it a name such as Other Fonts.

2. In Control Panel, choose the Fonts <u>icon</u>.

3. <u>Select</u> all the fonts in your Fonts folder, and then move them to the new Other Fonts folder. This will ensure only the system font, which is hidden, remains available for the system to utilize.

4. Shut down and then restart your computer.

Note:

This operation will also limit the number of fonts available to applications.   This will affect the display of documents on the screen and how they are printed.   This operation should be used with caution.

To restore the fonts

1. Move or copy the fonts from your Other Fonts folder to the Fonts folder in Control Panel.
2. Shut down and then restart your computer.

Setting Size and Color Schemes

Windows 95 enables you to adjust the size and color of most screen elements, such as Windows text, menus, and caption bars. This can make the system easier and use, and can reduce eyestrain.   In Microsoft Plus, a number of "themes" can be applied to your system, totally changing its look.

If you are currently viewing this in Windows 95, you may find more specific information about changing items. click here [?] to refer to the Windows 95 on-line help topic, "Changing the way the items on your desktop look "

Audio Features

Among the multimedia capabilities in Windows 95, sound and sound substitutes can assist both the sight and hearing-impaired.

[?]   Adjusting the Volume

[?]   Customizing Sound Schemes

[?]   SoundSentry and ShowSounds

Adjusting the Volume

If your computer has a sound card, you can adjust the volume of all sounds played by Windows by using the Sounds icon in Control Panel. You can also adjust the sound volume by using the speaker icon on the taskbar by using Volume Control.

For more specific information about adjusting volume, refer to the Windows 95 on-line help topic, "Using Volume Control to vary sound."

If you are currently viewing this in Windows 95, click here to display the help topic.

Note:
This doesnt affect the PCs built in speaker.   Only sounds generated by a sound card, such as the Windows Sound System®, Sound Blaster® or similar multimedia sound cards can be adjusted.

Customizing Sound Schemes

Windows provides a wide variety of sounds that you can associate with many events. These events can be generated by Windows or by programs. If you have difficulty distinguishing between the default sounds, you can choose a new sound scheme, or design your own to make the sounds easier to identify. Sound schemes can also help draw attention to or provide additional feedback for tasks as you do them.

For more specific information about building sound schemes, refer to the Windows 95 on-line help topic, "Assigning sounds to program events."

If you are currently viewing this in Windows 95, click here to display the help topic.

SoundSentry and ShowSounds

SoundSentry and ShowSounds can only be enabled from the ShowSounds tab within the Accessibility Options in Control Panel.

ShowSounds is a global flag that instructs programs to provide visible feedback in effect, asking the programs to be closed-captioned.

SoundSentry tells Windows to send a visual cue, such as a blinking title bar or a screen flash, whenever the computer generates a sound. This enables you to see when the computer is generating sounds, although it cannot enable you to distinguish between different sounds. You can choose separate display options for two situations:

       Use the Warning For Windowed Programs option to choose a visual cue when the <u>active window</u> is a Windows-based or MS-DOSbased program running in a <u>window</u>. You can choose to flash the Windows <u>desktop</u> (the entire display), flash the active window, or flash only the active window's title bar. You can also choose to have no visual cue in this situation.

If you choose to flash the active window or the active window's title bar, you may not see any visual cue if there are no programs running, or if the active window has no title bar.

       Use the Warning For Full-Screen Text Programs option to choose a visual cue when the you are running an MS-DOSbased program running in a full screen. You can choose either to flash the entire display, flash the border of the display, or flash characters in the upper-right corner of the screen. You can also choose to have no visual cue in this situation.

Some displays do not have a border that can be flashed, so you will see no visual cue if you choose this option on incompatible display hardware. This is true of most liquid crystal (LCD) displays typically found on laptop computers.

In Windows 95, the SoundSentry feature only supports sounds generated through the computer's internal speaker. It cannot detect sounds made using multimedia sound cards or MIDI systems. If your computer has a multimedia sound card, you may need to disable this hardware to force sounds to be played through the computer's built-in speaker. This allows SoundSentry to detect these sound events. You can disable your multimedia sound card by using the Multimedia icon in Control Panel.

       <u>To disable your multimedia sound card</u>

For more specific information about activating ShowSounds, refer to the Windows 95 on-line help <u>topic</u>, "Turning on ShowSounds."

If you are currently viewing this in Windows 95, click here to display the help <u>topic</u>.

To disable your multimedia sound card

1. In Control Panel, choose the Multimedia icon.

2. On the Advanced tab, <u>select</u> the entry for Audio Devices in the Multimedia devices list. You can show the available audio devices by pressing the RIGHT ARROW key or clicking the plus sign (+) icon.

3. <u>Select</u> the audio device that you want to disable, and then choose Properties.

4. <u>Select</u> Do Not Use Audio Features Of This Device.

5. Choose OK.

6. Choose OK or Apply.

You need to restart Windows for this change to takes effect. To re-enable your multimedia sound card, repeat the same procedure but <u>select</u> the option Use Audio Features Of This Device in the properties dialog box.

Other Features

These other features may also be of interest to you:

❓   Chat

❓   Assistance for Installing

Chat

Chat is useful for people who are deaf or hard-of-hearing. Chat is an alternative form of communication when an interpreter or a text telephone (called a TT or TDD) is not available.

You can use the Chat utility to have an electronic conversation with up to seven other people who are using Windows 95, and whose computers are connected through a network or by modems. Unlike an electronic mail message that you compose, save, and then send to another person, a Chat message is visible to others as you type it. Chat is in the Other\Chat directory on the Windows 95CD-ROM.

If you   previously ran Chat under Windows for Workgroups, and then upgraded to Windows 95 in your previous Windows directory, Chat is still available on your computer.   If Windows 95 is installed on a computer that did not previously have Windows for Workgroups installed, you can install Chat from the Windows 95CD-ROM.

To Install Chat

To Install Chat

1. In Control Panel, choose the Add/Remove Programs icon.

2. On the Windows Setup tab, choose Have Disk.

3. In the Install From Disk dialog box, supply the path to the Other\Chat directory on the Windows 95<u>CD-ROM</u>.

4. In the Have Disk box, <u>select</u> the Chat entry in the Components list, and then choose Install.

Assistance for Installing

People who require accessibility aids to work with Windows can experience problems with Windows 95 Setup because their accessibility aids are not available while Setup is running.

A system administrator can assist people in such cases by creating setup scripts that define all options so that Setup can run without user intervention. In such cases, the administrator should make sure to include the Windows 95 Accessibility Options among the optional components to be installed with Windows 95.

The following suggestions can help individuals who require accessibility aids but do not have a system administrator to create a setup script. In such cases, there are two options, depending on whether you want to create the script while running Windows version 3.x or MSDOS:

[?]   If you are running Windows 3.1 or Windows for Workgroups, use Batch.exe to create a setup script. This utility is found with the Windows 95 Resource Kit utilities or in the \Admin\Nettools\Netsetup directory on the Windows 95 compact disc.

[?]   If you are running MSDOS, create or edit the AUTOMATE.INF setup script provided with the Windows 95 Resource Kit utilities (\Admin\Reskit\Samples\Scripts on the Windows 95 compact disc)

When you install Windows 95 over an earlier version of Windows, Setup automatically moves your StartUp group and other Program Manager groups for use under Windows 95. Any accessibility options that were in your previous StartUp group start automatically in Windows 95 after Setup is completed.

More information on both Batch.exe and AUTOMATE.INF can be found in the Windows 95 Resource Kit

Getting More Information for People with Disabilities

There are a number of areas you can explore for more information on accessibility:

[?]   Information from Microsoft

[?]   Microsoft Services for People Who Are Deaf or Hard-of-Hearing

[?]   Microsoft Documentation In Alternative Formats

[?]   Third-Party Utilities to Enhance Accessibility

[?]   Assistive Technology Programs

[?]   Getting Information Updates

Information from Microsoft

For more information on Microsoft products and services for people with disabilities, contact:

Microsoft Sales Information Center Voice telephone: (800) 426-9400
One Microsoft Way   Text telephone: (800) 892-5234
Redmond, WA 98052-6393   Fax: (206) 635-6100

Information is also available on-line at the following sources:

[?]   The Microsoft Network (MSN)

[?]   CompuServe®

[?]   GEnie

[?]   Microsoft Download Service (MSDL), which you can reach by calling (206) 936-6735 any time except between 1:00 A.M. and 2:30 A.M. Pacific time. Use the following communications settings:

For this setting	Specify
Baud rate	1200, 2400, 9600, or 14400
Parity	None
Data bits	8
Stop bits	1

[?]   Various user-group bulletin boards (such as the bulletin-board services on the Association of PC User Groups network)

[?]   In /SOFTLIB/MSLFILES on the Internet servers FTP.MICROSOFT.COM and GOPHER.MICROSOFT.COM and WWW.MICROSOFT.COM

Microsoft Services for People Who Are Deaf or Hard-of-Hearing

Through a text telephone (TT/TDD) service, Microsoft provides people who are deaf or hard-of-hearing with complete access to Microsoft product and customer services.

You can contact the Microsoft Sales Information Center on a text telephone by dialing (800) 892-5234 between 6:30 a.m. and 5:30 p.m. Pacific time.

For technical assistance in the United States, you can contact the Microsoft Support Network on a text telephone at (206) 635-4948 between 6:00 A.M. and 6:00 P.M. Pacific time, Monday through Friday, excluding holidays.

In Canada, dial (905) 568-9641 between 8:00 A.M. and 8:00 P.M. Eastern time, Monday through Friday, excluding holidays.

Microsoft support services are subject to Microsoft prices, terms, and conditions in place at the time the service is used.

Microsoft Documentation In Alternative Formats

People who have difficulty reading or handling printed documentation can obtain many Microsoft publications from Recording for the Blind, Inc. Recording for the Blind distributes these documents to registered, eligible members of their distribution service, either on audio cassettes or on floppy disks.

The Recording for the Blind collection contains more than 80,000 titles, including Microsoft product documentation and books from Microsoft Press. You can contact Recording for the Blind at the following address or phone numbers for information on eligibility and availability of Microsoft product documentation and books from Microsoft Press:

Recording for the Blind, Inc.   Phone: (609) 452-0606
20 Roszel Road   Fax: (609) 987-8116
Princeton, NJ 08540

The Windows 95 product documentation is available from Recording for the Blind. Many of the Windows 95 documents are also available on a CD-ROM that comes with the package.

Third-Party Utilities to Enhance Accessibility

A wide variety of hardware and software products from other vendors are available to make personal computers easier to use for people with disabilities. Among the different types of products available for the MS-DOS®, Windows, and Windows NT® operating systems are the following:

[?] Programs that enlarge or alter the color of information on the screen for people with visual impairments

[?] Programs that describe information on the screen in Braille or synthesized speech for people who are blind or have difficulty reading

[?] Hardware and software utilities that modify the behavior of the mouse and keyboard

[?] Programs that enable you to type using a mouse or your voice

[?] Word or phrase prediction software that allows you to type more quickly and with fewer keystrokes

[?] Alternate input devices, such as head-pointers, single switch, and puff-and-sip devices for people who cannot use a mouse or a keyboard

[?] Microsoft distributes a catalog of third-party accessibility aids designed to work with the Windows and Windows NT operating systems. To obtain this catalog, contact the Microsoft Sales Information Center.

The Trace R&D Center at the University of WisconsinMadison produces a book and a CD-ROM that describe products that help people with disabilities use computers. The book, titled *Trace Resource Book,* provides descriptions and photographs of about 2000 products. The CD-ROM, titled *CO-NET CD*, provides a database of more than 18,000 products and other information for people with disabilities. It is issued twice a year. To obtain these directories, contact:

Trace R&D Center	Voice telephone	(608) 263-2309
S-151 Waisman Center	Text telephone:	(608) 263-5408
1500 Highland Avenue	Fax:	608) 262-8848
Madison, WI 53705-2280		

Assistive Technology Programs

For general information and recommendations on how computers can help specific people, you should consult a trained evaluator who can best match your needs with the available solutions. An assistive technology program in your area will provide referrals to programs and services that are available to you. To locate the assistive technology program nearest you, you can contact:

National Information System   Voice/text telephone: (803) 777-4435
Center for Developmental Disabilities   Fax: (803) 777-6058
Benson Building
University of South Carolina
Columbia, SC 29208

Getting Information Updates

If you would like to receive updates about accessibility enhancements to Microsoft products, please send a letter stating your name, organization, telephone, fax or text telephone numbers, and physical and electronic mail addresses to:

Windows Accessibility Group Fax: (206) 936-7329
One Microsoft Way   Email: enable@microsoft.com
Redmond, WA 98052-6393

Setup: Installing for the First Time

[?] Is Windows 95 safe to setup? Do I need a separate partition?

[?] I want to install Windows 95 in a clean directory so I can dual-boot. Is there any way to retain my settings so that I do not have to reinstall all of my programs?

[?] I want to have a smooth install of Windows 95. What are some things I can do in order to make it easier to install Windows 95?

[?] What do I need to do to my system for a clean installation of Windows 95?

[?] How do I install Windows 95 from a CD-ROM drive?

[?] How do I install Windows 95 from a remote CD-ROM drive?

[?] Can I setup Windows 95 from a network?

[?] How do I setup Windows 95 into a different subdirectory?

[?] How do I setup Windows 95 on a machine with Windows NT?

[?] Can I install Windows 95 on an OS/2 and MS-DOS/Windows dual-boot machine? Can I still dual boot?

[?] Can I run Windows 95 setup from MS-DOS? Do I lose any functionality?

[?] Setup hangs after the first reboot, why wont it boot?

[?] I am installing Windows 95 from CD-ROM, and the system hangs on the first boot. Why?

[?] Setup keeps hanging during the "Gathering Information" section. How do I get setup to bypass the problem?

[?] I was running setup for the first time and it hung during hardware detection. What do I do now?

[?] Setup hangs during Scandisk or tells me there are errors with my drive. I have run Scandisk at the MS-DOS prompt and it could not find any errors. Is there a way I can bypass it?

[?] I am seeing Setup error messages "su0410, su0409, and su129." Setup claims that there is a virus-protection software running. I checked my CONFIG.SYS and AUTOEXEC.BAT, files but there is no virus software running. What do I do?

[?] I am seeing an error during Setup that will not allow me to create a startup disk. What do I do?

[?] I received a GP fault in USER.EXE when running Setup. Now when I try to rerun Setup, I see the following error message: "SU0410 cannot open WORDPAD.INF, file missing, damaged, or in wrong format."

Setup: Installing Over an Existing Windows Version

❓   Should I install into my existing Windows directory, or a different directory?

❓   I have 25 megabytes free on my hard drive and when I try to upgrade to Windows 95 it tells me that I do not have enough disk space. How much do I need for Windows 95 if I am upgrading?

❓   How do I know if I have bad disks?

❓   When I upgrade over my previous version of Windows, will it retain all of my group files?

Setup: Common Questions and Answers

[?]　　　How do I make backup copies of my original diskettes?
[?]　　　Can I make floppy disk images from the CD?
[?]　　　What files does Windows 95 modify during setup?
[?]　　　My drive is partitioned with Ontrack Disk Manager. Will it work with Windows 95?
[?]　　　I have added the BootMulti=1 line to the MSDOS.SYS file in the root directory of drive C, but I still do not get the F4 functionality when I boot. Why?
[?]　　　We had a power failure during Setup. The power is back on now. Is there a way to continue the Setup that failed?
[?]　　　Is there a Maintenance Mode available for Setup?
[?]　　　Is it possible to direct the temporary file to a different drive or directory during Setup?

I want to install Windows 95 in a clean directory so I can dual-boot. Is there any way to retain my settings so that I do not have to reinstall all of my programs?

No, there is no way to retain the current settings of a Windows installation without installing Windows 95 into the Windows directory.

Setup hangs during Scandisk or tells me there are errors with my drive. I have run Scandisk at the MS-DOS prompt and it could not find any errors. Is there a way I can bypass it?

Yes, you can rerun Setup using the command SETUP /IS. This will bypass running ScanDisk at the beginning of Setup. However, you should make sure that you have checked all hard drives for errors by using ScanDisk or a similar disk utility to ensure that there are no errors on your drives before running Setup.

Note:

Run ScanDisk from your Windows 95 CD-ROM or disks rather than from your hard disk. Setup expects that the Windows 95 version will be run. If you run an older version, you will be prompted to run Scandisk again.

I am seeing Setup error messages "su0410, su0409, and su129." Setup claims that there is a virus-protection software running. I checked my CONFIG.SYS and AUTOEXEC.BAT files, but there is no virus software running. What do I do?

Check for the existence of virus detection programs in the Advanced CMOS (BIOS) configuration. Please contact the Bios Manufacturer for support in changing any settings to the BIOS.

I am seeing an error during Setup that will not allow me to create a startup disk. What do I do?

This problem can be caused by programs that were running before Setup started. To work around this problem, close all files and quit all running programs before starting Setup, or run Setup from MS-DOS.

I received a GP fault in USER.EXE when running Setup. Now when I try to rerun Setup, I see the following error message: "SU0410 cannot open WORDPAD.INF, file missing, damaged, or in wrong format."

To work around these problems, either run Setup from Windows 3.x or 95, or run Setup from MS-DOS without Smartdrv loaded. Use the SETUP /IC switch so Setup doesnt load SmartDrv automatically.

How do I know if I have bad disks?

(the original answer is below.   We need a new answer that addresses DMF format.)

Use the CHKDSK or SCANDISK command to check the disks.

If you are running MS-DOS 6 or earlier, type **chkdsk a:** at the command prompt.

If you are running MS-DOS 6.2 or later, type **scandisk a:** at the command prompt.

When I upgrade over my previous version of Windows, will it retain all of my group files?

Yes, provided your Windows shell was Program Manager. Program groups are automatically converted to menu items under Programs in the Start menu.

My drive is partitioned with Ontrack Disk Manager. Will it work with Windows 95?

Yes, Windows 95 is compatible with all versions of Ontrack Disk Manager.

I have added the BootMulti=1 line to the MSDOS.SYS file in the root directory of drive C, but I still do not get the F4 functionality when I boot. Why?

You may be using Drvspace. If you are using some form of disk compression, BootMulti=1 must be added to the [Options] section of the MSDOS.SYS file on the <u>host</u> drive of the computer.

We had a power failure during Setup. The power is back on now. Is there a way to continue the Setup that failed?

Depending on where Setup was interrupted, you may not be able to start your previous version of Windows. If this occurs, you should start Setup from the MS-DOS prompt. Setup should detect that the installation process was incomplete, and will prompt you to either begin a new installation or use Smart Recovery. Choose Smart Recovery to continue Setup.

Is there a Maintenance Mode available for Setup?

Yes. If you would like to add or remove Windows 95 components, double-click the Add/Remove Programs icon in Control panel, and then click the Windows Setup tab. Select the components you would like to add, and deselect the components you would like to remove.

Is it possible to direct the temporary file to a different drive or directory during Setup?

If you would like to specify where Windows 95 setup will place its temporary files during Setup, use the following command line when you start Setup:

      SETUP /T:<tempdir>

where <tempdir> is the name of the directory Setup will use for temporary files. This directory must already exist, and any files in the directory will be deleted.

Example:

      SETUP /T:D:\MYDIR

Uninstall Overview

Uninstall is a combination of the Setup Wizard and the Uninstall application.   There are two distinct phases of the process. The first phase is takes place during the installation of Windows 95 to prepare the system for a possible uninstall. The second phase is manually run after the installation process is complete when you wish to actually perform the uninstall.

How to set up for Uninstall

How Uninstall actually works

What happens after Setup is started

Troubleshooting the Setup portion of Uninstall

How to activate Uninstall

The Uninstall Process

Troubleshooting Uninstall

How to prepare for Uninstall

There are two conditions that must be met before the Uninstall portion of the Setup can be performed.

❓ The system must have a valid Windows 3.1x or Windows for Workgroups and MS-DOS 5.0 or higher.

❓ Installation must be to the Windows directory.

If these conditions are not met, by installing to a different directory (for instance), then the Setup Wizard will not display the Uninstall pages.

Uninstall: What happens after Setup is started

The first page during which the Setup Wizard gathers uninstall information from is the Preparing Directory page.   It is here that the files that need to be backed up is determined. Files that will be deleted, overwritten, or modified in the windows and windows system directory are the ones that will be backed up.   In addition, available disk space on the system is calculated.

The next page displayed is the selection system files should be saved or not. If Yes is selected, the amount of space on the valid hard drives is displayed with a selection of the drives to which the files can actually be backed up. The criteria for the list shown is:

        Drive must be non-removable

        Drive cannot be a network drive

        Drive must have enough available space to store the system files.

Compressed volumes do count as local hard drives.

If there is only one drive then the choice page will not be shown and the system files will be saved to that drive. If No is selected then setup proceeds normally with no uninstall facility.

If Yes is selected and   a drive location is determined, the Saving System Files page will be shown. This operates in two parts:

        Finding Files.

 All the files earmarked for backup will have their locations written to the W95UNDO.INI file.

        Saving Files.

 The files are stored (using MRCI compression) into a file called W95UNDO.DAT.

Once this procedure is done then Setup proceeds normally. Both the W95UNDO files are stored in the root of which ever drive the are placed.

Troubleshooting the Setup portion of Uninstall

If, for any reason, setup hangs before the first reboot, rerun setup and run Safe Recovery..   ALWAYS run Safe Recovery if Setup hangs for ANY reason whatsoever. Standard Setup Troubleshooting, as long as Safe Recovery is always run, remains valid. If Safe Recovery is not run then the Uninstall app may not be able to locate the W95UNDO files and Uninstall will not work.]

ALWAYS create an Emergency Boot Disk during the Setup of Windows 95. This is critical to ensure that a copy the boot files, UNISTALL.EXE, and SCANDISK.EXE are available if problems arise.

How to activate Uninstall

To run Uninstall after the system after has been enabled during Setup only one condition must be met; the File Copy Phase of Setup must be complete   and Finish selected prior to the system reboot.

Running Uninstall

Uninstall itself can be run from a couple different locations:

[?]   Emergency Boot Disk (EBD)
[?]   The command prompt,
[?]   The RUN dialog
[?]   Control Panel/Add-Remove Programs

If you wish to learn more about Add-Remove Programs, refer to Windows 95 on-line help topic, "To remove a program from your computer".

If you are currently viewing this in Windows 95, Click here [?] to display the help topic.

If Uninstall is run from the EBD, then the uninstall application has to be told which drive that the W95UNDO.INI is located.

        Uninstal c: or   Uninstal d:

If Uninstall is run from the Command Prompt, then the W95UNDO files should be located automatically. This is the same if Uninstall is run from either the RUN dialog or from the Control Panel. The information for the location of the W95UNDO files is stored in the MSDOS.SYS under the [Paths] section as UninstallDir=.

The Uninstall Process

When the Uninstall Application is started it first asks you if you want to proceed and warns that if you have compressed the drive that you will not be able to proceed successfully.

Uninstall then displays a dialog that warns that it is going to run Scandisk. This checks for any media problems that may have occurred on the hard drive and removes all long file names from files on the system. At that point Uninstall issues one last warning dialog that says the system will rebooted and Uninstall will proceed.

The system will restart at this point, and the Uninstall copyright will pop up followed by:

Please wait while Uninstall restores your previous configuration. This may take several minutes.

Uninstall will then post the following list (actual numbers may vary)

Checking files: 4135
Checking filenames: 231
Checking deleted files: 0
Checking modified files: 267
Checking directories: 124
Cleaning directories: 63
Restoring startup files
Restoring disk partition table
Restoring master disk partition table

The number of files or directories will vary from machine to machine, however, restoring the startup files and the disk partitions will never change. Following this list, Uninstall will prompt to remove any media in the floppy drives and reboot the system. Upon reboot the system should come up as it had prior to installation of Windows 95.

Troubleshooting Uninstall

If Uninstall hangs at any point during the process, rerunning the application should enable users to completely remove Windows 95. If the Uninstall application is interrupted at the point where it is restoring the Disk Partition or the Master disk partition, then Uninstall must be run from the EBD. If Uninstall hangs because it cannot locate Scandisk, locate a copy of SCANDISK.EXE and place it in the windows command directory.   Uninstall will then be able to proceed.

If Uninstall reports that SUHDLOG.DAT is missing,   double check to see if the SUHDLOG.DAT (or SUDLOG.---) is located on the boot drive.   SUHDLOG holds drive partition information for Uninstall

If Uninstall reports that either W95UNDO.INI or W95UNDO.DAT is missing, make sure that W95UNDO.INI and W95UNDO.DAT are in the same location no matter what drive they are on.

Things that can possibly affect the Uninstall Application are Viruses, BIOSs and things that protect the boot sector from being restored. All anti-virus programs should be disabled. VIRUS protection in the BIOS, and Boot Sector protection of any sort (BIOS, or other program) will need to be disabled.

Make sure that no compression has been run since the installation of Windows 95. If any compression has been run then Uninstall will not work.

If PLUS! Has been installed on the system, Uninstall can still be run but will not remove a number of Plus! Files that are on the hard disk. Plus! Should always be uninstalled before Uninstall is run. Any application that has been installed after Windows 95 has been installed will have to be reinstalled for it to run properly.

Common Questions and Answers

The following topics cover the most common questions and answers about Windows 95.

[?]   Setup: Installing for the first time

[?]   Setup: Installing over an existing Windows version

[?]   Common questions and answers about Setup

[?]   Common questions and answers about Networking

[?]   Windows and third-party programs

[?]   General Information

Networking: Common Questions and Answers

I cannot see any NetWare servers, but I can see servers on other networks. What's going on?

Your IPX/SPX frame type may have been set incorrectly.

If you have the IPX/SPX-compatible protocol installed, try carrying out the following procedure:

1 Click the Start button, point to Settings, and then click Control Panel.

2 Double-click the Network icon in Control Panel.

3 Click the IPX/SPX protocol , and then click Properties.

4 Click the Advanced tab, and then click Frame Type.

5 Check to see that the Frame Type is set properly. NetWare 3.11.x servers default to 802.3. NetWare 3.12 & 4.x servers default to 802.2. If the frame type is set to Auto, try changing it to your specific Frame Type.

Once I have set up my Windows 95 computer to act as a Novell(r) Pass-Through server, can actual Novell clients connect to my computer?

Yes. Computers running NETX or VLM (the Novell DOS redirectors) will be able to connect to a Windows 95 Pass-Through server. (The Novell server must be using the Bindery or Binder emulations.

Once I have set up my Windows 95 computer to act as a Novell Pass-Through server, can actual Novell clients connect to my shared printers?

Yes.

Will the Windows 95 Netware client be able to store files with long filenames on a Netware server? Is there any special software needed on the server side?

Yes, Windows 95 will be able to store long filenames on a Netware server. To set this up, you need to add the OS2 name space NLM to the Netware server.

Ive turned off the banner page through the Windows 95 graphical interface, but it still prints from my MS-DOS programs. How do I disable banner pages for my MS-DOS programs?

To turn off the banner page in MS-DOS, run the CAPTURE /NOBANNER utility.

What versions of Sun PC-NFS does Windows 95 support?

Windows 95 supports versions 5.0 or later.

I heard that Banyan is working on a 32-bit protected-mode client for Windows 95. When will this be available?

Banyan has recently released a beta of their protected-mode drivers for Windows 95. The drivers are on their bulletin board at (508) 836-1834. The filename is W95eap2.ZIP. Support for these drivers is available through Banyan.

How do I set up the IPX/SPX (only use that protocol) protocol to connect to a Windows NT server?

1 Click the Start button, point to Settings, and then click Control Panel.

2 Double-click the Network icon in Control Panel.

3 Remove all protocols except for IPX/SPX.

4 Click the IPX/SPX protocol, click Properties, and then click the Advanced tab.

5 Click Set This Protocol To Be The Default Protocol.

6 Click the NETBIOS tab, and then click I Want to Enable NetBIOS OVER IPX/SPX.

7 Click OK, and then restart your computer.

My network adapter card is software configurable. When I configure my adapter in the Network icon in Control Panel, will my network adapter be configured properly under Windows95?

Although most new network adapter cards are software configurable, it is still necessary to run the utility

software that came with the network adapter to properly configure it. Once this has been done, double-click the Network icon in Control Panel to confirm that the settings for the adapter match the settings specified through the utility software.

I cannot set up my PCMCIA network adapter. What do I do?

To use a PMCIA net card, both your socket services and net card driver must be in real mode, or both must be in protected mode. To determine what kind of net card driver you're using, carry out the following procedure:

1 Click the Start button, <u>point</u> to Settings, and then click Control Panel.

2 Double-click the Network icon in Control Panel.

3 Click your network adapter, and then click Properties.

4 View or change your network driver type.

To enable protected-mode socket services, double-click the PC Card ((PCMCIA) icon in Control Panel and follow the instructions on your screen. This <u>wizard</u> removes the real-mode drivers from your CONFIG.SYS, AUTOEXEC.BAT, and SYSTEM.INI files. After the real-mode drivers have been removed, protected-mode services will start automatically.

Windows and Third-Party Programs: Common Questions and Answers

What types of tape backup units does Windows 95 support?

The following table lists the types of tape drives supported in Windows 95:

Floppy Controller Drives:

Tape sizes	Compatible drives
DC2000	QIC 40 & QIC 80
DC2120	QIC 40 & QIC 80
MC3000	XL/QIC 3010
*	Conner QIC Wide Tapes are not supported

Parallel Port Drives:

Colorado Trakker 120, 250 and 3010

Tape backup units that are not supported:

SCSI Tape Backup Units

Proprietary Controller Tape Backup Units

SCSI tape backup units that use an external SCSI controller connected to the parallel port

Will I be able to use my backup sets from Microsoft Backup 6.0 and 6.22 with Windows 95 Backup?

No, you will only be able to use Windows 95 Backup sets with Window 95.

What is the Briefcase?

If you use the same files on two different computers, the Briefcase will help you keep those files in sync with each other. For more information, look up "Briefcase" in the Windows 95 Help Index.

Briefcase is not installed by default unless you installed Windows 95 on a portable computer. To add it later, Click the Start Button, point to Settings, and then click Control Panel. Double-click the Add/Remove icon and then click the Windows Setup tab.

Can I back up my floppy disk drive to a tape drive?

If the tape backup is attached to the floppy disk controller, this type of operation may fail. If the tape backup is not attached to the floppy disk controller, you can perform a backup this way.

If the SYSTEM.DAT file is corrupted, does Windows 95 automatically default to Safe Mode or use SYSTEM.DA0? If SYSTEM.DA0 is used, does Windows 95 try to update the corrupted SYSTEM.DAT file?

If SYSTEM.DAT is corrupted, Windows 95 uses SYSTEM.DA0 first. Windows will not try to fix the corrupted SYSTEM.DAT file. Windows 95 just renames the file extension from DA0 to DAT.

If you delete your SYSTEM.DAT file, then the next time you restart your computer you will see a message telling you that your registry is corrupted. If you choose OK, Windows 95 will restart using a backup version of the registry (SYSTEM.DA0).

Is there a way to prevent HIMEM.SYS, IFSHLP.SYS, and SETVER.EXE from loading automatically when Windows 95 is starting? It is my understanding that these files are called from IO.SYS.

Yes. To prevent IO.SYS from automatically calling these drivers, add the line **dos=noauto** to your CONFIG.SYS file. You will have to manually add these lines in the CONFIG.SYS file if NOAUTO is installed.

I noticed a file named SYSTEM.1st on my computer. What is this file and can I delete it?

The SYSTEM.1ST file is a copy of your registry the first time your computer started successfully. This file is very important for troubleshooting purposes and should NOT be deleted.

I notice that Smartdrv was remarked out by Windows 95. Should I add it back?

Smartdrv is not needed unless you are booting to a command prompt only, or running in (single) MS-DOS Mode. Windows 95 uses a protected-mode cache that is dynamic (shrinks and grows as needed).

I noticed that after I installed Windows 95, the FILES= and BUFFERS= statements were remarked out. Should I add these back manually?

Windows 95 automatically includes the following default settings in the IO.SYS file:

> FILES=60
>
> STACKS=9,256
>
> BUFFERS=30

These defaults can be overridden by greater entries in the CONFIG.SYS file.

How do you boot your computer to a Windows 95 MS DOS Prompt instead of to the graphical interface?

There are several possible to do this.

Restart your computer, and press SHIFT+F5 when you see the message "Starting Windows 95."

Restart your computer, and press F8 when you see the message "Starting Windows 95,"   Step through each line of your AUTOEXEC.BAT file, and then choose No when prompted to run the WIN command.

Edit the MSDOS.SYS file and change BOOTGUI=1 to BOOTGUI=0. This will automatically boot the computer to the Windows 95 MS-DOS prompt.

General Information: Questions and Answers

Device Manager shows an entry for an UNKNOWN? device. What is this?

Unknown devices are devices that are enumerated by some <u>bus enumerators</u> but that do not have a class. Unknown devices are devices that consume some type of resource (such as I/O or <u>IRQ</u>). A protected-mode driver is not loaded for an unknown device.

My fonts are all missing from the WIN.INI file. Where did they go?

They are now recorded in the registry (SYSTEM.DAT). The <u>registry</u> is a data structure designed to store configuration information about the system in a secure and orderly way.

How do I regenerate the WIN.COM file?

This file cannot be regenerated. To replace WIN.COM, you must manually extract WIN.CNF for the disks or <u>CD-ROM</u>. Once it is extracted, copy it to your Windows 95 directory as WIN.COM.

Some of my programs print correctly to a network printer using a UNC, while others run into various problems. What could be wrong?

Some programs have a hard time printing to a UNC path. The workaround is to <u>map</u> the printer to a virtual LPT port instead of using a UNC.

When I start Windows 95, all my icons are black. How do I correct this?

This can be caused by a corruption in the ShellIconCache (SHELL~1) file. To fix this problem, delete this file and restart your computer. The file (which is a hidden file in the WINDOWS directory is rebuilt automatically. If deleting this file does not fix the problem, try restarting your computer in <u>Safe Mode</u>, and then restarting it again as usual.

To make a hidden file visible so that you can delete it, carry out the following procedure.

1 In My Computer or Windows <u>Explorer</u>, click the View menu, and then click Options.
2 Click the View tab, make sure Show All Files is selected, and then click OK.

How can I delete files from Windows Explorer without having them go automatically to the Recycle Bin?

Press SHIFT+DELETE to delete a file completely from your hard disk.

How do I remove or prevent certain icons from being displayed in Control Panel?

The System Policy Editor enables you to restrict the Display, Network, Printers, System, and Security icons on a per-user basis. Also, there are plans for the Resource Kit to include per machine, per user, and per user group restrictions. The settings in each .CPL file (the file accessed through the Control Panel icons) define what registry keys are valid and what portions can be hidden from a user. Third-party .CPLs may or may not implement any system policy registry keys to hide parts of its property sheets. NOTE: The System Policy Editor is in the \ADMIN\APPTOOLS\POLEDIT directory on the <u>CD-ROM</u>.

How do you exclude an upper memory block (UMB) through the Windows 95 interface?

To do this, carry out the following procedure:

1 Click the Start button, <u>point</u> to Settings, and then click Control Panel.
2 Double-click the System icon, and then click the Device Manager tab.
3 Click Computer, and then click Properties.
4 Click the Reserve Resources tab, click Add, and then type the range to be excluded.

How do I make an emergency boot disk if I did not create one during Setup?

To create a complete emergency boot disk, double-click the Add/Remove Programs icon in Control Panel, and then click the Startup Disk tab. Follow the instructions on the screen.

Explorer - Frequently Asked Questions

[?]   Can you rename multiple files at once?
[?]   Can you change the file listing font (type and size)?
[?]   If I remove the file icons in the file listing, will that speed up Explorer?
[?]   Can I customize the Toolbar?
[?]   How do I select a range of files, like *.BAK?
[?]   How do I sort by date, type, name?
[?]   How do I open a file with a program it's not associated with?
[?]   How do I run a program and add command line arguments?
[?]   How do I label a disk?
[?]   How do I format a diskette?

[?] Click here to see more Frequently Asked Questions

Explorer - Frequently Asked Questions   - Continued

[?]   How do I expand a tree without changing what's in my righthand pane?

[?]   How do I copy or move a file without dragging and dropping?

[?]   I made a mistake, and have no idea where I just moved a file to.   Or I renamed a file I wasn't supposed to. What can I do?

[?]   How do I make a system disk?

[?]   How to I undelete a file?

[?]   Where is the Share Drive option?

[?]   How can I check how much free memory and resources I have?

[?]   How do I create a directory?

[?]   How can I find out how much space a folder is using?

[?]   How can I check free disk space?

[?]   Click here to see more Frequently Asked Questions

Explorer - Frequently Asked Questions - Continued

[?]   How do I associate a file with an unrecognized extension?
[?]   How do I change extension assignments?
[?]   Why can I not see "hidden files" or file extensions.   How do I rename an extension?
[?]   How can I figure out what is the MS-DOS 8.3 character filename of a long filename document.
[?]   In Explorer, how do you get to the Parent directory of a folder without using the Mouse?
[?]   So what is an Action, and how do I Add one?
[?]   Where are associations stored in the Registry?
[?]   How do I delete files without getting the Are you sure? prompt?
[?]   How do I copy a file between two directories on the same hard drive from within Explorer?
[?]   How can I select multiple files from inside of Explorer?

Can you rename multiple files at once?

You have to use DOS, but it can be dangerous, since changing extensions will break associations and won't usually work if extensions are not displayed

Can you change the file listing font (type and size)?

Change the "Icon Title Font" in Display Properties/Appearance Tabsheets.

If I remove the file icons in the file listing, will that speed up Explorer?

There is currently no way to remove the icons in Explorer.   Icons are cached, so it should be faster the second time you enter a folder.

Can I customize the Toolbar?

There is currently no way to customize the toolbar.

How do I select a range of files, like *.BAK?

Use Start Menu/Find.   It defaults to the current folder, and you can search for *.BAK to get a list of those files.
Or you can <u>sort the files by type</u> and then move to the type you want to <u>select</u>.

How do I sort by date, type, name?

Simplest way, choose Details view and click on a header (Name, Date, etc.) in the right pane to sort by that column.   Or choose the Arrange option from the View menu.

How do I open a file with a program it's not associated with?

Add <u>shortcuts</u> to \WINDOWS\SENDTO   directory and they will appear in the right-mouse SendTo submenu.   The program may then be dragged and dropped onto that menu item.

How do I run a program and add command line arguments?

You have to use Start Menu/Run and type in the command line as you want it to run.

This project is dedicated to Doug Lance Sheresh, whose insight, troubleshooting skills and encouragement made this project possible.

How do I label a disk?

Right-click, choose Properties for a drive.   You can change the label.

How do I format a diskette?

Right-click on <u>drive icon</u>, choose Format.   Won't work if the drive's contents are in the righthand pane (so don't left-click on it first).

How do I expand a tree without changing what's in my righthand pane?

Just click on the [+] symbol to expand tree, [-] to collapse a branch.

How do I copy or move a file without dragging and dropping?

Click on file or range of files.   Secondary click or use Edit menu and use Copy.   Now secondary click on the directory to receive the copy and choose Paste in that folder. To move the selected file(s), use Cut instead of Copy.

I made a mistake, and have no idea where I just moved a file to.   Or I renamed a file I wasn't supposed to.   What can I do?

Choose Undo from the Edit menu to undo the last file operation you performed.

How do I make a system disk?

 During format, choose "Make bootable only" if this disk is already formatted, or choose the option "Make disk bootable" to add the system files after a format.   To create a complete "emergency boot disk," run Add/Remove Programs from the Control Panel and choose the Startup Disk panel.

How do I undelete a file?

Open the Recycle Bin, find the file, right-click on it and choose Restore.   To make finding a file in the Recycle Bin easier, try clicking on the "Original Location" column to sort by that category.

Where is the Share Drive option?

Right click on a folder and choose Sharing or try the Share icon on the toolbar.

How can I check how much free memory and resources I have?

Use Help/About, or secondary click on My Computer, choose properties, and <u>select</u> the Performance tab for a more complete listing.

How do I create a directory?

Use File/New Folder or right-click and select New Folder.

How can I find out how much space a folder is using?

If a folder has items other than just subfolders, you can right click on it and choose Properties to get the size of all folders and subfolders within it.   The status bar only shows you the size of the items (not subfolders) in that folder.

How can I check free disk space?

Secondary click on <u>drive icon</u> and choose Properties to get a pie chart and details on drive space used.

How do I associate a file with an unrecognized extension?

To create an association, double-click it, and in the dialog box, type a description for the new type, and locate the program used to open it.   In the future, you can double-click on the file (its extension will no longer appear, and it's icon will match the app used to open it) to <u>open</u> it.

How do I change extension assignments?

Use View/Options/File Types, and edit an assignment.   Or just use Remove and recreate the assignment as in the prior tip.

Why can I not see "hidden files" or file extensions?   How do I rename an extension?

Use View/Options and turn on the check box for "Show all files".   Normally you want to hide extensions for a smoother look and feel, and to avoid the .LNK extensions on desktop shortcuts. If you need to rename a file and change its extension, you can turn off "Hide extensions for file types that are registered" from View/Options. You can now rename the entire file including the extension

Warning:

This can break the association for a file.   If you rename a Word document with an extension other than .DOC, you can no longer double-click on it to start it.

How can I figure out what is the MS-DOS 8.3 character filename of a long filename document.

Right-click on it and choose Properties, or left click and choose File/Properties.   To help predict an eight character name, use a meaningful eight character name at the start of the long filename, such as "LTR2MOM -- Letter to Mom."

In Explorer, how do you get to the Parent directory of a folder without using the Mouse?

Press the BackSpace key.

So what is an Action, and how do I Add one?

An action is something you can chose to do to a file or program by secondary clicking on the icon.   The actions show up at the top of the menu list.   i.e. Open, Print etc.

To create a new action item, open <u>explorer</u>, choose options from the view menu, and select the File Types tab. Then choose the type of file that you want to add an action for, and choose edit.   Select New and enter the title of the action and the command line needed to execute the action.

Where are associations stored in the Registry?

These settings are stored in the HKEY_CLASSES_ROOT section of the Windows 95 registry.

How do I delete files without getting the Are you sure? prompt?

Just drag and drop it into the wastebasket located either on the desktop or in the tree pane.

How do I copy a file between two directories on the same hard drive from within Explorer?

There are several methods:

Method 1 - Secondary Click and Drag the file to another location

      Drop the file in the desired location

      Choose copy from the Context Menu

Method 2 - While holding down the CTRL key, Primary Mouse Drag the file

      Drop the file in the desired location

      NOTE:

      CTRL + Primary Mouse Button is a Copy of the file

Method 3 - Highlight the file

      Choose Edit and Copy

      Move to the desired location

      Choose Edit and Paste

How can I select multiple files from inside of Explorer?

There are several methods:

Method 1 - Use the CTRL key and Primary Mouse Click to <u>select</u> multiple files

Method 2 - Use the SHIFT key and Click on the First file to be selected

Use the SHIFT key and Click on the Last file to be selected

All files located between the first and last file are automatically selected

Method 3 - Hold down the LEFT or RIGHT mouse button

Drag a BOX around the ICONS you want to select

Release the MOUSE button

Method 4 - Use SELECT ALL to mark all of the files in the directory

NOTE:

Only Method 1 can be used with SELECT ALL

Desktop - Frequently Asked Questions

[?]   How do I change the color schemes?

[?]   How do I change the video drivers?

[?]   How can I get an icon back if it has been moved off the screen?

[?]   Why can I not move any of the icons from the row(s) of icons on the desktop?

[?]   How can I get to the settings for the desktop?

[?]   What can I do if the buttons in my windows are messed up?

[?]   How do I change the wallpaper?

[?]   How can I change the fonts of the menus?

[?]   What can I do if I forget my screensaver password?

[?]   How can I change the size and font type of the icon fonts?

How do I change the color schemes?

You can go to desktop properties and then to the Appearance Tab Sheet.   To get to the desktop properties, you can secondary click on the desktop and choose properties, or you can choose the display icon from the Control Panel.

How do I change the video driver?

You go to the desktop properties and then to the Settings Tab Sheet. To get to the desktop properties, you can secondary click on the desktop and choose properties, or you can choose the display icon from the Control Panel.

How can I get an icon back if it has been moved off the screen?

You just <u>select</u> the arrange icons or line up icons choice after you secondary click on the desktop.

Why can I not move any of the icons from the row(s) of icons on the desktop?

You will want to check to see if the autoarrange setting is enabled on the Desktop Properties - Arrange Icons menu choice. To get to the desktop properties, you can secondary click on the desktop and choose properties, or you can choose the display icon from the Control Panel.

How can I get to the settings for the desktop?

Secondary click on the desktop then choose Properties.

What can I do if the buttons in my windows are messed up?

You will want to check the font Marlett. If it is corrupted or missing, this will make the window buttons look garbled.   You can check the font in the Control Panel, under Fonts.

How do I change the wallpaper?

You can change the wallpaper selection from the Desktop Properties - Background Tab Sheet. To get to the desktop properties, you can secondary click on the desktop and choose properties, or you can choose the display icon from the Control Panel.

How can I change the fonts of the menus?

You can change the fonts for each menu in the Desktop Properties - Appearance Tab Sheet by selecting the item you want the font changed for, and choosing the new font. To get to the desktop properties, you can secondary click on the desktop and choose properties, or you can choose the display icon from the Control Panel.

What can I do if I forget my screensaver password?

You can just go back to the Desktop - Screen saver Tab Sheet and reset the password.

How can I change the size and font type of the icon fonts?

You can change the icon font and icon size items in the Desktop Properties - Appearance tab Sheet.

Windows 3.1/Windows 95 Desktop Comparison

To help the you in the transition from Windows 3.x to Windows 95 here is a list of commonly accessed Desktop settings and how they can be accomplished in Windows 95.   Click on any of the topics below to see a comparison between Windows 3.x and Windows 95.

[?]   Where do I change display settings?

[?]   Where do I change my desktop Pattern?

[?]   Where do I set or adjust my screen saver?

[?]   Where do I make wallpaper selections?

[?]   Where can I change my icon spacing?

[?]   Where can I set the color of my desktop?

[?]   Where do I set how fast my cursor blinks?

[?]   Where can I adjust my sizing grid for sizing windows?

Where do I change display settings?

Windows 3.x:

Main Group - Windows Setup icon - Options - Change System Settings - Display

Windows 95:

Secondary click on the desktop - Properties - Settings Tab Sheet

Where do I change my desktop Pattern?

Windows 3.x:
Main Group - Control Panel - Pattern

Windows 95:
Secondary click on the desktop - Properties - Background Tab Sheet

Where do I set or adjust my screen saver?

Windows 3.x:

Main Group - Control Panel - Screen Saver

Windows 95:

Secondary click on the desktop - Properties - Screen Saver Tab Sheet

Where do I make wallpaper selections?

Windows 3.x:

Main Group - Control Panel - Wallpaper

Windows 95:

Secondary click on the desktop - Properties - Background Tab Sheet

(This also encompasses the Tile and Center options for the wallpaper also.)

Where can I change my icon spacing?

Windows 3.x:

Main Group - Control Panel - Icon Spacing

Windows 95:

Secondary click on the desktop - Properties - Appearance - Item - Icon Spacing

Where can I set the color of my desktop?

Windows 3.x:

Main Group - Control Panel - Color - Change Palette

Windows 95:

Secondary click on the desktop - Properties - Appearance

Where do I set how fast my cursor blinks?

Windows 3.x:
Main Group - Control Panel - Keyboard - Cursor Blink Rate

Windows 95:
Taskbar/My Computer - Control Panel - Keyboard - Cursor Blink Rate

Where can I adjust my sizing grid for sizing windows?

Windows 3.x:

Main Group - Control Panel - Sizing Grid

Windows 95:

Secondary Click on the <u>desktop</u> - Properties - Appearance - Item

Start Menu - Frequently Asked Questions

What is the start menu?

The popup associated with the start button on the <u>taskbar</u>.   The single obvious point of access to the system.

How can I add items to the start menu?

1 - Drag an icon to the start button and it will appear at the top of the initial program list.

2 - Click on the start menu, then on settings an finally taskbar.   Choose the tab heading Start Menu Programs.   Select add and continue through selecting the program and name.   Then the user will be prompted to select where in the hierarchy of menu programs the new program will be placed.

Can I display anything else on the taskbar?

Yes, a speaker will show beside the time when sounds are enabled and a battery will show if power management capabilities are enabled.   Minimized applications will also appear on the taskbar.

Can I change the color and size of the start menu?

The size can be changed by dragging the border of the taskbar to the desired width.   The color of the taskbar is unchangeable.

Can I change the icon inside the start button?

The icons within the start menu itself can be changed but not the icon on the start button.

Can I hide the start menu/taskbar?

Yes, by going into the settings and taskbar there is an option to autohide the taskbar.

The start menu selections are too hard to select, often missing the intended selection. Can I slow it down?

By changing the font size under desktop properties, the size is thus changed making it easier to <u>select</u> the menu options.

When I secondary click on my mouse at the start menu, what should I get?

Open , explore, and find.

How do I select a hotkey for an item Ive added to the start menu?

Click on settings and taskbar properties, then <u>select</u> start menu programs and advanced.   Then select the menu item that the hotkey will be added to then select file and properties, then select on shortcut.

My programs always start minimized and I want it full screen, How do I fix it?

Follow the instructions for the question about the hotkey and in the same dialog box setting as the hot key properties there is an option for the run minimized.

The number of documents in my start menu is too large, how do I get rid of some of them ?

Click on settings, taskbar,start menu programs and click on clear.   However, this will flush all of the documents out of the documents window.

Keyboard Shortcuts

The following keys work in Explorer for shell objects and folders once selected:

F2	Rename
F3	Find
CTRL-X, C, V	Cut, copy or paste respectively
DELETE key	Delete
Shift-Delete	Delete immediately without putting the file in Recycle Bin
ALT-Enter	Properties
ALT-Double-Click	Properties
CTRL-Right-Click	Put alternative verbs on the context menu (Open with)
Shift-Right-Click	Change the default command to the next one in the list
Shift-Double-Click	Execute the alternative default command (the 2nd one in the list - Explore a folder)

To copy a file, hold the CTRL key while you drag the file to a folder.

To create a shortcut, hold CTRL+Shift while you drag the file to the desktop or a folder.

The following keys control various functions in Folder and Explorer:

F4	(Explorer) Drops down the combo box and puts <u>focus</u> on it.
F5	Refresh
F6	Tabs between panes in Explorer
CTRL-G	(Explorer) go to
CTRL-Z	Undo
CTRL-A	Select all
Backspace	Goes to the parent folder
Shift-<close>	On folders, closes this folder and all its parent folders <u>open</u> a folder window in place, just this one time

The following keys permit you to navigate through the Explorer's folder tree

Num *	Expands everything under selection
Num +	Expands selection
Num -	Collapses selection
Right Arrow	Expands current selection if it's not expanded, otherwise goes to the first child
Left Arrow	Collapses current selection if it's expanded, otherwise goes to the parent

The following keys allow you to navigate through Property sheets for objects

CTRL-Tab or

CTRL-Shift-Tab Tabs forwards or backwards through pages respectively

The following keys permit you to perform actions in Open and Save dialog boxes

F4	Drop down the location list
F5	Refresh the view
Backspace	Go to parent folder if <u>focus</u> on view window

The following keyboard shortcuts work generally throughout Windows 95

F1	Help
F10	Goes to menu mode)
Shift-F10	Context menu for selected item
CTRL-ESC	Bring up start menu, also sets <u>focus</u> to the taskbar
CTRL-ESC, ESC	Focus on the taskbar, now you can tab then Shift-F10 for context menu, or tab then arrow key to change tasks, or tab to desktop
ALT-Tab	Switch to the next app in the z-order

Shift while popping in a CD bypasses auto-run.

ALT-M when focus is on the tray or desktop does minimize all and puts focus on the desktop.

The following keys activate accessibility features in Windows 95, if installed

Tap Shift (5 times)	Toggles <u>StickyKeys</u> on/off
Hold down Right Shift (8 sec)	Toggles <u>FilterKeys</u> on/off
Hold down NumLock (5 sec)	Toggles <u>ToggleKeys</u> on/off
ALT-LEFT-SHIFT-Num Lock	Toggles <u>MouseKeys</u> on/off
ALT-LEFT-SHIFT-Print Screen	Toggles <u>High Contrast</u> on/off

Click here for more information on Accessibility in Windows 95.

Recycle Bin - Frequently Asked Questions

[?]   I pulled a file over to the Recycle Bin for disposal, but when dropped it only appeared as an icon beneath the Recycle Bin and did not enter the contents.

[?]   I was out at MS-DOS doing some maintenance. I deleted a few files, but they did not show up in the Recycle Bin. How can I get these back?

[?]   I want to have my system automatically purge the contents of the Recycle Bin at predetermined times. Is this possible?

[?]   I deleted a file before I could get any information on it. How do I get the specifics of the file?

[?]   I dont want anyone to see certain files in the Recycle Bins contents. Is this possible?

[?]   Do deleted network files go into the Recycle Bin?

I pulled a file over to the Recycle Bin for disposal, but when dropped it only appeared as an icon beneath the Recycle Bin and did not enter the contents. Why is this?

This will occur when the Recycle Bin is full. To correct the problem the user will have to either empty the wastebasket, or   edit the percentage of disk space allocated for the applet.

I was out at MS-DOS doing some maintenance. I deleted a few files, but they did not show up in the Recycle Bin. How can I get these back?

The files deleted at MS-DOS will not show up in the <u>Recycle Bin</u> by design. When the undelete option is attempted to recover a deleted file, the system errors, informing the user that he/she is using a utility designed for an earlier version of DOS and/or Windows. It is very important to remember that this is based on Beta information and could change, but the idea here seems to be that it will nudge users toward relying more on the GUI and less on the DOS Prompt.

I want to have my system automatically purge the contents of the Recycle Bin at predetermined times. Is this possible?

No. In properties there is an option to purge files immediately on delete, and this is as close as we can get at this point. This will possibly be a big issue with power users.

I deleted a file before I could get any information on it. How do I get the specifics of the file?

This can be accomplished by either double-clicking the <u>Recycle Bin</u> icon, or right clicking the icon and choosing open. Locate the file in question. Point to the file and double click to bring up its properties box. This will show Type, Size, Origin, Deleted Date, Created Date, and Attributes.

I dont want anyone to see certain files in the Recycle Bins contents. Is this possible?

Yes. Double-click the Recycle Bin icon, or right click and go to open. Choose View and go down to Options. There you will find the option to Hide Files Of This Type.   If   the files extension isnt on the list, then the file will also have to be marked as HIDDEN.

Do deleted network files go into the Recycle Bin?

No. These files will not be in the local Recycle Bin.

Secondary Mouse Click - Frequently Asked Questions

[?]   What are the general uses of the secondary mouse-click in Windows 95?

[?]   What is a secondary mouse-click?   Dont you mean a right-click?

[?]   How do I reverse the buttons as just described above?

[?]   What is a context menu?

[?]   What do you mean by an "object?"

[?]   Which entries typically appear in the context menu of a selected file?

[?]   What are "Special Drag and Drop Operations?"

[?]   How does the help system implement secondary mouse-clicks?

What are the general uses of the secondary mouse-click in Windows 95?

1) Context Menus
2) Special Drag and Drop operations
3) Context-sensitive help displays

What is a secondary mouse-click?   Dont you mean a right-click?

For most users, yes, the secondary mouse button is the button on the right hand side of the mouse.   However, a significant portion of the population is left-handed.   For those individuals, Windows 95 makes it possible to reverse the action of the two buttons, so that a left-handed individuals left index finger can be used as the primary means of selecting items and launching applications, the same as a right-handed person uses their right index finger for these tasks.   To avoid possible confusion when speaking with left-handed individuals, we have adopted the convention of using the terms Primary Mouse Button and Secondary Mouse Button; hence for a right-handed person, the secondary mouse button is the right button, but for a left handed individual who has reversed the buttons actions, the secondary button will be the one on the left.

How do I reverse the buttons as just described above?

From the Start Menu, select Settings...Control Panel.   In control panel, <u>open</u> the Mouse icon.   From the properties sheet which next appears, you may select the desired configuration.

What is a context menu?

This is the menu which pops up when an object is selected with the secondary mouse button in Windows 95. Depending on the type of object selected, the items appearing in this menu may change or may appear dimmed (unavailable).

What do you mean by an "object?"

Windows 95 is known as an "object-oriented" operating system.   Virtually everything in Windows 95 - files, hardware devices, user profiles, etc., is represented in this manner.

Closely associated with an object are its "properties".   For example, file attributes are some of the properties associated with a file.   Another example would be the connection speed associated with a Hyperterminal or RNA Connection.

Which entries typically appear in the context menu of a selected file?

1) Open, if a file association exists, or Open With…, if one does not.

2) Send To…, used to copy a file to a predetermined location, application, or hardware device.

3)Cut/Copy/Paste, used for file management (also used for block editing within an application.)

4) Create Shortcut, used to create a small, flexible pointer to the location of the file selected. When <u>shortcuts</u> are moved, the link to the selected file is maintained.   Known on other platforms as an alias, or, shadow.

5)   Delete, chosen to delete the selected file.

6)   Rename, used to select a new name for the selected file

7)   Properties, used to view and modify the selected files properties.

What are "Special Drag and Drop Operations?"

Windows 95 makes it easy to choose between copying a file, moving a file, or creating a shortcut, when using the secondary mouse button to drag the file to another location.   Simply depress the secondary button when selecting and dragging the file, then release.   A menu of the above choices, plus an option to cancel, will appear.

How does the help system implement secondary mouse-clicks?

The help system provided with Windows 95 contains a great deal of context-sensitive information which will help answer users questions quickly and accurately without the necessity of searching through layers of menus and indexes.   In Windows 95, dialogue boxes contain two types of information, Fields and Labels.   A field is an area of the dialogue where the user or the system has placed information which can be changed.   A label is a descriptive name for the type of information contained in the field.   When the user secondary-clicks the label of a field, a special one-item, Whats This? context menu appears.   Selecting this single menu item will promptly display the context-sensitive help information which the user desires.

Directory Structure - Frequently Asked Questions

          What is directory structure and how do I view it?

          What can we learn from it?

          Why the order of items in the list?

          Why replace file manager with this new directory structure stuff?

          Why is there a plus beside some of the folders in my directory list? A minus?

          How do I find hidden directories on the list?

          What happens to the directory structure when I have multiple users and profiles are enabled?

          What is a mapped drive and how do I know if I have one?

          I cannot find a file or folder (directory), what do I do?

What is directory structure and how do I view it?

Directory structure is the way that a computers resources are listed in the Explorer.   For example the desktop is at the top of the structure in Explorer, but by previous (file manager) convention the root directory came first in the hierarchy.

What can we learn from it?

Directory structures gives us some clues as to how the system is currently configured.   We can determine if profiles are setup for multiple users, if some sort of network has been setup, and what type of drives we have.

Why the order of items in the list?

Many hours of research went into determining what would be the most logical order to show the current resources of the computer.   The first item that is seen when windows starts up is the most logical place to start with, this being the desktop.   My computer, the Recycle Bin, and Network Neighborhood all step in at the next level.   All of these   items are on the desktop and provide access to any part of the computer from these three icons.

Why replace file manager with this new directory structure stuff?"

File manager still exists but it is not a 32-bit application so it is still possible to perform tasks with it.   The Explorer was developed to take advantage of the Windows 95 architecture and moves us toward the goal of files and directories being objects which are inherently easier to manipulate than hundreds of files in dozens of subdirectories.

Why is there a plus beside some of the folders in my directory list? A minus?

These folders contain subdirectories and when these folders are expanded out to show the subdirectories then a minus appears.   This is a great way to determine if we have subdirectories or not.

How do I find hidden directories on the list?

In Explorer click on view and then options.   On the property sheet there is the option to view hidden files.

What happens to the directory structure when I have multiple users and profiles are enabled?

A directory called profiles is created under the windows directory with the various user names.   Under each respective user name there is another directory tree with items such as recent, Network Neighborhood, and Start Menu.   This is where the respective user information is stored.   See the following page for an example.

What is a mapped drive and how do I know if I have one?

A mapped drive is a drive letter pointing to a specific computer and directory out on the network.   Mapping of directories is not recommended as that is an older convention that is limited by available drive letter and if the drive letter is changed a multitude of applications can have problems with this as they are looking for a drive letter not a computer or folder.   We can easily determine if a drive has been mapped by looking at the directory listing under my computer.   There a network connection will be shown along with the path and out to the right a drive letter will be assigned.

I cannot find a file or folder (directory), what do I do?

In Explorer there is a tools option on the menu bar.   Clicking on this will drop a menu which contains the find option.   With this we can find both files and folders.   Deeper in this menu we can restrict the search options with such items as time and date stamp, case sensitive, etc.

Shortcuts - Frequently Asked Questions

What is a Shortcut?

Shortcuts are pointers to that reference the actual application or program file. Shortcuts also can define the icons Program Item Properties.

How do I create a Shortcut?

Drag and Drop	By dragging the object with the secondary-mouse button, the option Create Shortcut will appear. **NOTE**: Dragging an Executable file with the primary-mouse button will also create a Shortcut.
Secondary-Mouse click	A secondary-mouse click on an object will have Create Shortcut as a menu item.
Shortcut <u>Wizard</u>	Accessed through the Desktop or Windows Explorer-Secondary-mouse click in an open area, choose New, Shortcut.

How can I tell whether an object is a Shortcut or not?

Shortcut to application	by default will inherit the applications native icon.
Shortcut to associated data file	by default will look like a dog-eared piece of paper with the associated applications icon inside.

All <u>Shortcuts</u> have a small curved arrow in the lower left hand corner of the icon.

NOTE:
PIF files are also considered to be Shortcuts (this is subject to change).

How do I delete a Shortcut?

Drag the Shortcut to the <u>Recycle Bin</u>

Highlight the Shortcut and press DELETE.

In Windows Explorer, highlight the Shortcut, Choose *File, Delete*.

From <u>MS-DOS Mode</u>, or in a MS-DOS window, locate the *.LNK file and delete it using the DEL command.

Are links and shortcuts synonymous?

In the case of a "Link" referring to the LNK extension, the two words are synonymous, however a "Linked file" referring to an <u>OLE</u> function is completely different.

What are a Shortcuts Properties and how do I access them?

Shortcut properties can be accessed by Right-clicking the Shortcut and clicking Properties.

The top of the Shortcut TAB will display the current Icon and current name of the file.

Target Type:	Tells you what kind of program the file references.
Target Location:	Tells you the location of the subdirectory the application is in.
Target:	Target & Command line (from WIN 3.x). It is the line that displays how the program is to be executed.
Start In:	Is the same as Working Directory.
Hot Key:	Hot key & Shortcut key(from Win3.x) have the same operation. Use it to make a quick key combination to this application.
Run:	Tells Win95 to start the program in a normal sized window Maximized or Minimized.
Find Target:	Will close the properties window and <u>open</u> the window\subdirectory and highlight on the Master file.
Change Icon:	Will let you choose different icons to represent your application.

Security - Frequently Asked Questions

[?]   What are User Profiles, and why would I need them?

[?]   What is the difference between Share level and User level security?

What are User Profiles, and why would I need them?

Profiles will let you configure the desktop for multiple user, with there own unique settings.

What is the difference between Share level and User level security?

With share level security we can limit access to only the resources on our machine that we want to <u>share</u>.   These resources can then be given passwords.   In a user level security configuration a user is given rights to resources on the network, each resource need not be <u>password</u> protected because a users rights are controlled by a central server.

What can I do if I choose the incorrect video driver for my computer?

Windows 95 will test the new settings for 15 seconds and then return to the previous settings. If the new setting doesnt work, you can stay with your current settings.

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Windows 95 Err Msg: Windows Could Not Combine VxDs...

PSS ID Number: Q117391

[?] Article Information

[?] **SYMPTOMS**

[?] **CAUSE**

[?] **RESOLUTION**

SYMPTOMS

When Windows 95 restarts after you run Setup, you receive the following error message:

Please wait while Setup updates your Configuration files.

This may take a few seconds...

Windows could not combine VxDs into a monolithic file before starting.

Windows may not start or run properly.

If Windows fails to start, run SETUP again.

Press any key to continue...

Your machine stops responding (hangs) at this point.

CAUSE

This error can be caused by either of the following:

[?]   Your hard disk does not have at least 3 megabytes (MB) of free space after installing Windows 95.

-or-

[?]   Your hard disk contains bad sectors.

RESOLUTION

To correct this problem:

[?]   Increase the hard disk space available by rebooting your computer and pressing the F5 key when you see the "Starting Windows" message. Use the MS-DOS DEL command to delete unnecessary files and make additional hard disk space available.

-or-

[?]   Use a hard disk utility, such as ScanDisk, to correct the bad sectors or mark them as being bad.

-or-

[?]   Run Setup from MS-DOS rather than a previous version of Windows.

KBCategory: kbsetup kberrmsg kbhw

KBSubcategory: wpp95 win95 winboot

Additional reference words: 95 err msg

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Windows 95 Does Not Boot After Running MicroHelp UnInstaller

PSS ID Number: Q117431

[?] Article Information

[?]**SYMPTOMS**

[?]**CAUSE**

[?]**RESOLUTION**

[?]**MORE INFORMATION**

SYMPTOMS

After you run MicroHelp UnInstaller version 2.0 under Windows 95, your system does not boot.

CAUSE

UnInstaller searches your system and deletes files associated with a specified application that you want to remove. However, if you run UnInstaller under Windows 95, it leaves the system unbootable.

RESOLUTION

To correct this problem, reinstall Windows 95.

MORE INFORMATION

For more information, contact MicroHelp Incorporated.

UnInstaller is manufactured by MicroHelp Inc., a vendor independent of Microsoft; we make no warranty, implied or otherwise, regarding this product's performance or reliability.

KBCategory: kb3rdparty kbsetup

KBSubcategory: wpp95 win95 winboot   appscomp

Additional reference words: 95 3rdparty file registry error corrupting corrupted

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Windows 95 Setup Err Msg: The Path Is Invalid

PSS ID Number: Q117509

[?] Article Information

[?] **SYMPTOMS**

[?] **CAUSE**

[?] **RESOLUTION**

[?] **MORE INFORMATION**

SYMPTOMS

When you try to set up Windows 95, you receive the following error message

The path <xxx> is invalid

where <xxx> is the path to the specified setup directory (for example, C:\WINDOWS).

CAUSE

If the drive you are trying to install Windows 95 on has zero (0) bytes available, the above error message is generated.

RESOLUTION

[?]   Install Windows 95 to a different drive.

- or-

[?]   Make additional hard disk drive space available.

MORE INFORMATION

Windows 95 generates the above error message only in cases in which zero bytes are available on the drive on which Windows 95 is being installed. If more than zero bytes of hard disk space are available, but not enough for Windows 95 to be successfully installed, you receive an error message similar to the following:

[?]   Insufficient disk space

-or-

[?]   Not enough disk space

KBCategory: kbsetup kberrmsg kbinterop kbhw

KBSubcategory: wpp95 win95

Additional reference words: 95 invalid path err msg

Microsoft Knowledge Base Information for Article Q118579

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Contents of the Windows 95 MSDOS.SYS File

PSS ID Number: Q118579

[?] Article Information

[?]   Click here to view MSDOS.SYS.

[?]SUMMARY

[?]MORE INFORMATION

SUMMARY

The Windows 95 Setup program creates a file called MSDOS.SYS in the root directory and sets the file's Read-Only, System, and Hidden attributes. Unlike the MSDOS.SYS file in MS-DOS, this file is a text file. It contains a [Paths] section that lists the locations for other Windows 95 files (such as the registry file) and an [Options] section that you can use to personalize the boot process.

MORE INFORMATION

The [Paths] section can contain the following settings:

HostWinBootDrv=<Root of Boot Drive>

Default: C

Purpose: Specifies the location for the root of the boot drive.

WinBootDir=<Windows Directory>

Default: Directory specified during Setup (for example, C:\WINDOWS)

Purpose: Lists the location of the necessary files for booting.

WinDir=<Windows Directory>

Default: Directory specified during Setup (for example, C:\WINDOWS)

Purpose: Lists the location of the Windows 95 directory specified during Setup.

The [Options] section can contain the following settings and must be manually inserted:

BootDelay=<Seconds>

Default: 2

Purpose: Sets the amount of time the "Starting Windows" message remains on the screen before Windows 95 continues to boot.

BootFailSafe=<Boolean>

Default: 0

Purpose: A setting of 1 forces your computer to boot in Safe Mode.

BootGUI=<Boolean>

Default: 1

Purpose: A setting of 1 forces the loading of the GUI interface. A setting of 0 disables the loading of the GUI interface.

BootKeys=<Boolean>

Default: 1

Purpose: A setting of 1 enables the use of the function key boot options (that is, F4, F5, F6, and F8). A setting of 0 disables the use of these function keys during the boot process

NOTE: A setting of BootKeys=0 overrides the use of BootDelay=n.

BootMenu=<Boolean>

Default: 0

Purpose: A setting of 1 enables the startup menu. If this setting is 0, then you must press the F8 key when "Starting Windows" appears to invoke the startup menu.

BootMenuDefault=<Number>

Default: 1 if the system is running correctly

           4 if the system hung in the previous instance

Purpose: Use this setting to set the default menu item for startup.

BootMenuDelay=<Number>

Default: 30

Purpose: This setting is used to set the number of seconds your system will pause on the startup menu. If the number of seconds counts down to 0 without intervention, the BootMenuDefault is activated.

BootMulti=<Boolean>

Default: 0

Purpose: A setting of 0 disables the multi-boot option. (For example, with a setting of 0 you cannot boot your previous operating system.) A setting of 1 enables the F4 and F8 keys to boot your previous operating system.

NOTE: This setting is set to 0 by default to avoid the corruption of data by allowing you to inadvertently boot MS-DOS and run a disk utility that does not recognize long filenames.

BootWarn=<Boolean>

Default: 1

Purpose: A setting of 0 disables the Safe Mode boot warning message and the startup menu.

BootWin=<Boolean>

Default: 1

Purpose: A setting of 1 forces Windows 95 to load at startup. A setting of 0 disables Windows 95 as your default operating system (this is useful only if you have MS-DOS version 5.x or 6.x on the computer).

NOTE: Pressing F4 inverts the default only if BootMulti=1. (For example, pressing the F4 key with a setting of 0 forces Windows 95 to load.)

DoubleBuffer=<Boolean>

Default: 0

Purpose: A setting of 1 is a conditional setting that enables double-buffering for controllers that need it (for

example, <u>SCSI</u> controllers). A setting of 2 is an unconditional setting that enables double-buffering regardless of whether the controller needs it or not.

DBLSpace=<Boolean>

Default: 1

Purpose: A setting of 1 allows the automatic loading of the DBLSPACE.BIN file. A setting of 0 prevents the automatic loading of this file.

DRVSpace=<Boolean>

Default: 1

Purpose: A setting of 1 allows the automatic loading of the DRVSPACE.BIN file. A setting of 0 prevents the automatic loading of this file.

LoadTop=<Boolean>

Default: 1

Purpose: A setting of 0 does not let Windows 95 load COMMAND.COM or DRVSPACE.BIN/DBLSPACE.BIN at the top of 640K. If you are having compatibility problems with software that makes assumptions about the available memory try setting this to 0.

Logo=<Boolean>

Default: 1

Purpose: A setting of 1 forces the default Windows 95 logo to appear. A setting of 0 prevents the animated logo from being displayed. A setting of 0 also avoids hooking a variety of <u>interrupts</u> that can create incompatibilities with certain third-party memory managers.

Network=<Boolean>

Default: 0

Purpose: A setting of 1 means the network was installed and adds "Start Windows, bypassing startup files, with network support" as an option on the Windows 95 startup menu.

The MSDOS.SYS file also contains a section that contains seemingly useless information. This information is necessary to support programs that expect the MSDOS.SYS file to be at least 1024 bytes in length. For example, if an anti-virus program detects that the MSDOS.SYS file is less than 1024 bytes, it may assume that the MSDOS.SYS file is infected with a virus. If you delete the MSDOS.SYS file your computer will not start.

The following statement, followed by a series of "X"s, appears in the MSDOS.SYS file:

    ;The following lines are required for compatibility with other programs.

    ;Do not remove them (MSDOS.SYS needs to be >1024 bytes).

Since each line begins with a semicolon (;), the lines are not read by the system.

How to Edit the MSDOS.SYS File

If you want to change any of the values in the MSDOS.SYS file, follow these steps to edit the file:

1. Click the Start button, point to Find, then click Files Or Folders.

2. In the Named box, type "MSDOS.SYS" (without quotation marks). In the Look In box, click your boot drive (usually drive C). Click the Find Now button.

3. Use the right mouse button to click the MSDOS.SYS file and then click Properties on the menu that appears.

4. Click the Read-Only and Hidden check boxes to remove these attributes from the MSDOS.SYS file and then click OK.

5. Use the right mouse button to click the MSDOS.SYS file and then click Open With on the menu that appears.

6. In the "Choose the program you want to use" box, click <u>WORDPAD</u> and then click OK.

7. Make the changes you want to the MSDOS.SYS file. When you are done, save the file and then quit WordPad.

8. Use the right mouse button to click the MSDOS.SYS file and then click Properties on the menu that appears.

9. Click the Read-Only and Hidden check boxes to set these attributes for the file and then click OK. Close the Find window.

10. Quit and then restart Windows.

KBCategory: kbsetup kbenv kbhw kbtshoot

KBSubcategory: wpp95 win95 diskmem winboot

Additional reference words: 95 tshoot wwt security administrator auto-loading winboot.ini msdos.w40

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Windows 95 Does Not Recognize Your Computer as Plug and Play

PSS ID Number: Q118628

[?] Article Information

[?] **SYMPTOMS**

[?] **CAUSE**

[?] **RESOLUTION**

SYMPTOMS

Windows 95 does not recognize your machine as a Plug and Play computer even though you receive a message during startup that states:

> Intel PnP BIOS Extensions Installed

CAUSE

Intel has developed some motherboards that are equipped with a Plug and Play <u>BIOS</u> that does not contain the run-time services necessary to configure motherboard devices.

An example of such a motherboard is the Intel P5/90. Gateway, and possibly other original equipment manufacturers (OEMs), ship computers with the P5/90 motherboard.

RESOLUTION

Consult your hardware vendor about upgrading your system BIOS to comply with the Plug and Play BIOS version 1.0a specification.

KBCategory: kbhw kbprb kb3rdparty kbsetup

KBSubcategory: wpp95 win95 diskmem winboot

Additional reference words: 95 pnp plug-and-play plugnplay 1.0a 3rdparty

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Enhanced Functions of Sejin J-Mouse Keyboard Do Not Work

PSS ID Number: Q118870

[?] Article Information

[?]**SYMPTOMS**

[?]**CAUSE**

[?]**STATUS**

[?]**MORE INFORMATION**

SYMPTOMS

After you install the Sejin J-Mouse Keyboard drivers and restart the system, your mouse no longer functions. The keyboard functions normally; however, the enhanced features of the J-Mouse are not active.

CAUSE

The version 4.0 drivers for the J-Mouse features of the Sejin J.M. Keyboard are not compatible with Windows 95.

STATUS

At this time, no resolution for this problem is available. Sejin is aware of the problem and is currently working on drivers that will be compatible with Windows 95.

Windows 95 includes a MouseKeys feature that allows users to perform mouse actions using the numeric keypad. You can enable these features by pressing the keyboard combination ALT+SHIFT+NUM LOCK. For more information about MouseKeys, refer to Help.

MORE INFORMATION

The J-Mouse Keyboard has mouse capabilities built into the "J" key to enable mouse movement from the keyboard. There are several other keys with mouse functions assigned to them. These keys are designed to shorten the transition time between the mouse and the keyboard. They also assist individuals with movement disabilities, much the same as the accessibility features of Windows 95.

The products included here are manufactured by Sejin America, a vendor independent of Microsoft; we make no warranty, implied or otherwise, regarding these products' performance or reliability.

KBCategory: kbtool kbhw kb3rdparty kbprb kbsetup

KBSubcategory: wpp95 win95 appscomp winshell

Additional reference words: 95 3rdparty j mouse

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System Hangs When Accessing Sound Card Controlled CD-ROM Drive

PSS ID Number: Q118954

[?] Article Information

[?] **SYMPTOMS**

[?] **CAUSE**

[?] **RESOLUTION**

[?] **MORE INFORMATION**

SYMPTOMS

When you press CTRL+ALT+DEL to reboot and then try to use the Sound Blaster or Media Vision Pro Audio "SCSI" CD-ROM drive, Windows 95 stops responding (hangs).

CAUSE

If your system hangs and you have to press CTRL+ALT+DEL, the system may not find the CD-ROM drive after rebooting. If this occurs, trying to use the CD-ROM causes the system to hang again.

RESOLUTION

To work around this problem, press the reset button on your computer or turn off the computer and then turn it on again. To avoid this problem, load only the protected-mode drivers for the Sound Blaster or Media Vision Pro Audio on-board "SCSI" interface proprietary CD-ROM devices.

MORE INFORMATION

If Windows 95 is relying on real-mode drivers for the Sound Blaster or Media Vision Pro Audio on-board CD-ROM interface, sometimes CTRL+ALT+DEL does not reset this interface. If so, you no longer have access to anything on the CD-ROM because its drivers were unable to load.

The products included here are manufactured by vendors independent of Microsoft; we make no warranty, implied or otherwise, regarding these products' performance or reliability.

KBCategory: kbsound kb3rdparty kbmm kbprb kbhw kbsetup

KBSubcategory: wpp95 win95

Additional reference words: 95 sbpro sb16 trantor SCSI (read IDE) 3rdparty scuzzy

Microsoft Knowledge Base Information for Article Q119067

Last modified on 08-JUN-1995

Applies to Microsoft Windows 95

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Booting MS-DOS with QEMM DOSDATA.SYS Starts Windows 95

PSS ID Number: Q119067

[?] Article Information

[?] **SYMPTOMS**

[?] **CAUSE**

[?] **WORKAROUND**

[?] **MORE INFORMATION**

SYMPTOMS

Pressing F4 when the "Starting Windows" message appears does not start the computer with your previous version of MS-DOS.

CAUSE

QEMM 7.03 and later installs a utility called DOSDATA.SYS in the CONFIG.SYS file. When this file is read, it forces the computer to reboot so that it can optimize memory allocations made from the first boot cycle. Windows 95 does not support the DOSDATA.SYS utility included with QEMM versions 7.03 and later.

WORKAROUND

To successfully boot to MS-DOS:

1. Press F4 when you see the "Starting Windows" message.

2. The computer reboots after DOSDATA.SYS is read and displays "Starting Windows" again.

3. Press F4 when you see "Starting Windows" the second time. This allows the computer to continue booting to MS-DOS.

   -or-

1. Remark out any statements for QEMM in the CONFIG.SYS file by placing a semicolon before those statements and then reboot your computer.

2. Press F4 when you see the "Starting Windows" message.

NOTE: You may have to edit your MSDOS.SYS file to boot your previous version of MS-DOS. For additional information, please see the following article(s) in the Microsoft Knowledge Base:

   ARTICLE-ID: Q118579

   TITLE: Contents of the Windows 95 MSDOS.SYS File

   (Click here [?] to jump to the article)

   ARTICLE-ID: Q121963

   TITLE: Requirements to Boot Previous Operating System

MORE INFORMATION

QEMM is manufactured by Quarterdeck Office Systems, a vendor independent of Microsoft; we make no warranty, implied or otherwise, regarding this product's performance or reliability.

KBCategory: kb3rdparty kbtool kbprb kbsetup

KBSubcategory: wpp95 win95 diskmem appscomp

Additional reference words: 95 qemm386 3rdparty

Microsoft Knowledge Base Information for Article Q119091

Last modified on 27-JUL-1995

Applies to Microsoft Windows 95

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PCMCIA Cards Detected Twice on IBM ThinkPad 750 and 750c

PSS ID Number: Q119091

[?] Article Information

[?] **SYMPTOMS**

[?] **CAUSE**

[?] **WORKAROUND**

[?] **MORE INFORMATION**

SYMPTOMS

On the IBM ThinkPad 750 and 750C, PCMCIA cards are reported as two separate nodes under the Device Manager card class.

CAUSE

When the Socket Services driver attempts to determine the number of PCMCIA sockets in the ThinkPad, the ThinkPad incorrectly reports that there are more than two PCMCIA sockets, even though the ThinkPad has only two.

WORKAROUND

To work around this problem:

1. Click the Start button, point to Settings, then click Control Panel.

2. Double-click the System icon, and then click the Device Manager tab.

3. Expand the PCMCIA Socket branch and click "Intel PCIC Compatible PCMCIA Controller."

4. Click the Properties button, then click the Socket Services tab.

5. In the Number Of Sockets box, change the value from Automatic Detection to 2.

6. Click Apply Now on all open property sheets, then click Shut Down on the taskbar and restart Windows 95.

Now any PCMCIA card you plug in will be detected only once.

If you already have two instances of a PCMCIA device in Device Manager, select the class of the card (for example, Modem or Network), expand the branch and remove one of the instances of that device.

MORE INFORMATION

The products included here are manufactured by vendors independent of Microsoft; we make no warranty, implied or otherwise, regarding these products' performance or reliability.

KBCategory: kbhw kb3rdparty kbprb kbsetup

KBSubcategory: wpp95 win95

Additional reference words: 95 3rdparty

Microsoft Knowledge Base Information for Article Q119092

Last modified on 08-JUN-1995

Applies to Microsoft Windows 95

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STB Lightspeed Tseng 4000 W32p Not Detected as PCI Card

PSS ID Number: Q119092

[?] Article Information

[?]**SYMPTOMS**

[?]**CAUSE**

[?]**MORE INFORMATION**

SYMPTOMS

Windows 95 does not detect the STB Lightspeed Tseng 4000 W32p PCI video adapter as a PCI card; it is placed in the Video section of the registry, not the PCI section.

CAUSE

According to STB, the early revisions of the W32p chip were not strictly PCI compatible. As a compatibility measure, the video adapter does not report itself as a PCI card. The performance of the video adapter is unaffected.

MORE INFORMATION

The products included here are manufactured by vendors independent of Microsoft; we make no warranty, implied or otherwise, regarding these products' performance or reliability.

KBCategory: kbdisplay kb3rdparty kbhw kbprb kbprint kbsetup

KBSubcategory: wpp95 win95

Additional reference words: 95 3rdparty

Microsoft Knowledge Base Information for Article Q119118

Last modified on 08-JUN-1995

Applies to Microsoft Windows 95

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Windows 95 Fails to Install on an 80386 Computer

PSS ID Number: Q119118

[?] Article Information

[?] **SYMPTOMS**

[?] **CAUSE**

[?] **RESOLUTION**

[?] **MORE INFORMATION**

SYMPTOMS

The Windows 95 Setup program fails or displays the following error message:

> Setup error B1: Setup has detected an 80386 processor that is not compatible with this version of Windows. Before you can run this version of Windows, you need to upgrade your processor. Contact your computer manufacturer for more information.

CAUSE

Intel 386 microprocessors dated before April 1987 are known as B1 stepping chips. These chips are known to introduce random math errors when performing 32-bit operations, thus making them incompatible with Windows 95.

RESOLUTION

If your 386 chip was manufactured before April 1987 or has a label on it that reads "For 16-bit operations only," contact your hardware manufacturer about a microprocessor upgrade.

MORE INFORMATION

The product included here is manufactured by a vendor independent of Microsoft; we make no warranty, implied or otherwise, regarding this product's performance or reliability.

KBCategory: kbsetup kberrmsg kbhw

KBSubcategory: wpp95 win95 diskmem winboot

Additional reference words: 95 MHz locks freezes hangs err msg 16 20 dx compaq deskpro 386/20

Microsoft Knowledge Base Information for Article Q119876

Last modified on 08-JUN-1995

Applies to Microsoft Windows 95

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Windows 95 Startup Error: Incorrect MS-DOS Version...

PSS ID Number: Q119876

⍰ Article Information

⍰**SYMPTOMS**

⍰**CAUSE**

⍰**RESOLUTION**

⍰**MORE INFORMATION**

SYMPTOMS

After you install Windows 95 and restart the system, it returns to an MS-DOS prompt with the following error message:

> Incorrect MS-DOS version

> Enter the name of Command Interpreter (e.g., C:\WINDOWS\COMMAND.COM)

CAUSE

This problem can occur if SETVER.EXE is being loaded in the CONFIG.SYS file and has a setting indicating that COMMAND.COM should look for a version of MS-DOS earlier than 7.0.

RESOLUTION

Boot the system with the Windows 95 Startup disk and do the following:

1. Change to the WINDOWS directory by typing the following:

    cd\<Windows 95 directory name>

2. Rename the SETVER.EXE file by typing the following:

    ren setver.exe setver.old

3. Remove the Windows 95 Startup disk from drive A, then shut down and restart the system. (Windows 95 loads at this point.)

4. Click the Start button, point to Programs, and then click MS-DOS Prompt.

5. Change to the Windows directory by typing the following:

    cd\<Windows 95 directory name>

6. Rename the SETVER.EXE file again by typing the following:

    ren setver.old setver.exe

7. Remove the COMMAND.COM entry by typing the following:

    setver command.com /d

8. Restart the computer to make the SETVER changes take effect.

The above procedure allows SETVER to maintain compatibility with existing MS-DOS-based applications.

MORE INFORMATION

When Windows 95 is installed, the new SETVER.EXE assumes the settings of the currently loaded SETVER.EXE in an effort to maintain compatibility with existing MS-DOS-based applications.

KBCategory: kbsetup kberrmsg kbsetup

KBSubcategory: wpp95 win95 diskmem winboot

Microsoft Knowledge Base Information for Article Q120388

Last modified on 08-JUN-1995

Applies to Microsoft Windows 95

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Windows 95 Setup Err Msg: Warning SU-0014...

PSS ID Number: Q120388

[?] Article Information

[?] **SYMPTOMS**

[?] **CAUSE**

[?] **WORKAROUND**

SYMPTOMS

During the installation of Windows 95, you receive the following error message:

Setup Detection Warning

Warning SU-0014

Setup has found a hardware device on your computer that is not responding. Click Continue to try this device again.

If problems persist, click Exit Setup, quit all programs, remove floppy disks from their drives, and turn your computer off. Then, turn your computer on and run Setup again (choose Safe Recovery when prompted).

CAUSE

This error message can be caused by any of the following conditions:

[?]   The network has stopped responding.

[?]   The CD-ROM has stopped responding.

[?]   The floppy disk drive has stopped responding.

[?]   You no longer have access to the hard disk to complete the installation process.

[?]   An unsupported device has been detected.

WORKAROUND

Following the recommendation in the error message (that is, turning off your computer, turning on your computer, and then rerunning Setup selecting Safe Recovery) may correct this problem. If it does not, you must determine which of the above conditions exists and then correct the problem (or problems).

Microsoft Knowledge Base Information for Article Q120680

Last modified on 04-JUL-1995

Applies to Microsoft Windows 95

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Blank Pages When Printing to Canon LBP-81V Printer

PSS ID Number: Q120680

[?] Article Information

[?]**SYMPTOMS**

[?]**CAUSE**

[?]**RESOLUTION**

[?]**MORE INFORMATION**

SYMPTOMS

When you print a document to a Canon LBP-81V printer, the first few pages print correctly, but the remaining pages are blank.

CAUSE

This problem can occur if the Canon LBP-81V printer is attached to the computer with a parallel cable over 4 feet in length. The blank pages occur because the Canon LBP-81V printer defaults to a 30-second time-out. This setting cannot be changed.

RESOLUTION

To correct this problem, connect the printer to the system using a parallel cable shorter than 4 feet. This is the recommended length specified in the Canon LBP-81V printer documentation.

MORE INFORMATION

The LBP-81V printer is manufactured by Canon, a vendor independent of Microsoft; we make no warranty, implied or otherwise, regarding this product's performance or reliability.

KBCategory: kbprint kb3rdparty kbhw kbsetup

KBSubcategory: wpp95 win95

Additional reference words: 95 3rdparty bubble jet bubblejet

Microsoft Knowledge Base Information for Article Q121169

Last modified on 04-JUL-1995

Applies to Microsoft Windows 95

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Lotus ScreenCam for Windows Causes Blank Screen

PSS ID Number: Q121169

[?] Article Information

[?] **SYMPTOMS**

[?] **CAUSE**

[?] **WORKAROUND**

[?] **MORE INFORMATION**

SYMPTOMS

When you are using Lotus ScreenCam for Windows version 1.0a, the screen goes completely blank[?] you see nothing other than the mouse moving.

CAUSE

This problem occurs when ScreenCam tries to access Windows 95 internal system data using incorrect commands. This prevents ScreenCam from repainting the display, resulting in the blank screen.

WORKAROUND

ScreenCam does run correctly when loaded from Microsoft Windows version 3.x in a virtual machine (VM). For more information about running Microsoft Windows version 3.x in a VM, refer to the Windows 95 release notes.

MORE INFORMATION

ScreenCam is a multimedia tool used to capture application screen activity, cursor movements, and sound into an integrated movie.

ScreenCam is manufactured by Lotus Development Corporation, a vendor independent of Microsoft; we make no warranty, implied or otherwise, regarding this product's performance or reliability.

KBCategory: kbdisplay kbsound kb3rdparty kbmm kbtool kbsetup

KBSubcategory: wpp95 win95 appscomp

Additional reference words: 95 3rdparty screen cam empty ms-dos session ms-dos window

Microsoft Knowledge Base Information for Article Q121294

Last modified on 08-JUN-1995

Applies to Microsoft Windows 95

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Windows 95 Err Msg w/a DISTEC Drive: Missing Operating System

PSS ID Number: Q121294

[?] Article Information
[?] **SYMPTOMS**
[?] **CAUSE**
[?] **WORKAROUND**
[?] **MORE INFORMATION**

SYMPTOMS

When Windows 95 reboots after Setup is complete, you receive the following error message:

Missing operating system

CAUSE

This error message occurs when your DISCTEC removable hard disk drive is set as the boot drive.

DISCTEC removable hard disk drives set the CMOS to drive type 2. The DISCTEC removable drive device driver (DISCTEC.SYS) then uses an INT 13 function 9 call to reset the BIOS with the proper hard disk drive type. The hard disk drive type is stored in the partition sector.

Windows 95, as well as some earlier versions of MS-DOS, rewrites the partition sector when installed. This causes the code the DISCTEC device driver inserted to be removed. Therefore, the BIOS can no longer identify the proper hard disk drive type.

WORKAROUND

[?]   If you have already installed Windows 95 and are receiving the above error message, perform the following steps:

1. Boot your computer with a bootable floppy disk.

2. Insert the DISCTEC installation disk in the floppy disk drive and change to this drive (A: or B:).

3. Use DISCTEC's hard disk drive partitioning software to rewrite the partition table as follows:

HDPRT /w /0

NOTE: The last character above is a zero.

You are returned to a drive prompt without any messages being displayed. This step works correctly as long as the formatting of the hard disk has not changed.

4. Reboot your computer from the hard disk.

[?]   If you have not installed Windows 95 yet, perform the following steps:

1. Manually set the CMOS to the proper hard disk drive type.

2. Remove the DISCTEC.SYS device driver from the CONFIG.SYS file and reboot your computer.

3. Install Windows 95.

4. Reinstall the DISCTEC software.

If you continue to receive the above error message or experience other problems with your DISCTEC removable drive, contact DISCTEC technical support at (407) 671-5500.

MORE INFORMATION

After booting from a floppy disk and attempting to access your hard disk drive, you may encounter "Sector not found" error messages. To correct these errors, make sure that the DISCTEC device driver (DISCTEC.SYS) is loading in the CONFIG.SYS file on the floppy disk.

The DISCTEC removable hard disk drive is manufactured by Disk Technologies Corp., a vendor independent of Microsoft; we make no warranty, implied or otherwise, regarding this product's performance or reliability.

KBCategory: kbhw kb3rdparty kbsetup

KBSubcategory: wpp95 win95

Additional reference words: 95 3rdparty disktec disktech disctech

Microsoft Knowledge Base Information for Article Q121319

Last modified on 27-JUL-1995

Applies to Microsoft Windows 95

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Missing Display Options in Display Property Sheet

PSS ID Number: Q121319

[?] Article Information

[?] **SYMPTOMS**

[?] **CAUSE**

SYMPTOMS

When you try to change the <u>Desktop</u> Area setting in properties for Display, some options that the video adapter is capable of providing may not be available. For example, a video adapter that can display 1024 x 768 x 256 resolution may offer only 640 x 480 x 256 and 800 x 600 x 16 as the resolution options.

CAUSE

Missing display options can occur when one or more of the following conditions exists:

[?]   The computer is a PCI system and the Monitor Timing settings in the system BIOS are set incorrectly. The Monitor Timing settings should match the capabilities of the display monitor (screen). Check your monitor documentation for the maximum resolution supported by your monitor. Refer to the documentation for your computer system to obtain information about how to make the necessary changes to the Monitor Timing settings.

[?]   The Monitor Type is incorrect on the Change Display Type   property sheet.   (You can access this setting by clicking the right [secondary] mouse button on the desktop, selecting Properties, clicking the Settings tab, and then clicking the Change Display Type button.) The Monitor Type should match the monitor brand and model that you are using. If your monitor is not listed, you can select the Generic setting that corresponds to the capabilities of your monitor.

[?]   The Windows 95 display driver does not support the display mode you are trying to use. If you are confident that the display and video adapter is capable of a higher resolution, try setting the Adapter Type to one of the high-resolution generic (Super VGA) modes. NOTE: This may or may not function correctly depending on your configuration.

[?]   You are using a Windows version 3.1 display driver. If you use a Windows 3.1 display driver, the Desktop Area and Color Palette settings are not changeable in Properties for Display. To change the resolution, you must click the Change Display Type button and change the Adapter Type to the Windows 3.1 display driver you want to use.

KBCategory: kbdisplay kbhw kbusage kbprb kbsetup kbmm kbui

KBSubcategory: wpp95 win95 winshell

Additional reference words: 95 properties sheet

Microsoft Knowledge Base Information for Article Q121627

Last modified on 08-JUN-1995

Applies to Microsoft Windows 95

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Using NCR C810 PCI SCSI Adapter on Systems with Phoenix BIOS

PSS ID Number: Q121627

[?] Article Information

[?] **SYMPTOMS**

[?] **CAUSE**

[?] **RESOLUTION**

[?] **MORE INFORMATION**

SYMPTOMS

System performance, especially hard disk performance, decreases dramatically after you install Windows 95.

CAUSE

The NCR C810 PCI SCSI adapter functions correctly only if it is configured to use IRQ 15. The BIOS setup utility on systems using Phoenix System BIOS version 5.12 or 5.33 allows the PCI SCSI adapter to be configured to use any IRQ in the 7-15 range. If the NCR C810 PCI SCSI adapter is not configured correctly, Windows 95 is forced to use slower real-mode device drivers.

RESOLUTION

Consult the system manual and change the NCR C810 PCI SCSI adapter IRQ setting to IRQ 15 in the system BIOS setup utility. This enables Windows 95 to use the faster protected-mode device drivers.

MORE INFORMATION

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KBCategory: kbsetup kb3rdparty

KBSubcategory: wpp95 win95appscomp winshell winboot

Additional reference words: 95 3rdparty protected scuzzy

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Microsoft Knowledge Base Information for Article Q121718

Last modified on 08-JUN-1995

Applies to Microsoft Windows 95

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Disabled Net Card on Compaq XL560 Is Detected By Plug and Play

PSS ID Number: Q121718

[?] Article Information

[?] **SYMPTOMS**

[?] **CAUSE**

[?] **RESOLUTION**

SYMPTOMS

The Compaq XL560 <u>EISA</u> PCI-based computer has a built-in AMD Ethernet network interface card. When the internal network card is disabled through CMOS and a second network card is installed, Windows 95 detects both the internal and the secondary network cards during the Plug and Play detection portion of Setup.

CAUSE

The built-in network interface card is disabled from a system BIOS point of view only--Windows 95 recognizes it as an unconfigured device. Windows 95 treats unconfigured devices as PCMCIA devices and assigns them IRQ 9 and an I/O range. As a result, the device is recognized in the Plug and Play detection phase.

RESOLUTION

To correct this problem, disable the built-in network interface card through the Device Manager in Control Panel.

To disable the internal network card in Windows 95, perform the following steps:

1. Click the Start button, point to Settings, and then click Control Panel.

2. Double-click the System icon.

3. Click the Device Manager tab.

4. Click the plus sign next to Network Adapters.

5. Click the AMD network interface card, then click the Properties button.

6. Under Device Usage, change the status by clicking the option that reads "The device is present, but do not use it."

7. Click the OK button to accept the change, then close Device Manager and Control Panel.

The internal network interface card should now be disabled.

KBCategory: kbsetup kbhw kbnetwork

KBSubcategory: wpp95 win95 winboot msnets

Additional reference words: 95 pnp plug-and-play

Microsoft Knowledge Base Information for Article Q121926

Last modified on 08-JUN-1995

Applies to Microsoft Windows 95

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Second CD-ROM Drive Not Accessible in Windows 95

PSS ID Number: Q121926

[?] Article Information

[?] **SYMPTOMS**

[?] **CAUSE**

[?] **RESOLUTION**

SYMPTOMS

When you install Windows 95 on a system with two CD-ROM drives, one of the CD-ROM drives is not accessible via Explorer or My Computer.

CAUSE

This problem occurs when Windows 95 loads protected-mode drivers for one of the CD-ROM drives and the second CD-ROM drive is running with real-mode drivers loading in the CONFIG.SYS and AUTOEXEC.BAT files. Windows 95 assumes that the real-mode and protected-mode drivers reference the exact same drive; therefore, it assigns the drive letter for the protected-mode drive to be the same as the existing real-mode drive letter.

RESOLUTION

Assign the CD-ROM drive running in protected mode to a different drive letter.

You can change the drive letter of a CD-ROM drive by performing the following steps:

1. Click the Start button, point to Settings, and then click Control Panel.

2. Double-click the System icon, then click the Device Manager tab.

3. Select the CD-ROM you want to change from the list, then click the Properties button.

4. Click the Settings tab.

5. In the Reserved Drive Letters section, set Start Drive Letter and End Drive Letter to the drive letter you want the CD-ROM to use. Click the OK button.

6. Click the Start button on the taskbar and click Shut Down. Then click Restart The Computer.

The CD-ROM drive letter should now be the letter you selected and the second CD-ROM should be accessible.

To change the drive letter of the CD-ROM using MSCDEX, use the MSCDEX /L: switch on the MSCDEX line in the AUTOEXEC.BAT file. For example, inserting a /L:E on the MSCDEX line would change the drive letter of the of the CD-ROM using MSCDEX to E.

KBCategory: kbmm kbsetup kbhw

KBSubcategory: wpp95 win95 winshell

Additional reference words: 95 cdrom protected mode

Microsoft Knowledge Base Information for Article Q122497

Last modified on 08-JUN-1995

Applies to Microsoft Windows 95

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Closing a Folder Before Setup Is Complete Hangs Computer

PSS ID Number: Q122497

[?] Article Information

[?] **SYMPTOMS**

[?] **CAUSE**

[?] **RESOLUTION**

SYMPTOMS

When you are installing a software package, the computer stops responding (hangs).

CAUSE

Near the end of the installation process, most programs create a <u>folder</u> and icons. At times, this folder may be visible on the screen before the setup program is complete. If you close this folder before setup finishes, the system may hang.

RESOLUTION

To avoid this problem, do not close the folder before the installation is complete.

KBCategory: kb3rdparty kbsetup kbinterop

KBSubcategory: wpp95 win95 appscomp

Additional reference words: 95 3rdparty hung locks locked up freezes frozen crashes

Microsoft Knowledge Base Information for Article Q123078

Last modified on 08-JUN-1995

Applies to Microsoft Windows 95

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IDE E-Z Raid-1 Driver Does Not Load; Uses Real-Mode Drivers

PSS ID Number: Q123078

[?] Article Information

[?]**SYMPTOMS**

[?]**CAUSE**

[?]**RESOLUTION**

[?]**MORE INFORMATION**

SYMPTOMS

When you check the status of your hard disk controller in Device Manager, you may see a red circle with a slash mark through it to the left of the controller. In addition, the Animated Cursors may be disabled. (To locate Device Manager, double-click the System icon in Control Panel and then click the Device Manager tab.)

CAUSE

These problems occur when you have an E-Z Raid-1 controller card installed. The E-Z Raid-1 controller card comes with Win32 drivers for Windows 3.1. The Windows 95 drivers are incompatible with this card, forcing paging to take place through real mode.

RESOLUTION

To correct these problems, run the setup program for the E-Z Raid controller card (from the original disk), and install the Windows 3.1 drivers.

MORE INFORMATION

After you install the E-Z Raid drivers and restart Windows 95, you receive an error message that reads "Device conflict. Drivers detected that conflict with the generic ESDI controller. This device will be disabled." You do not receive this error message the next time you start Windows 95. The drivers added by the E-Z Raid setup program are TRMINT13.386 and WDCTRL32.386

KBCategory: kbsetup kbenv kb3rdparty

KBSubcategory: wpp95 win95 diskmem winboot

Additional reference words: 95 3rdparty 95 wdctrl int13

Microsoft Knowledge Base Information for Article Q123096

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Applies to Microsoft Windows 95

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Windows 95 Err Msg: Setup Error G1. Windows Setup Cannot...

PSS ID Number: Q123096

[?] Article Information

[?] **SYMPTOMS**

[?] **CAUSE**

[?] **WORKAROUND**

[?] **MORE INFORMATION**

SYMPTOMS

After you type "setup" (without the quotation marks) to start the Microsoft Windows 95 Setup program, you receive the following error message:

> Setup Error G1. Windows Setup cannot install from MS-DOS with EMM386.EXE or similar utilities loaded on this machine. You will need to remove EMM386.EXE from your CONFIG.SYS file and restart your machine before running Setup. After Windows has been installed, you can safely add EMM386.EXE back to your CONFIG.SYS.

CAUSE

Some Gateway 2000 computers are equipped with BIOS chip sets that cause this error message to appear when you run Setup from MS-DOS and you are loading EMM386.EXE, or a similar memory manager, in the CONFIG.SYS file.

WORKAROUND

To work around this error message:

[?]   Remove EMM386.EXE (or the similar memory manager) before you run Setup.

-or-

[?]   Run Setup from within Windows (for example, perform an upgrade over a previous version of Windows or Windows for Workgroups).

-or-

[?]   Upgrade the BIOS in your computer.

MORE INFORMATION

It is uncertain exactly which BIOS manufacturers and versions cause this error message; however, it has been reported with the following BIOS chip sets:

    Phoenix 486 ROM BIOS Plus dated 1/15/88

KBCategory: kbsetup kberrmsg kbhw kb3rdparty

KBSubcategory: wpp95 win95

Additional reference words: 95 3rdparty err msg

Microsoft Knowledge Base Information for Article Q123249

Last modified on 27-JUL-1995

Applies to Microsoft Windows 95

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After Running ATI Mach32 Setup, System Uses Safe Mode Startup

PSS ID Number: Q123249

[?] Article Information

[?]**SYMPTOMS**

[?]**CAUSE**

[?]**RESOLUTION**

SYMPTOMS

After you run the ATI Mach32 setup utility (INSTALL.EXE), you may be unable to start the computer except in Safe Mode.

CAUSE

This problem occurs because the Windows 3.x drivers supplied by ATI conflict with the Windows 95 drivers.

RESOLUTION

ATI has updated versions of the drivers available on its BBS. The updated drivers work only if you have previously installed an ATI Windows 3.1 driver. For more information about the updated versions of the video drivers, contact ATI.

KBCategory: kb3rdparty kbsetup kbhw kbdisplay

KBSubcategory: wpp95 win95 winboot

Additional reference words: 95 3rdparty mach32

Microsoft Knowledge Base Information for Article Q123322

Last modified on 08-JUN-1995

Applies to Microsoft Windows 95

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No Access to COM Ports with SuperVoice 2.0b & RHICOMM.DRV

PSS ID Number: Q123322

[?] Article Information

[?] **SYMPTOMS**

[?] **CAUSE**

[?] **WORKAROUND**

[?] **MORE INFORMATION**

SYMPTOMS

Windows 95 cannot gain access to the communication (COM) ports for detection.

CAUSE

This symptom occurs if the Windows 3.1 communications application SuperVoice version 2.0b is installed in Windows 95 when you add a new modem to the system. This application copies a new communications driver called RHICOMM.DRV to the Windows SYSTEM subdirectory and changes a line in the SYSTEM.INI file.

NOTE: The above symptom does not occur until you restart the system.

WORKAROUND

Using a text editor such as MS-DOS Editor or Notepad, open the SYSTEM.INI file, which is found in the Windows directory. In the [boot] section, locate the line that reads:

Comm.drv=Rhicomm.drv

Change this line to read:

Comm.drv=Comm.drv

Save the changes and then restart the system.

MORE INFORMATION

SuperVoice is manufactured by Pacific Image Communications, a vendor independent of Microsoft; we make no warranty, implied or otherwise, regarding this product's performance or reliability.

KBCategory: kbsetup kbenv kb3rdparty

KBSubcategory: wpp95 win95 wincomm appscomp exchange awfax

Additional reference words: 95 3rdparty comm port

Microsoft Knowledge Base Information for Article Q123441

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Applies to Microsoft Windows 95

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Windows 95 DriveSpace Err Msg: Windows Cannot Perform...

PSS ID Number: Q123441

[?] Article Information

[?] **SYMPTOMS**

[?] **CAUSE**

[?] **RESOLUTION**

[?] **MORE INFORMATION**

SYMPTOMS

When you use the Windows 95 DriveSpace compression utility to delete a compressed drive, the following error message is displayed:

> Windows cannot perform this operation because the enhanced mode disk compression driver could not be loaded. You may need to run setup again to install additional disk components. DRVSPACE 545

CAUSE

This problem occurs if the Windows 95 protected-mode DriveSpace driver (DRVSPACX.VXD) is missing or corrupted. In such cases, Windows 95 loads the real-mode DriveSpace driver. Deletion operations are not possible with the real-mode driver.

RESOLUTION

To correct this problem, extract the file DRVSPACX.VXD from the original Windows 95 disks or CD-ROM. To extract the file, perform the following steps:

1. Rename the DRVSPACX.VXD file on your hard disk. This file should be located in the WINDOWS\SYSTEM\IOSUBSYS subdirectory.

   a. To rename this file, first click the Start button on the <u>taskbar</u>. On the Find menu, click Files Or Folders.

   b. In the Find: All Files dialog box, type "drvspacx.vxd" (without the quotation marks) in the Named box. Click the Find Now button.

   NOTE: If DRVSPACX.VXD is missing, that is, it is not found on the hard disk that contains Windows 95, skip to step 2 below.

   c. In the file listing box, use the right (secondary) mouse button to click the file DRVSPACX.VXD and then click Rename. Rename the file DRVSPACX.OLD and then press ENTER.

   NOTE: It is important that you use an extension other than .VXD when renaming files.

2. Extract a new DRVSPACX.VXD from the Windows 95 disks to the WINDOWS\SYSTEM\IOSUBSYS subdirectory. To extract the file, insert Disk 11 in the floppy disk drive, or insert the Windows 95 Setup CD in the CD-ROM drive, then follow the steps below.

   a. On the taskbar, click Start. On Programs menu, click MS-DOS Prompt.

   b. At the command line, type the following

   extract /l <drive letter>:\windows\system\iosubsys   <drive letter>:\win95_11.cab drvspace.vxd

   where <drive letter> indicates the letter designating the drive containing the floppy disk or CD-ROM.

3. Restart the system.

   NOTE: For additional information about the EXTRACT command, type "extract /?" (without the quotation marks) at the MS-DOS prompt.

MORE INFORMATION

If DRVSPACX.VXD becomes corrupted or is accidentally deleted from the system, the real-mode driver loads by default. DriveSpace cannot perform any operation using the real-mode driver while running under Windows 95. However, some operations (such as unmount and change letter) can be performed by making changes to the DRVSPACE.INI file and then restarting the system. However, the FORMAT and DELETE commands cannot be performed without the full support of the file system. These commands cannot be run with the real-mode driver.

Microsoft Knowledge Base Information for Article Q123611

Last modified on 27-JUL-1995

Applies to Microsoft Windows 95

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SCSIPORT.PDR Installed on All Computers During Setup

[?] Article Information
[?] **SUMMARY**
[?] **MORE INFORMATION**

SUMMARY

When you install Windows 95, the file SCSIPORT.PDR is installed even if you do not have a SCSI controller.

MORE INFORMATION

This file is installed in the Windows \SYSTEM\IOSUBSYS directory on all computers, even those without SCSI controllers. Many original equipment manufacturers (OEMs) do not specify through their .INF files to install SCSIPORT.PDR when you add their SCSI devices; therefore, Windows 95 installs it during Setup.

Microsoft recommends that you leave SCSIPORT.PDR on your hard disk in case you add a SCSI device at a later time. Its small size does not consume much space.

KBCategory: kbsetup kbhw kb3rdparty

KBSubcategory: wpp95 win95 diskmem winboot

Additional reference words: 95 3rdparty scuzzy

Microsoft Knowledge Base Information for Article Q123694

Last modified on 04-JUL-1995

Applies to Microsoft Windows 95

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Canceling the Network Install Wizard Causes Error on Restart

PSS ID Number: Q123694

[?] Article Information

[?] **SYMPTOMS**

[?] **CAUSE**

[?] **STATUS**

[?] **RESOLUTION**

SYMPTOMS

If you try to add a <u>client</u>, adapter, <u>protocol</u> , or service, and you click the Cancel button before the Network Install <u>Wizard</u> is finished copying files, you receive an error message when Windows 95 restarts.

A variety of error messages can be generated. Examples include the following:

[?]   The driver file could not be found.

[?]   Error loading device driver.

CAUSE

The error message is displayed because although you canceled the installation, the <u>Registry</u> has already been updated with the new information. When Windows restarts, it reads the Registry and tries to load the files specified; however, because the files were not copied to your hard disk, an error message appears.

STATUS

Microsoft is researching this problem and will post new information here in the Microsoft Knowledge Base as it becomes available.

RESOLUTION

Start Windows 95 in <u>Safe Mode</u> by pressing the F5 key when you see the "Starting Windows" prompt. After Windows has loaded, rerun the Network Install Wizard and either remove the component you just added, or allow the files to be copied to your hard disk when prompted.

KBCategory: kbnetwork kbsetup kbprb

KBSubcategory: wpp95 win95 msnets ndisk3x ndis2

Additional reference words: 95

Microsoft Knowledge Base Information for Article Q123876

Last modified on 08-JUN-1995

Applies to Microsoft Windows 95

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Installed Components for Typical, Compact, or Portable Setup

PSS ID Number: Q123876

[?] Article Information

[?] **SUMMARY**

[?] **MORE INFORMATION**

SUMMARY

This article lists the items that are installed when you select the Typical, Portable, or Compact Windows 95 Setup option. If an item that you want is not installed when you use one of the predefined Setup options, you can use the Custom Setup option and select the items you want. You can also choose to add or remove items after Windows 95 is installed.

MORE INFORMATION

NOTE: Items that are included only on CD-ROM must be manually selected using the Custom Setup option.

Component	Typical	Portable	Compact	Available on CD-ROM Only
Accessories				
Accessibility Options	no	no	no	yes
Calculator	yes	no	no	no
Character Map	no	no	no	yes
Clipboard Viewer	no	no	no	yes
Desktop Wallpaper				
Autumn Leaves	no	no	no	yes
Windows Logo	no	no	no	yes
Document Templates	yes	no	no	no
Extra Cursors	no	no	no	yes
Games				
FreeCell	no	no	no	yes
Hearts	no	no	no	yes
Minesweeper	no	no	no	yes
Solitaire	no	no	no	yes
NetWatcher	no	no	no	yes
Object Packager	yes	no	no	no
Online User's Guide	no	no	no	yes
Paint	yes	no	no	no
Quick View				
AMI, AMI Pro	no	no	no	yes
ASCII	no	no	no	yes
Configuration Files	no	no	no	yes
Corel Draw 4 and 5	no	no	no	yes
Dynamic Link Libraries	no	no	no	yes

Encapsulated PostScript	no	no	no	yes
Excel Chart	no	no	no	yes
Excel Spreadsheet	no	no	no	yes
Executable Files	no	no	no	yes
Lotus 1-2-3	no	no	no	yes
MS Works Database	no	no	no	yes
MS Works Documents	no	no	no	yes
MS Works Spreadsheet	no	no	no	yes
Quattro Pro for MS-DOS	no	no	no	yes
Quattro Pro for Windows	no	no	no	yes
Registration Entries	no	no	no	yes
Rich Text Format	no	no	no	yes
Setup Files	no	no	no	yes
Text	no	no	no	yes
Windows 3.x Write	no	no	no	yes
Windows Bitmap (DIB)	no	no	no	yes
Windows Bitmap Graphics	no	no	no	yes
Quick View, Extra				
Compuserve GIF	no	no	no	yes
Freelance for Windows	no	no	no	yes
Micrographix Draw	no	no	no	yes
Multiplan	no	no	no	yes
PowerPoint	no	no	no	yes
TIFF	no	no	no	yes
Windows Metafile	no	no	no	yes
WordPerfect Demo	no	no	no	yes
Screen Savers				
Blank Screen	yes	no	no	no
Curves and Colors	no	no	no	yes
Flying Through Space	no	no	no	yes
Mystify Your Mind	no	no	no	yes
Scrolling Marquee	yes	no	no	no
System Monitor	no	no	no	yes
Windows 95 Tour	no	no	no	yes
WordPad	yes	no	no	no
Communications				
Dial-Up Networking	no	yes	no	no
Direct Cable Connect	no	yes	no	no
Hyper Terminal	yes	no	no	no
Phone Dialer	yes	yes	no	no
Disk Tools				

Backup	yes	no	no	no
Disk Defragmenter	yes	yes	yes	no
Disk Compression Tools	no	yes	yes	no
Microsoft Exchange				
Compuserve Mail Services	no	no	no	no
Internet Mail Services	no	no	no	no
Microsoft Exchange	no	no	no	no
Microsoft Fax	no	no	no	yes
Microsoft Network	yes	yes	no	no
Multi-Language Support	no	no	no	yes
MultiMedia				
Audio Compression	yes	yes	no	no
CD Player	yes	yes	no	yes
Media Player	yes	no	no	no
Musica Sound Scheme	no	no	no	yes
Nature Sound Scheme	no	no	no	yes
Robotz Sound Scheme	no	no	no	yes
Sound and Video Clips	no	no	no	yes
Sound Recorder	yes	no	no	no
Utopia Sound Scheme	no	no	no	yes
Video Compression	yes	yes	no	yes
Volume Control	yes	no	no	yes

KBCategory: kbsetup kbref

KBSubcategory: wpp95 win95

Additional reference words: 95 install wwt

Microsoft Knowledge Base Information for Article Q123877

Last modified on 27-JUL-1995

Applies to Microsoft Windows 95

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How to Set Up Banyan VINES in Windows 95

PSS ID Number: Q123877

[?] Article Information

[?]**SUMMARY**

[?]**MORE INFORMATION**

SUMMARY

This article describes how to install Banyan VINES connectivity in Microsoft Windows 95.

NOTE: You must be using Banyan VINES version 5.52(5) or later.

MORE INFORMATION

1. Make sure Banyan VINES connectivity works before you install Windows 95.

2. Install Windows 95.

3. Use the right mouse button to click the <u>Network Neighborhood</u> icon, then click Properties on the menu that appears.

4. Add the following components to Network properties if they are not present:

   [?]   Network adapter

   [?]   Banyan DOS/Windows 3.1 Client

   [?]   Banyan VINES Protocol

5. Your AUTOEXEC.BAT file should contain the following lines:

   Path=Z:\...

   C:\WINDOWS\net initialize

   ban /nc

   ndisban

   redirall

   C:\WINDOWS\net start

   arswait

   z:login

   NOTE: This works assuming your Banyan VINES files are in the root directory. If not, modify the AUTOEXEC.BAT file and add a statement that changes to the Banyan VINES directory.

   HINT: You can make sure that these files load succussfully by pressing the F8 key when you see the "Starting Windows" message. This lets you step through the loading of these files one at a time.

6. Restart your computer to make sure you are prompted to log on to Banyan VINES, and that you can access any Banyan VINES mapped drives.

   NOTE: Because Banyan VINES servers do not have <u>browsing</u> capabilities, they do not appear in your Network Neighborhood.

Troubleshooting

1. Check the network adapter in the Network property sheet to make sure it is set for a real-mode 16-bit NDIS driver.

2. Check the PROTOCOL.INI file in your Windows directory for the following sections:

   [BAN$VINES]

   DriverName=ndisban$

Bindings=EXP16$

        Lanabase=1

        [NDISBAN$]

        DriverName=NDISBAN$

        Lanabase=1

        Bindings=EXP16$

    NOTE: This example uses the Intel EtherExpress 16 network card.

3. Run PCCONFIG.EXE from your Banyan VINES directory to make sure its driver name matches the "Bindings=" line above.

4. Make sure drive Z has the latest VINES.DRV and VVINESD.386 files.

5. If you are using token-ring, your AUTOEXEC.BAT should contain NDTOKBAN instead of NDISBAN.

6. Try to load drivers high. (They require a lot of <u>conventional memory</u>.)

7. If you add the Banyan VINES <u>client</u>, it does not add the Banyan VINES protocol. However, if you add the Banyan VINES protocol, the Banyan VINES client is automatically added.

8. To set up a printer, you must run VINES.EXE from drive Z and choose printer services. You, or the network administrator, must set up print queues. This sets up a port (LPT1, for example) to be redirected to a network printer. In Windows 95, you can install a local printer on LPT1 and it should work correctly.

9. If you receive a message about your Banyan VINES version not being the latest when you reboot Windows 95, edit the Vines.ini file as follows

     [NEWREV]

     dontcopy=1

     vines.version=5.5<x> (<x>) USA

     windows.version=3.95

     where <x> is the version of Banyan VINES you are using.

10. If you do not see the Banyan VINES screen before Windows 95 starts, there is a problem with the VINES drivers in the AUTOEXEC.BAT file.

11. If you can log on to the network but you cannot <u>map</u> Banyan VINES drives, or drives mapped in the <u>login script</u> appear as local drives, make sure that Z: is included in the Path statement in the AUTOEXEC.BAT file.

KBCategory: kbnetwork kbsetup kb3rdparty

KBSubcategory: wpp95 win95 3rdPartyNet

Additional reference words: 95

Microsoft Knowledge Base Information for Article Q123992

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Applies to Microsoft Windows 95

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Basic Configurations for COM Ports in Windows 95

PSS ID Number: Q123992

[?] Article Information

[?] **SUMMARY**

[?] **MORE INFORMATION**

SUMMARY

Windows 95 includes a set of "Basic Configurations" for communications (COM) ports. These configuration options make it easier for you to avoid hardware conflicts by letting you easily change the settings a COM port uses.

These Basic Configurations provide the following:

[?]   A default configuration for each COM port. You cannot change this default setting.

[?]   Additional configurations for each port that lets you edit the IRQ setting. These configurations do not let you change I/O addresses.

[?]   Additional configurations for each port that lets you edit both the IRQ and the I/O range.

MORE INFORMATION

Basic Configurations are determined by the following table:

Basic Configuration	IRQ Setting	Editable?	I/O Setting	Editable?
0	4	No	03F8-03FF	No
1	4	Yes	03F8-03FF	No
2	3	No	02F8-02FF	No
3	3	Yes	02F8-02FF	No
4	4	No	03E8-03EF	No
5	4	Yes	03E8-03EF	No
6	3	No	02E8-02EF	No
7	3	Yes	02E8-02EF	No
8	Variable	Yes	Variable	Yes

COM 1 defaults to Basic Configuration 0. The IRQ can be changed by selecting Basic Configuration 1.

COM 2 defaults to Basic Configuration 2. The IRQ can be changed by selecting Basic Configuration 3.

COM 3 defaults to Basic Configuration 4. The IRQ can be changed by selecting Basic Configuration 5.

COM 4 defaults to Basic Configuration 6. The IRQ can be changed by selecting Basic Configuration 7.

Basic Configuration 8 can be used to configure additional COM ports because it lets you change the IRQ and the I/O address.

Example

The following is a sample procedure for changing the IRQ for COM 1:

1. Click the Start button on the taskbar.

2. On the Settings menu, click Control Panel, then double-click the System icon.

   NOTE: You can skip steps 1 and 2 if you use the right (secondary) mouse button to click the My Computer icon and then click Properties.

3. Click the Device Manager tab, double-click Ports (COM & LPT), then double-click Communications Port (COM1).

4. Click the Resources tab.

   NOTE: COM 1 defaults to Basic Configuration 0, and the settings are according to the table above.

5. Click the arrow next to the Setting Based On box, and click Basic Configuration 1.

6. Under Resource Settings, double-click Interrupt Request (or IRQ), then click the up or down arrow to change the Value field setting.

7. Click OK and restart Windows when prompted.

KBCategory: kbenv kbhw kbsetup

KBSubcategory: wpp95 win95 wincomm

Additional reference words: 95

Microsoft Knowledge Base Information for Article Q124177

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Applies to Microsoft Windows 95

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Application Error: SUWIN Caused an Illegal Instruction

PSS ID Number: Q124177

[?] Article Information

[?]**SYMPTOMS**

[?]**CAUSE**

[?]**RESOLUTION**

SYMPTOMS

When you try to perform a server-based setup of Windows 95 on a system running Microsoft Workgroup Add-On for MS-DOS, you receive the following error:

Application Error "SUWIN caused an illegal instruction in module GDI.EXE at 0001:16EF."

NOTE: This error can also occur on systems with insufficient hard disk space to create a temporary setup directory.

CAUSE

This error occurs on Workgroup Add-On for MS-DOS systems configured to use the basic network redirector. When Windows 95 is set up from an MS-DOS prompt, it loads a mini-version of Windows. This version is very sensitive to system files not being accessible or loadable. The basic redirector included with Workgroup Add-On for MS-DOS may occasionally drop file handles and/or network connections. After this occurs, the mini-version of Windows fails to load code segments or resources and generates the error message.

RESOLUTION

Run Setup after starting Workgroup Add-On for MS-DOS using the full redirector. To start Workgroup Add-On for MS-DOS with the full redirector, type "net stop" (without the quotation marks) at an MS-DOS prompt and log off the system. Then type "net start full" (without the quotation marks) and log on to the system. Setup should now run without generating the error message.

KBCategory: kberrmsg kbsetup kbinterop kbnetwork

KBSubcategory: wpp95 win95 wgao msnets

Additional reference words: 95 err msg

Microsoft Knowledge Base Information for Article Q124659

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Applies to Microsoft Windows 95

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How to Use Logitech Mouse in Windows 95 Setup

PSS ID Number: Q124659

[?] Article Information

[?] **SUMMARY**

[?] **MORE INFORMATION**

SUMMARY

If you run the Microsoft Windows 95 Setup program from an MS-DOS prompt on a computer with a Logitech mouse installed, the mouse does not function until Setup has restarted the computer to boot Windows 95.

MORE INFORMATION

To use a Logitech mouse in the initial portion of Windows 95 Setup, start the Setup program with the following command:

    SETUP /IL

The Logitech mouse is manufactured by Logitech, Inc., a vendor independent of Microsoft; we make no warranty, implied or otherwise, regarding this product's performance or reliability.

KBCategory: kbsetup kbprb kb3rdparty kbhw

KBSubcategory: wpp95 win95

Additional reference words: 95 logi tech logitec

Microsoft Knowledge Base Information for Article Q124855

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Applies to Microsoft Windows 95

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Extra Shortcuts on Desktop After Installing Windows 95

PSS ID Number: Q124855

[?] Article Information

[?] **SYMPTOMS**

[?] **CAUSE**

[?] **RESOLUTION**

[?] **MORE INFORMATION**

SYMPTOMS

After upgrading to Windows 95 from Windows or Windows for Workgroups, the Desktop is cluttered with icons for files that Windows 95 did not install. Each file in the Windows subdirectory has a corresponding icon on the Desktop.

CAUSE

This problem occurs when you have a Windows-based (or Windows for Workgroups) application that used a Windows\Desktop directory. Any file placed in this directory appears as an icon on the Desktop.

RESOLUTION

To correct this problem, move the unnecessary files to another directory or delete the files if the third-party application is no longer needed. Moving the files could affect the performance or ability to run of the third-party application. Be sure not to delete any Windows 95 shortcuts you want to maintain on the Desktop.

MORE INFORMATION

Desktop Set is an application that uses a Windows\Desktop directory. Windows 95 creates an icon for each Desktop Set file because these files remained in Windows\Desktop directory during the upgrade.

Desktop Set is manufactured by OKNA Corporation, a vendor independent of Microsoft; we make no warranty, implied or otherwise, regarding this product's performance or reliability.

KBCategory: kbsetup kb3rdparty kbinterop

KBSubcategory: wpp95 win95 appscomp

Additional reference words: 95 3rdparty

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Microsoft Knowledge Base Information for Article Q125448

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Applies to Microsoft Windows 95

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Application Setup Fails If No AUTOEXEC.BAT or CONFIG.SYS

PSS ID Number: Q125448

[?] Article Information

[?]**SYMPTOMS**

[?]**CAUSE**

[?]**WORKAROUND**

SYMPTOMS

When you are trying to install a program or Windows device driver, the Setup program for the program or device driver fails.

CAUSE

If the Setup program requires that an AUTOEXEC.BAT or CONFIG.SYS file be present on your hard disk, it may fail in Windows 95. If these files are not required due to your computer's configuration, they may not be present.

WORKAROUND

To work around this problem, you can either:

[?]   Create generic AUTOEXEC.BAT and CONFIG.SYS files.

   -or-

[?]   Obtain a new Setup program from the manufacturer.

KBCategory: kb3rdparty kbtool kbsetup

KBSubcategory: wpp95 win95 appscomp

Additional reference words: 95

Microsoft Knowledge Base Information for Article Q125480

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Applies to Microsoft Windows 95

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Boot Sector Protection Causes Windows 95 to Hang

PSS ID Number: Q125480

[?] Article Information

[?]**SYMPTOMS**

[?]**CAUSE**

[?]**WORKAROUND**

SYMPTOMS

One of the following symptoms occurs:

[?]   Windows 95 stops responding (hangs) during Setup or when it attempts to load.

[?]   You are asked whether you want to overwrite the boot sector. Choosing Yes may allow you to complete the Setup procedure, but Windows 95 hangs when it attempts to load.

After you restart the computer, you receive the following message:

Windows Setup was unable to update your system files.

This may be caused by virus detection that is built-in to your machine, or by virus detection software running on your system.

To disable built-in virus detection you will need to run the configuration program that came with your machine, or contact your machine manufacturer.

To disable virus-detection software that you have running on your system, you may need to remove the lines that start the program from your AUTOEXEC.BAT or CONFIG.SYS files.

After you have disabled the virus detection, re-start your machine and re-run Windows Setup.

Press any key to continue....

CAUSE

Some computers include a feature that prevents applications from writing to the boot sector. Such features are normally in the form of anti-virus protection set through your computer's CMOS. If anti-virus protection is enabled, Windows 95 cannot complete its installation, or it does not load properly.

WORKAROUND

Disable the anti-virus feature in your computer's CMOS settings, then re-install Windows 95.

NOTE: In order to disable Compaq's SafeStart Manager in the CMOS settings, you must upgrade the BIOS to at least version 2.26b.

For information about accessing your computer's CMOS settings, please consult your owner's manual or your computer manufacturer.

KBCategory: kbsetup kberrmsg

KBSubcategory: wpp95 win95 winboot diskmem

Additional reference words: 95 antivirus locks freezes

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Microsoft Knowledge Base Information for Article Q126160

Last modified on 08-JUN-1995

Applies to Microsoft Windows 95

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MS-DOS-Based Game Setup Does Not Detect WSS as Sound Blaster

PSS ID Number: Q126160

[?] Article Information

[?]**SYMPTOMS**

[?]**CAUSE**

[?]**RESOLUTION**

SYMPTOMS

When you install an MS-DOS-based game in a full-screen MS-DOS window on a computer with the Microsoft Windows Sound System installed, the game fails to detect the Windows Sound System sound card.

CAUSE

This problem can occur when the game requires that an IRQ from 0 to 7 be used for the sound card but the sound card is set to an IRQ higher than 7. The Windows Sound System (WSS) can use IRQ 7, 9, 10, or 11. If there is a known working configuration using IRQ 7, Windows 95 will use the existing configuration. If there is no existing configuration using IRQ 7, Windows 95 will assign IRQ 7 to a device only as a last resort in order to not conflict with the Enhanced Capabilities port (ECP).

The following games are known to fail to detect the WSS sound card:

[?]   7th Guest

[?]   Kings Quest V

RESOLUTION

To correct this problem, change WSS to use IRQ 7. To do so, follow these steps:

1. Use the right mouse button to click My Computer, and then click Properties on the menu that appears.

2. Click the Device Manager tab.

3. Double-click the Sound Video And Game Controllers entry.

4. Click the MS Windows Sound System entry and then click the Properties button.

5. Click the Resources tab.

6. Change the <u>Interrupt</u> Request setting to 07.

7. Click OK to accept the settings.

After you make this change, the MS-DOS-based game should detect the WSS sound card as a Sound Blaster sound card.

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KBCategory: kbhw kbinterop kbsetup kbui kbmm

KBSubcategory: wpp95 win95 wss appscomp

Additional reference words: 95

Microsoft Knowledge Base Information for Article Q126412

Last modified on 28-JUL-1995

Applies to Microsoft Windows 95

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Using the Microcom DeskPorte 28.8 Modem in Windows 95

PSS ID Number: Q126412

[?] Article Information

[?] **SYMPTOMS**

[?] **CAUSE**

[?] **WORKAROUND**

[?] **STATUS**

[?] **MORE INFORMATION**

SYMPTOMS

When you click the More Information button on the Diagnostics tab when you are viewing the properties for a Microcom DeskPorte 28.8 Fast EP modem, you receive the following error message:

> The modem failed to respond. Make sure it is properly connected and turned on. Verify that the <u>interrupt</u> for the port is properly set.

After you receive this error message and then try to make a connection with Dial-Up Networking, you receive the following error message:

> The computer is not receiving a response from the modem. Check that it is plugged in, and if necessary, turn it off, and then turn it back on.

You can access the modem with Dial-Up Networking after you turn the modem off and back on.

CAUSE

Modem diagnostics does not work correctly with the Microcom DeskPorte 28.8 Fast EP modem. The second error message occurs only if you click the More Information button for the modem before you use Dial-Up Networking.

WORKAROUND

To work around this problem, turn the modem off and back on. Do not click the More Information button on the Diagnostics tab when you are viewing the properties for this modem.

STATUS

Microsoft is researching this problem and will post new information here in the Microsoft Knowledge Base as it becomes available.

MORE INFORMATION

The Windows 16-bit API (and most communication packages) does not support the driver name syntax used to open the Microcom modem port driver (PPM.VXD). Only 32-bit programs that support the Telephony API (<u>TAPI</u>) can access the Microcom DeskPorte 28.8 Fast EP modem with the default configuration.

To use the DeskPorte 28.8 Fast EP parallel port modem with 16-bit Windows-based applications that use only COM ports, follow these steps:

1. Add a CommAlias key to

    HKEY_LOCAL_MACHINE\System\CurrentControlSet\Control

    in the <u>registry</u>.

2. For the CommAlias key, add a string value of

    <COM port>

    where <COM port> is the COM port you are redirecting to the LPT port. This COM port must not be physically

present in your computer or in Device Manager. For example, if your computer does not have a COM3 port, you could use the value:

>   COM3

3. Set the <COM port> string value to

>   <parallel port>\PPM.VXD

where <parallel port> is the port the modem is attached to. For example, if the modem is on LPT1, you could use the value:

>   LPT1\PPM.VXD

For information about how to edit the registry, view the Changing Keys And Values online Help topic in Registry Editor (REGEDIT.EXE). Note that you should make a backup copy of the registry files (SYSTEM.DAT and USER.DAT) before you edit the registry.

WARNING: Using Registry Editor incorrectly can cause serious problems that may require you to reinstall Windows 95. Microsoft cannot guarantee that problems resulting from the incorrect use of Registry Editor can be solved. Use Registry Editor at your own risk.

KBCategory: kberrmsg kbhw kbsetup kb3rdparty

KBSubcategory: wpp95 win95 wincomm

Additional reference words: 95

Microsoft Knowledge Base Information for Article Q126545

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Applies to Microsoft Windows 95

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Cannot Find Second NetWare Server with Two Net Cards Installed

PSS ID Number: Q126545

[?] Article Information

[?]**SYMPTOMS**

[?]**CAUSE**

<u>SYMPTOMS</u>

When you are using two network adapters connected to two separate Novell(r) networks using the Microsoft client for Novell NetWare or a Novell NetWare Workstation shell, Windows 95 sees only one of the two networks.

<u>CAUSE</u>

Only one instance of the Microsoft client for Novell NetWare or the Novell NetWare Workstation shell can be installed in Windows 95. The first of the two network adapters to receive a response from a NetWare <u>server</u> will be the active <u>network adapter</u>.

KBCategory: kbsetup kbenv kbnetwork

KBSubcategory: wpp95 win95 3rdpartynet

Additional reference words: 95

Microsoft Knowledge Base Information for Article Q126633

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Applies to Microsoft Windows 95

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Network Card IRQ Conflicts with Another Device

PSS ID Number: Q126633

[?] Article Information
[?] **SYMPTOMS**
[?] **CAUSE**
[?] **WORKAROUND**
[?] **MORE INFORMATION**

SYMPTOMS

After you install a network interface card (NIC) in your computer, the IRQ that is set conflicts with another device in your system.

CAUSE

This problem can occur with NICs that are software configurable. If Microsoft Windows 95 cannot detect the NIC resources (for example, if there is no PROTOCOL.INI file, NDIS 2 driver, or Novell(r) NetWare ODI configuration) it defaults to the first available logical configuration, regardless of IRQ assignments.

WORKAROUND

Use Control Panel to change the IRQ setting for the NIC to its original setting. To do so, follow these steps:

1. Click the Start button, point to Settings, then click Control Panel.

2. Double-click the Network icon.

3. On the Configuration tab, double-click the NIC in your computer.

4. On the Resources tab, change the IRQ setting so that it matches the setting on the NIC.

5. Click OK.

MORE INFORMATION

During Setup, Windows 95 tries to determine the NIC's configuration from existing network information. If no network configuration information exists, Setup tries to detect the configuration. If you are using a software configurable NIC, Setup detects the I/O address, not the IRQ. Setup then assigns an IRQ from the first logical configuration Windows has for it, even though the IRQ may already be assigned to another device.

For example, if you install an Intel EtherExpress 16 NIC configured to use IRQ 10 in a computer with no previous network files, Setup assigns IRQ 3 to the NIC when it cannot find the NIC's IRQ. This creates an IRQ conflict, because IRQ 3 is already assigned to COM2.

KBCategory: kbnetwork kbsetup kbhw

KBSubcategory: wpp95 win95 msnets

Additional reference words: 95

Microsoft Knowledge Base Information for Article Q126671

Last modified on 04-JUL-1995

Applies to Microsoft Windows 95

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Windows 95 Overwrites Linux Boot Manager

PSS ID Number: Q126671

[?] Article Information

[?] **SYMPTOMS**

[?] **CAUSE**

[?] **RESOLUTION**

[?] **MORE INFORMATION**

SYMPTOMS

When you install Microsoft Windows 95 on a computer that has the Linux operating system installed, Windows 95 may overwrite or deactivate the Linux boot manager (LILO, or Linux Loader). As a result, you can no longer access the Linux operating system.

CAUSE

The Linux boot manager (LILO) can be installed in two ways. It can be installed to the hard disk's Master Boot Record (MBR), or to the root directory or superblock (in Linux terminology) of the Linux partition. A superblock installation means that the Linux partition should be the active partition. Windows 95 Setup makes the primary MS-DOS partition in which it is installed the active partition, causing LILO to be bypassed.

If LILO is installed in the MBR, it is overwritten by Windows 95 Setup.

RESOLUTION

To correct this problem, use one of the following methods:

[?]   If LILO was installed to the MBR, follow these steps:

1. Restart the computer using a bootable Linux floppy disk.

2. Run the LILOCONFIG program from the floppy drive.

[?]   If LILO was installed to the superblock, use the FDISK command to activate the Linux partition.

MORE INFORMATION

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KBCategory: kbsetup kb3rdparty

KBSubcategory: wpp95 win95 diskmem

Additional reference words: 95 wwt

Microsoft Knowledge Base Information for Article Q127806

Last modified on 08-JUN-1995

Applies to Microsoft Windows 95

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Setup Remarks Out Lines in AUTOEXEC.BAT File

PSS ID Number: Q127806

[?] Article Information

[?] **SYMPTOMS**

[?] **CAUSE**

[?] **RESOLUTION**

SYMPTOMS

When you install Windows 95, Setup remarks out some of the commands in the AUTOEXEC.BAT file. These commands are the REN, COPY, MOVE, and DEL commands.

CAUSE

This behavior is by design. Setup disables these lines to prevent files that may be required for Setup to finish successfully from changing.

RESOLUTION

After Windows 95 is installed and working correctly, use any text editor (such as Notepad) to edit the AUTOEXEC.BAT file and remove the REM command from the beginning of lines that you want to re-enable.

KBCategory: kbsetup kbenv

KBSubcategory: wpp95 win95

Additional reference words: 95

Microsoft Knowledge Base Information for Article Q128328

Last modified on 28-JUL-1995

Applies to Microsoft Windows 95

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Folders/Shortcuts Re-created When You Run Setup Again

PSS ID Number: Q133284

[?] Article Information

[?] **SYMPTOMS**

[?] **CAUSE**

[?] **STATUS**

[?] **MORE INFORMATION**

SYMPTOMS

When you run Setup to install Windows 95 over an existing installation of Windows 95, some folders and shortcuts that you may have removed from the Start menu are re-created.

The following actions can also re-create folders and shortcuts that you have removed:

[?]   Running the following command:

   grpconv /m

[?]   Double-clicking a .grp file.

[?]   Double-clicking Runonce.exe in the Windows\System folder.

CAUSE

When a Windows 3.x program group is converted, the .grp file is not removed from the Windows folder. Each time you run Setup, it searches for and converts all the .grp files.

RESOLUTION

After you run Setup successfully, remove all the .grp files and the Progman.ini file from the Windows folder.

STATUS

This behavior is by design.

MORE INFORMATION

During the Run Once portion of Setup, Setup searches for all the Windows 3.x program group files and converts them to shortcuts on the Start menu.   If you run Setup (or the group converter tool or Runonce.exe) again, all the group files are converted to shortcuts again.

For additional information, please see the following article in the Microsoft Knowledge Base:

   ARTICLE-ID: Q119941

   TITLE   : How to Rebuild, Convert, Troubleshoot Folders in Windows 95

   (Click here [?] to jump to the article)

KBCategory: kbsetup kbenv

KBSubcategory: win95 wpp95

Additional reference words: 95

Microsoft Knowledge Base Information for Article Q128380

Last modified on 04-JUL-1995

Applies to Microsoft Windows 95

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Options Not Available for Different User Profiles

PSS ID Number: Q128380

[?] Article Information

[?]**SUMMARY**

[?]**MORE INFORMATION**

SUMMARY

If a component is not installed when you set up Windows 95, that component will not be available for other users when the User Profiles feature is enabled.

For example, assume that you have set up Windows 95 without installing the Musica and Robotz sound schemes. After Setup is finished, you enable User Profiles. You then install the Musica and Robotz sound schemes. When a different user logs on to your computer, the Musica and Robotz sound schemes are not available to that user, even though they are physically present. To use these sound schemes, the user must run Setup and install them. Each user who wants to use these sound schemes on your computer will have to install them.

MORE INFORMATION

To install sound schemes, follow these steps:

1. Click the Start button, point to Settings, then click Control Panel.

2. Double-click the Add/Remove Programs icon.

3. Click the Windows Setup tab.

4. Click Multimedia, then click the Details button.

5. Click the check boxes of the sound schemes you want to install.

6. Click the OK button.

KBCategory: kbmm kbusage kbsetup kbenv

KBSubcategory: wpp95 win95

Additional reference words: 95

Microsoft Knowledge Base Information for Article Q128730

Last modified on 26-JUL-1995

Applies to Microsoft Windows 95

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Error Message "Invalid System Disk" After Setup Reboots

PSS ID Number: Q128730

[?] Article Information

[?]SYMPTOMS

[?]CAUSE

[?]RESOLUTION

[?]MORE INFORMATION

SYMPTOMS

During the first reboot in Windows 95 Setup, you may receive the following error message:

> Invalid system disk
>
> Replace the disk, and then press any key

You may also receive this error message when you boot from the startup disk.

CAUSE

This error message may be caused by one of the following situations:

[?]   The system is infected with a boot-sector virus. This error is known to be caused by the AntiCMOS.A virus.

[?]   The system is running virus-protection software.

[?]   The system is using hard disk management software (such as Disk Manager, EZ-Drive, or DrivePro) for Logical Block Addressing (LBA) support. These tools provide support for hard disks with more than 1024 cylinders.

RESOLUTION

Use one of the following methods to correct the problem.

Systems Infected with a Virus

Use an anti-virus program to detect and remove the virus, and then reinstall Windows 95. Boot-sector viruses infect computer systems by copying code either to the boot sector on a floppy disk or the partition table on a hard disk. During startup, the virus is loaded into memory. Once in memory, the virus infects any non-infected disks accessed by the system.

Systems Running Virus-Protection Software

Boot the system using the startup disk created during Windows 95 Setup. Use the SYS command from the startup disk to restore the system files to the hard disk.

Systems Using Disk Management Software

Windows 95 may not in some cases detect disk management software and may overwrite the master boot record (MBR) information. Refer to the documentation for the disk management software you are using for information about restoring the MBR.

Reinstall the Windows 95 system files

1. Boot the system using the Windows 95 Emergency Boot Disk.

2. At the MS-DOS command prompt, type the following lines:

   c:

   cd\windows\command

      attrib c:\msdos.sys -h -s -r

      ren c:\msdos.sys c:\msdos.xxx

      a:

      sys c:

      del c:\msdos.sys

      ren c:\msdos.xxx c:\msdos.sys

      attrib c:\msdos.sys +r +s +h

3. Remove the disk and reboot the computer.

For more information about Windows 95 Setup and troubleshooting steps, please see the following article in the Microsoft Knowledge Base:

      ARTICLE-ID: Q129260

      TITLE: Windows 95 Setup: Description and Troubleshooting Steps

      (Click here to jump to the article)

MORE INFORMATION

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REFERENCES

For more information about boot-sector viruses, please see the following article in the Microsoft Knowledge Base:

      ARTICLE-ID: Q82923

      TITLE: Methods to Detect a Boot-Sector Virus

KBCategory: kbsetup kberrmsg

KBSubcategory: wpp95 win95 winboot

Additional reference words: 95 anti cmos

Microsoft Knowledge Base Information for Article Q128919

Last modified on 08-JUN-1995

Applies to Microsoft Windows 95

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Resources for Disabled Devices Not Freed Up

PSS ID Number: Q128919

[?] Article Information

[?] **SYMPTOMS**

[?] **CAUSE**

[?] **RESOLUTION**

[?] **MORE INFORMATION**

SYMPTOMS

Even though you disable a device in your computer's CMOS settings, Windows 95 enables the device and consumes its resources. Windows 95 may also reinstall a device that is removed from Device Manager.

CAUSE

When Windows 95 starts, it examines the resources supplied by your computer and activates them as needed. Windows 95 detects Plug and Play devices regardless of the CMOS settings.

RESOLUTION

To prevent Windows 95 from activating disabled hardware, you must disable the hardware in the computer's CMOS settings and remove it from the current configuration in Windows 95. This frees the device's resources for other devices to use. To disable a device in the current configuration, follow these steps:

1. Click the Start button, point to Settings, then click Control Panel.

2. Double-click the System icon.

3. Click the Device Manager tab, then double-click the device you want to disable.

4. Click the General tab, then click the Original Configuration (Current) check box to clear it.

5. Click the OK button.

6. Restart Windows 95 when prompted.

7. Disable the device in your computer's CMOS settings. For information about how to disable a device in your computer's CMOS settings, please contact your computer's manufacturer.

Example

An example of when you might want to disable a device is when you have a PS/2-style mouse port in your computer but you are not using a PS/2-style mouse. This device appears in Device Manager with an exclamation point in a yellow circle, meaning that the device is not working properly.

For additional information about this particular issue, please see the following article in the Microsoft Knowledge Base:

ARTICLE-ID: Q126632

TITLE: Mouse Detected as PS/2-Style or Bus Does Not Work During Setup

(Click here [?] to jump to the article)

MORE INFORMATION

When you disable a device in Device Manager, you must restart your computer before you can reassign the device's resources to another device, even though you are not prompted to restart Windows 95.

KBCategory: kbhw kbsetup

KBSubcategory: wpp95 win95 winpnp

Additional reference words: 95

Microsoft Knowledge Base Information for Article Q129260

Last modified on 27-JUL-1995

Applies to Microsoft Windows 95

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Windows 95 Setup: Description and Troubleshooting Steps

PSS ID Number: Q129260

[?] Article Information

[?]**SUMMARY**

[?]**MORE INFORMATION**

SUMMARY

This article discusses the Windows 95 Setup process and steps to troubleshoot Setup problems.

MORE INFORMATION

Starting Setup

Microsoft Windows 95 can upgrade Windows version 3.0 and higher and Windows for Workgroups version 3.1 and higher. If you are using Windows 3.0, you must run Setup from MS-DOS. If you are using Windows 3.1 or Windows for Workgroups 3.1 or higher, you can run Setup from MS-DOS or Windows.

Windows 95 can upgrade MS-DOS, PC-DOS, or OEM-DOS version 3.2 and higher.

Setup Step-by-Step

Understanding the steps that Setup performs may help you to troubleshoot problems you encounter during the Setup process. Setup performs the following steps:

Step 1 - Initializing Setup

In this step, Windows 95 prepares your computer for installation by performing the following functions:

[?]   If you run Setup from MS-DOS, Windows 95 searches the local hard disk for a previous version of Windows 3.1 or later. If a previous version is found, Setup recommends that you quit Setup and then run Setup again from inside the existing Windows version.

[?]   Setup checks for the minimum system configuration.

[?]   Setup checks for an extended memory manager (such as HIMEM.SYS) and a disk <u>cache</u> program (such as SMARTDRV.EXE). If either is not found, Setup loads one.

[?]   Setup checks for the presence of "dirty" or "deadly" terminate-and-stay-resident programs (TSRs) that are known to cause problems with Windows 95 Setup.   Use SETUP /IT to ignore this TSR check.

[?]   If you run Setup from MS-DOS, Setup installs the necessary components for mini-Windows. Setup stores these files in a temporary directory it creates called WININST0.400.

[?]   Setup runs SCANDISK /ALL /NOTEXT to check the hard disk for any problems. Use SETUP /IS to not run ScanDisk during Setup.

[?]   Setup starts the graphical user interface (GUI) and displays the "Welcome to Setup" message. At this point, Setup switches the processor into 386 enhanced mode and makes extended memory available.

[?]   If Setup finds an OLD_DOS.X directory, it asks you if you want to delete this information to free hard disk space.

Step 2 - Preparation for Smart Recovery

If for any reason Setup does not finish and the computer needs to be restarted, the following lines in the AUTOEXEC.BAT file prompt you to run Setup again and choose the Smart Recovery option:

@if exist c:\wininst0.400\suwarn.bat call c:\wininst0.400\suwarn.bat

@if exist c:\wininst0.400\suwarn.bat del c:\wininst0.400\suwarn.bat

Step 3 - Read the SETUPLOG.TXT File

Setup reads the SETUPLOG.TXT file to see if Setup failed previously. If Setup did fail previously, Setup prompts you to run Smart Recovery or to continue using the Full Install option.

If the SETUPLOG.TXT file is complete and you run Setup from the same version of Windows, Setup provides a Verify option. Using this option causes Setup to check the Windows 95 file sizes and dates. If a file is damaged, Setup re-installs it.

Step 4 - Gathering Information

Setup collects information from you (such as your name and the directory in which to install Windows 95) and writes that information to the SETUPLOG.TXT file for use when copying files.

Step 5 - Hardware Detection

Hardware detection is the most intense portion of Setup. Windows 95 maintains a database of known legacy (non-Plug and Play) devices and the resources that they use. Setup polls all of these resources (I/O ports, IRQs, DMA channels, memory addresses, and so on) and looks for responses to determine what device is using each resource. If Setup detects a Plug and Play device, it adds that device's configuration information to the registry.

Setup creates the registry and puts the SYSTEM.NEW, USER.NEW, and DETLOG.TXT files in the root directory of drive C. To help speed the process of searching through the extensive .INF files, Setup uses two indexing files, DRVIDX.BIN and DRVDATA.BIN, from the temporary directory (WININST0.400).

Step 6 - Windows Components

When you select the components to install (or accept the default components), Setup writes them to the SETUPLOG.TXT file with the other Setup information.

Step 7 - Startup Disk

If you chose to create a Startup Disk, Setup copies these files now. After the Startup Disk is created, Setup uses the SETUPX.DLL file to create a list of files to copy based on the components you chose earlier.

Step 8 - Finishing Setup

After copying all the necessary files, Setup upgrades the existing copy of Windows and replaces the existing MS-DOS version with the Windows 95 operating system. After Setup reaches 100% complete, it writes information to the hard disk's master boot record (MBR) and renames the IO.SYS and MSDOS.SYS files to IO.DOS and MSDOS.DOS. At this point you are prompted to click the Finish button so that Setup can restart your computer and complete the installation.

Step 9 - Configuring Hardware

Setup updates the configuration files by running WININIT.EXE to process the options in the WININIT.INI file. The WININIT.INI file tells Setup to create the VMM32.VXD file and to rename the files that were used by Setup initially but are no longer needed.

Step 10 - Run-Once

Setup runs the Run-Once module. This module is specified in the registry and installs certain device configurations and printers, converts .GRP files to Windows 95 format, sets the time and date, and sets up the Help system for Windows 95.

Step 11 - Second Reboot

This step does not occur on all computers. Setup may restart your computer a second time so that it can finalize the hardware settings. This extra step lets Setup detect hardware that could not be detected during the original hardware detection.

For example, if your computer contains a sound card with a built-in SCSI controller, Setup detects the sound card and SCSI controller during the initial hardware detection phase. Setup restarts your computer a second time so that it can load the SCSI enumerator and detect whatever is attached to the SCSI controller (such as a CD-ROM drive).

Troubleshooting Setup

Before you try any of the following steps, create a boot disk for your current operating system. Copy any files you need to start your computer (including the AUTOEXEC.BAT and CONFIG.SYS files) to the boot disk. Make sure to include any necessary device driver files (such as a device driver that gives you access to the hard disk). For instructions about how to create a boot disk, please consult your operating system's documentation.

Clean Boot

If you have problems installing Windows 95, you should first try a clean boot. If no disk-compression software, disk partitioning software, or other third-party driver is necessary to start your computer, follow these steps to try a clean boot:

1. Rename the CONFIG.SYS file to CONFIG.XXX. To do so, type the following line at a command prompt:

    ren c:\config.sys c:\config.xxx

2. Rename the AUTOEXEC.BAT file to AUTOEXEC.XXX. To do so, type the following line at a command prompt:

    ren c:\autoexec.bat c:\autoexec.xxx

3. Restart your computer and run Setup again.

Setup from MS-DOS:

If disk partitioning, disk compression, or other third-party software is required to start your computer, the AUTOEXEC.BAT and CONFIG.SYS files should appear as follows:

CONFIG.SYS

    FILES=45

    BUFFERS=20

    <Third-party disk partitioner>

    <Third-party disk compression driver>

    <Other required third-party driver>

    SHELL=C:\<dir>\COMMAND.COM   /E:1024 /P

AUTOEXEC.BAT

    PROMPT PG

    PATH=C:\DOS;C:\

Setup from Windows:

If disk partitioning, disk compression, or other third-party software is required to start your computer, the AUTOEXEC.BAT and CONFIG.SYS files should appear as follows:

CONFIG.SYS

    FILES=45

```
BUFFERS=20

DEVICE=C:\<dir>\HIMEM.SYS

<Third-party disk partitioner>

<Third-party disk compression driver>

<Other third-party drivers>

STACKS=9,256

SHELL=C:\<dir>\COMMAND.COM   /E:1024 /P
```

AUTOEXEC.BAT

```
PROMPT $P$G

PATH=C:\WINDOWS;C:\DOS;C:\

SET TEMP=C:\<dir>
```

NOTE: These examples assume you are not running Setup from a network. If you are running Setup from a network, please consult your network administrator for instructions on using a minimal boot.

ScanDisk Stops Responding (Hangs)

If your computer stops responding while ScanDisk is checking the hard disk for problems, Setup should return control of the computer to you after three minutes of inactivity. If Setup does not return control to you, use the SETUP /IS command to run Setup without running ScanDisk. Setup still runs CHKDSK to check for cross-linked files.

Setup Hangs

Some computers include a feature that prevents applications from writing to the boot sector of the hard disk, often in the form of anti-virus protection. Such features may be set in your computer's CMOS memory. If anti-virus protection is running, Setup cannot finish the installation, or Windows 95 does not load properly.

To work around this problem, disable the anti-virus feature in your computer's CMOS memory and then run Setup again. For information about how to change CMOS settings on your computer, please contact your computer manufacturer.

Setup Hangs on Disk 2

This problem can be caused by either of the following situations:

 Bad disks. To test for bad disks, follow these steps:

1. Copy the EXTRACT.EXE file from Disk 1 to the root directory of drive C. To do so, type the following line at the command prompt:

    copy a:\extract.exe c:\

2. Create a temporary directory on your hard disk by typing the following line at the command prompt:

    md c:\win95tmp

3. With Disk 1 in drive A, change to that drive and copy all the files to the new directory you created in step 2 by typing the following lines (press ENTER after each line):

    a:

    copy *.* c:\win95tmp

4. With Disk 2 in drive A, extract PRECOPY2.CAB and WIN95_02.CAB to the directory you created in step 2:

    extract /e precopy2.cab /l c:\win95tmp

    extract /e win95_02.cab /l c:\win95tmp

NOTE: You must use the EXTRACT command on all the disks except Disk 1, due to their format.

If you cannot copy or extract these files, you may need replacement disks.

5. Run Setup from the directory you created in step 2 rather than from Disk 1:

c:

cd\win95tmp

setup

Change-line support is not working properly. If Setup cannot read Disk 2 after it reads Disk 1, try the following steps:

1. Add the appropriate line to the CONFIG.SYS file:

For a 1.44-MB drive A:

DRIVPARM=/d:0 /f:7

For a 1.44-MB drive B:

DRIVPARM=/d:1 /f:7

NOTE: Because the /C switch is not included in these lines, MS-DOS is instructed to not depend on change-line support. If the CONFIG.SYS file contains a DRIVER.SYS line, disable it by placing the REM command at the beginning of the line.

2. Restart the computer and run Setup again.

If Setup works correctly, change-line support is not functioning properly. Leave the DRIVPARM statement in the CONFIG.SYS file.

If Setup still does not work correctly, remove the DRIVPARM statement from the CONFIG.SYS file and consult your computer manufacturer to make sure that the computer's CMOS settings are correct.

Setup Hangs During Hardware Detection

If Setup hangs while it is detecting hardware in your computer, try the following steps:

1. Turn your computer off, wait a few seconds, then turn it back on.

   NOTE: Do not use the reset button or press CTRL+ALT+DEL to restart your computer.

2. Run Setup again and choose Smart Recovery when you are prompted.

If Setup continues to hang at the same place during hardware detection, follow these steps:

1. Run Setup.

2. Click the Custom Setup option button when you are prompted.

3. When you are prompted "Do you want Setup to look for all hardware devices?" click "No, I want to modify the hardware list."

4. In the Hardware Types list, click only the following types:

   Display

   Floppy Disk Controller

   Hard Disk Controller

   Keyboard

   Mouse

5. If Setup continues to hang during hardware detection, run Setup again and select different combinations of hardware types. For example, select only Display, Floppy Disk Controller, Keyboard, and Mouse.

Setup Hangs While Creating the Startup Disk

Setup may hang or generate a general protection (GP) fault error message when it tries to create the Startup

Disk. This problem may be due to the presence of a virtual device driver (VxD) from Norton Utilities. To work around this problem, use either of the following methods:

[?]   Start Setup again. When you are prompted whether you want to create a Startup Disk, click No.

[?]   Remove the "device=symevnt.386" line from the [386Enh] section of the SYSTEM.INI file and then run Setup again. Use any text editor (such as Notepad or EDIT.COM) to edit the SYSTEM.INI file and remove this line.

If you choose not to create a Startup Disk during Setup, you can create one after Setup is finished. To do so, follow these steps in Windows 95:

1. Click the Start button, point to Settings, then click Control Panel.

2. Double-click the Add/Remove Programs icon, then click the Startup Disk tab.

3. Click the Create Disk button to create a Startup Disk.

Setup Hangs After the First Reboot

Setup may hang after the first reboot for one of the following reasons:

[?]   There is a video driver conflict, or an incompatible real-mode hard disk driver. Try to start Windows 95 in Safe Mode by following these steps:

1. Restart Windows 95. Press the F8 key when you see the "Starting Windows 95" message.

2. Choose Safe Mode from the Microsoft Windows 95 Startup menu.

If Windows 95 starts, change the video driver to the standard VGA driver by following these steps:

1. Click the Start button, point to Settings, then click Control Panel.

2. Double-click the Display icon.

3. Click the Settings tab, then click the Change Display Type button.

4. Click the Change button in the Adapter Type section, then click the Show Compatible Devices option button.

5. Click "(Standard Display Types)" then double-click Standard Display Adapter (VGA). Click OK.

6. Restart Windows 95 normally.

For additional information about troubleshooting video problems in Windows 95, please see the following articles in the Microsoft Knowledge Base:

ARTICLE-ID: Q127139

TITLE: Troubleshooting Video Problems in Windows 95

[?]   There may be a damaged Windows 3.1 group (.GRP) file. To correct this problem, turn your computer off, wait a few seconds, then turn it back on. Run the Group Converter tool (GRPCONV.EXE) to rebuild each .GRP file individually.

"Incorrect System Disk" or "Invalid System Disk" Error Message

You can work around this problem by manually installing the Windows 95 system files on the hard disk. To do so, follow these steps:

1. Start your computer with the Startup Disk created during Setup.

2. Make a backup copy of the current MSDOS.SYS file by typing the following lines at the command prompt:

c:

cd\windows\command

attrib c:\msdos.sys -r -s -h

ren c:\msdos.sys c:\msdos.xxx

3. Use the SYS command from the Startup Disk to transfer the system files to the hard disk by typing the following lines at the command prompt:

a:

sys c:

4. Replace the new MSDOS.SYS file with the backup copy by typing the following lines at the command prompt:

c:

cd\windows\command

attrib c:\msdos.sys -r -s -h

del c:\msdos.sys

ren c:\msdos.xxx c:\msdos.sys

attrib c:\msdos.sys +r +s +h

Setup Hangs on the Second Reboot

For information about troubleshooting this and other problems in Windows 95, please see the following article in the Microsoft Knowledge Base:

ARTICLE-ID: Q119941

TITLE: How to Rebuild, Convert, Troubleshoot Folders in Windows 95

(Click here to jump to the article)

Microsoft Knowledge Base Information for Article Q129716

Last modified on 04-JUL-1995

Applies to Microsoft Windows 95

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Setup Warning on Computers Using XtraDrive Is Misleading

PSS ID Number: Q129716

[?] Article Information

[?]**SYMPTOMS**

[?]**CAUSE**

[?]**RESOLUTION**

[?]**MORE INFORMATION**

SYMPTOMS

When you try to install Windows 95 on a computer running the ITT XtraDrive disk compression software you receive the following warning:

> The following program(s) or driver(s) are running on your computer. Windows may not install or run correctly with these programs. It is recommended that you close these programs before continuing with Setup. To remove these programs, you may have to modify your AUTOEXEC.BAT or CONFIG.SYS files. When you are done, restart your computer, and then run Setup again. For more information, see SETUP.TXT on Setup Disk 1 or the Windows CD-ROM.

> Click OK to continue with Setup or click Cancel to Quit Setup, and then remove these programs.

> XTRADRIVE.SYS   ITT XtraDrive Software

CAUSE

This warning is somewhat misleading. The problem detected is that the ITT XtraDrive software is configured to use write caching.

RESOLUTION

Cancel Setup and reconfigure XtraDrive to disable write caching. Once you have disabled XtraDrive's write caching, Windows 95 Setup will run correctly. For information about how to disable write caching in XtraDrive, please refer to the XtraDrive documentation.

MORE INFORMATION

XtraDrive is manufactured by Integrated Information Technology, a vendor independent of Microsoft; we make no warranty, implied or otherwise, regarding this product's performance or reliability.

KBCategory: kb3rdparty kbsetup kberrmsg

KBSubcategory: wpp95 win95 diskmem isvcompress

Additional reference words: 95

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Microsoft Knowledge Base Information for Article Q129955

Last modified on 08-JUN-1995

Applies to Microsoft Windows 95

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IRQ Conflicts with PCI Display Adapters

PSS ID Number: Q129955

[?] Article Information
[?] **SYMPTOMS**
[?] **CAUSE**
[?] **RESOLUTION**
[?] **MORE INFORMATION**

SYMPTOMS

When you install a Peripheral Component Interconnect (PCI) video adapter that is configured to use a particular interrupt (IRQ), Windows 95 may configure it to use another IRQ that is already in use by another device.

CAUSE

PCI devices can share PCI IRQs, but Windows 95 does not support sharing PCI IRQs with other non-PCI devices (such as an IDE controller).

Windows 95 display drivers do not use an IRQ. However, PCI adapters request an IRQ for full backward compatibility.

RESOLUTION

Use Device Manager to resolve the conflict by assigning a different IRQ to one of the conflicting devices.

MORE INFORMATION

This behavior is common to all PCI display adapters, but does not apply to Industry Standard Architecture (ISA) or VESA Local Bus (VLB) display adapters.

PCI devices can share IRQs. This behavior is in the PCI specification and Windows 95 supports it. PCI devices must be configured by the computer's BIOS. This occurs during the computer's Power-On Self Test (POST) before the operating system is loaded. Windows 95 does not configure PCI devices, but uses what the BIOS reports.

In order to get full Plug and Play functionality, Windows 95 enables inactive devices when it starts. For example, if a second IDE controller is disabled in the BIOS but not in Device Manager, the controller is enabled and resources are assigned to it. To prevent this behavior, disable the inactive device and remove it from the current configuration in Device Manager.

Note that if you are using an early version of the Micron BIOS, you should contact Micron for a later version. Early versions of the Micron BIOS do not configure PCI cards correctly, leading to conflicts with the video device on IRQ 15 or other non-valid IRQs.

KBCategory: kbhw kbsetup

KBSubcategory: wpp95 win95

Additional reference words: 95

Microsoft Knowledge Base Information for Article Q130378

Last modified on 08-JUN-1995

Applies to Microsoft Windows 95

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Mouse Connected to Disabled COM Port Functions Properly

PSS ID Number: Q130378

? Article Information

?SYMPTOMS

?CAUSE

?RESOLUTION

?STATUS

SYMPTOMS

You may experience either of the following situations:

? Although the current hardware profile indicates that the PS/2-style or serial port to which the mouse is attached is disabled, the mouse functions properly.

? Although the current hardware profile indicates that a particular serial port is disabled, you can communicate with that port from an MS-DOS prompt.

CAUSE

When you start Windows 95 with a hardware profile in which the port that the mouse is connected to is disabled, the Windows 95 mouse driver searches all the appropriate ports for a mouse. If the driver locates a mouse, the driver loads and the mouse works correctly.

Similarly, accessing a serial port from an MS-DOS prompt bypasses the virtual communications driver, accessing the port directly. Therefore, you can communicate with the port even if it is disabled in Device Manager.

RESOLUTION

If you do not want to use a mouse in Windows 95, remove the mouse in Device Manager and then disconnect the mouse from the computer.

STATUS

This behavior is by design.#

KBCategory: kbhw kbenv kbsetup

KBSubcategory: wpp95 win95 wincomm

Additional reference words: 95 vm

Microsoft Knowledge Base Information for Article Q131496

Last modified on 13-JUN-1995

Applies to Microsoft Windows 95

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DEC Etherworks Turbo /TP Not Detected During Setup

PSS ID Number: Q131496

[?] Article Information

[?]**SYMPTOMS**

[?]**CAUSE**

[?]**RESOLUTION**

SYMPTOMS

When you install Windows 95, Setup may not detect the DEC Etherworks Turbo /TP <u>network adapter</u> in your computer.

CAUSE

DEC Etherworks Turbo /TP network adapters without the option ROM chip installed are not detected by Setup unless the adapter's driver is loaded in memory or a valid PROTOCOL.INI file for the adapter exists. This behavior is due to the safe detection methods used by Setup to detect installed network adapters.

DEC Etherworks Turbo /TP network adapters with the option ROM chip installed are detected during Setup regardless of whether the adapter's driver is loaded in memory.

RESOLUTION

Setup detects the network adapter if the driver is loaded in memory during Setup. This occurs if the network is started prior to running Setup. To install support for the network adapter without starting the network, choose the Custom Setup option so that you can <u>select</u> which devices are installed during Setup.

If support for the DEC Etherworks Turbo /TP network adapter is not installed during Setup, you can add the network adapter later using the Network tool in Control Panel, or by running the Add New Hardware <u>Wizard</u> in Control Panel.

To add support for the DEC Etherworks Turbo /TP network adapter, follow these steps:

1. Click the Start button, point to Settings, then click Control Panel.

2. Double-click the Network icon.

3. Click Add.

4. Click Adapter, then click Add.

5. In the Manufacturers box, click Digital Equipment. In the Network Adapters box, click DEC Etherworks Turbo /TP.

6. Click OK.

KBCategory: kb3rdparty kbsetup kbnetwork

KBSubcategory: wpp95 win95 windrvr ndis3x nethw

Additional reference words: 95

Microsoft Knowledge Base Information for Article Q118450

Last modified on 04-JUL-1995

Applies to Microsoft Windows 95

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COMSPEC Environment Is Not Set When Using 4DOS

PSS ID Number: Q118450

[?] Article Information

[?] **SYMPTOMS**

[?] **CAUSE**

[?] **RESOLUTION**

[?] **MORE INFORMATION**

SYMPTOMS

The COMSPEC environment variable is not set after Windows 95 has started.

CAUSE

This environment variable is not set if you are using J.P. Software 4DOS.COM instead of MS-DOS COMMAND.COM on the SHELL line in your CONFIG.SYS file.

RESOLUTION

To correct this problem:

[?]   Upgrade to 4DOS version 4.02 or later.

- or-

[?]   Set the COMSPEC variable in the AUTOEXEC.BAT file by adding the   following statement to the AUTOEXEC.BAT file

   set comspec=c:\<directory name>\4dos.com

   where <directory name> is the directory in which you installed 4DOS.

-or-

[?]   Use COMMAND.COM, in place of 4DOS.COM, on the SHELL statement in your CONFIG.SYS file.

MORE INFORMATION

4DOS is manufactured by J.P. Software, a vendor independent of Microsoft; we make no warranty, implied or otherwise, regarding this product's performance or reliability.

KBCategory: kbenv kb3rdparty kbprb

KBSubcategory: wpp95 win95 appscomp diskmem

Additional reference words: 95 fourdos 4 dos 3rdparty

Microsoft Knowledge Base Information for Article Q118629

Last modified on 27-JUL-1995

Applies to Microsoft Windows 95

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Using Novell Btrieve with Windows 95

PSS ID Number: Q118629

[?] Article Information

[?] SUMMARY

[?] MORE INFORMATION

SUMMARY

Btrieve is a key-indexed record management system. It is usually installed in a client-server configuration in which the server is a Novell NetWare file server.

BREQUEST.EXE is installed on the client machine and is required in order to have access to files on a Btrieve server. For Windows 95, you must use Btrieve version 5.15c or later.

MORE INFORMATION

BREQUEST.EXE requires IPX/SPX; therefore, Windows 95 is configured differently depending on the Novell NetWare client software you are using.

Using the Microsoft Client for NetWare

[?]   Verify that the workstation can communicate with the NetWare server that contains the Btrieve databases.

[?]   Create a WINSTART.BAT file that contains BREQUEST.EXE. This allows Windows 95 to start the IPX/SPX protocol interface.

[?]   Make sure that WBTRCALL.DLL (Windows Btrieve DPMI DLL file) is located   in the Windows 95 SYSTEM subdirectory.

NOTE: This configuration provides BREQUEST.EXE to Windows-based applications only. For BREQUEST.EXE to be available for MS-DOS-based applications, it must be loaded in an MS-DOS prompt.

Using a Novell-Supplied Network Client with Windows 95

Refer to the Btrieve "Installation and Operation" manual for installation instructions in this environment.

Key Points:

[?]   Make sure that WBTRCALL.DLL is located in the Windows 95 SYSTEM subdirectory.

[?]   Make sure that BREQUEST.EXE is loading without error messages after the real-mode network software is started.

[?]   If you are loading NETX or VLM, set up Btrieve as you normally do.

For more information about installing and using Btrieve, contact Novell or your local authorized Novell NetWare reseller.

Btrieve is manufactured by Novell, Inc., a vendor independent of Microsoft; we make no warranty, implied or otherwise, regarding this product's performance or reliability.

KBCategory: kb3rdparty kbprb kbnetwork

KBSubcategory: wpp95 win95 3rdpartynet appscomp

Additional reference words: 95 berequest betrieve 6.10 5.15c 3rdparty

Microsoft Knowledge Base Information for Article Q120442

Last modified on 27-JUL-1995

Applies to Microsoft Windows 95

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Using Hard Disk Utilities with Windows 95

PSS ID Number: Q120442

 Article Information

SUMMARY

MORE INFORMATION

SUMMARY

Most hard disk utility programs released before Windows 95 require updating to work correctly with Windows 95. If you use a non-Windows 95-aware hard disk utility, you may lose long filenames and you are at risk of losing data.

If the file maintenance utility you use is not written to support long filenames, it will likely corrupt your long filenames. Examples of such programs include the following:

> 4DOS
> MS-DOS DOSSHELL
> NDOS
> Norton Desktop
> Norton Utilities
> PC-Tools PCShell
> PC-Tools Utilities
> Windows File Manager
> XTree
> XTree Gold
> XTree Pro

For more information about the problems caused by third-party hard disk utilities, contact the manufacturer.

MORE INFORMATION

The following MS-DOS commands may also cause long filename damage:

 COPY - This command results in a mismatched long filename when you copy a short filename in the 32-bit entry beneath an orphaned long filename.

 DEFRAG - Using DEFRAG from MS-DOS version 6.0, 6.2, 6.21, or 6.22 causes you to lose long filenames because it re-sorts the structure of short filenames on your disk without taking into account their associated long filenames. Windows 95 Defrag does not re-sort the filenames due to the possibility of file corruption in a multitasking environment.

 DEL/DELTREE - These commands result in orphaned long filenames. DEL applies to files only. DELTREE applies to files and folders, but only affects the topmost folder that it is run on as all subsequent folders and files are deleted, including their long filenames.

 MD - This command results in a mismatched long filename. The damage occurs when you make a short filename folder in the 32-bit entry beneath an orphaned long filename.

 MOVE - This command causes mismatched or orphaned long filenames. If MOVE is performed within the context of the same folder (a modified rename) then a mismatched long filename will result. If MOVE is performed outside of the folder, then an orphaned long filename will result. This applies to both files and folders.

 RD - This command results in an orphaned long filename. The damage occurs when you remove a short filename folder in the 32-bit entry beneath its associated long filename.

 REN - This command results in a mismatched long filename. The damage occurs when you rename a short filename in the 32-bit entry beneath its associated long filename. The REN command will not fix a previously mismatched long filename.

 SCANDISK - This command does not account for the long filename structure when it writes corrections to your disk; therefore, it corrupts long filenames.

If you need to use an earlier version of a hard disk utility, perform the following steps:

1. Run LFNBK.EXE, which is a long filename (LFN) backup utility currently available in the Section 8 Library of the WINBTU forum on CompuServe (LFNBK.ZIP).

LFNBK.EXE removes your long filenames and saves them to a data file.

Read LFNBK.TXT for more information.

2. Restart your computer and use the appropriate step below:

 If you need to run an MS-DOS-based utility, press the F8 key when you see the Starting Windows message. Choose Yes in response to all the questions until you are prompted to load Windows 95, then choose No.

-or-

 If you need to run a Windows-based utility, allow Windows 95 to start normally.

3. After you run the utility, reboot your computer and run LFNBK.EXE to restore your long filenames.

The products included here are manufactured by vendors independent of Microsoft; we make no warranty, implied or otherwise, regarding these products' performance or reliability.

KBCategory: kbenv kb3rdparty kbprb kbtool

KBSubcategory: wpp95 win95 appscomp diskmem lfn

Additional reference words: 95 3rdparty

Microsoft Knowledge Base Information for Article Q121058

Last modified on 04-JUL-1995

Applies to Microsoft Windows 95

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DIR Results in Strange Characters When Using SCSI Drive

PSS ID Number: Q121058

[?] Article Information

[?] **SYMPTOMS**

[?] **CAUSE**

[?] **RESOLUTION**

[?] **MORE INFORMATION**

SYMPTOMS

When you are running MS-DOS version 6.0 or higher and you press the F4 or F8 key at the Starting Windows prompt, running the DIR command causes strange characters rather than a directory listing to be displayed.

CAUSE

This problem occurs if your hard disk is a SCSI drive that requires double buffering and the following line is loading in the CONFIG.SYS (CONFIG.DOS) file:

    DEVICE=C:\DOS\EMM386.EXE NOEMS X=D800-DFFF

RESOLUTION

To correct this problem, insert the command doublebuffer=1 in the MSDOS.SYS file. To insert this line, do the following:

1. Start Windows 95.

2. Click the Start button on the taskbar and then click Run.

3. In the Open box, type the following:

       notepad C:\msdos.sys

4. In the [Options] section, add the following line: doublebuffer=1

   Normally, double buffering should automatically be enabled whenever needed. The doublebuffer=1 command is a way of forcing double buffering when built-in detection fails.

5. Click Save on the File menu.

MORE INFORMATION

This is a MS-DOS 6.x configuration problem, not a problem in Windows 95. When you boot under Windows 95, double buffering is automatically provided if needed. This is not the case with MS-DOS versions 6.0 and higher. This problem is known to occur with the following SCSI hard disks:

    Seagate ST1200N external drive

KBCategory: kbhw kbprb kb3rdparty

KBSubcategory: wpp95 win95 winboot diskmem

Additional reference words: 95 1.0 1.00 6.00 6.2 6.20 6.21 6.22 garbage trash settings double-buffering scuzzy 3rdparty

Microsoft Knowledge Base Information for Article Q128517

Last modified on 08-JUN-1995

Applies to Microsoft Windows 95

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MS-DOS-Based Game Plays No Sound or Shuts Down

PSS ID Number: Q128517

[?] Article Information

[?]**SUMMARY**

[?]**MORE INFORMATION**

SUMMARY

Some MS-DOS-based games require an 8-bit direct memory access (DMA) channel setting for the sound card to provide sounds. Games known to require an 8-bit DMA channel setting include:

[?]   Renegade: Battle for Jacob's Star

[?]   Where in the World is Carmen Sandiego

MORE INFORMATION

If the sound card in your computer is set for a 16-bit DMA channel (5, 6, or 7), use Device Manager to change the card's configuration to use an 8-bit DMA channel (0, 1, or 3).

You may also need to run the configuration tool that is included with the sound card to change its DMA channel setting to match the setting in Device Manager. If no configuration tool is included with the sound card, you may need to change jumpers on the card.

Changing the DMA Channel in Device Manager

To change the DMA channel for the sound card in Device Manager, follow these steps:

1. Click the Start button, point to Settings, then click Control Panel.

2. Double-click the System icon.

3. Click the Device Manager tab, then double-click Sound, Video, And Game Controllers.

4. Double-click the sound card that is installed in your computer.

5. Click the Resources tab.

6. Double-click Direct Memory Access, then change the DMA setting to the setting you want.

7. Click OK. When you are prompted to do so, restart your computer.

KBCategory: kbmm kb3rdparty kbhw

KBSubcategory: wpp95 win95 winshell msdos

Additional reference words: 95 pas16

Microsoft Knowledge Base Information for Article Q129147

Last modified on 08-JUN-1995

Applies to Microsoft Windows 95

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Some Compaq Computers Boot Slowly with AutoMount Enabled

PSS ID Number: Q129147

[?] Article Information

[?] **SYMPTOMS**

[?] **CAUSE**

[?] **RESOLUTION**

[?] **STATUS**

SYMPTOMS

If the DriveSpace compression driver is loaded in memory and the Automatically Mount New Compressed Devices option is enabled, your Compaq computer may take an unusually long time to boot.

CAUSE

This problem occurs because of the manner in which certain Compaq computers access their floppy disk drives. When the Automatically Mount New Compressed Devices option is enabled on these computers, the floppy disk drives are repeatedly accessed as the computer boots, causing the boot process to take an unusually long time.

RESOLUTION

To resolve this problem, use one of the following two methods:

[?]   Disable the Automatically Mount New Compressed Devices option. To do so, follow these steps:

1. Click the Start button, point to Programs, point to Accessories, point to System Tools, then click DriveSpace.

2. On the Advanced menu, click Options.

3. Click the Automatically Mount New Compressed Devices check box to clear it.

4. Click the OK button.

5. Click OK.

6. On the Drive menu, click Exit.

[?]   Change the Power Up Speed setting on your Compaq computer from Automatic to Full. For information about how to change this setting, please contact your computer manufacturer.

STATUS

Microsoft is researching this problem and will post new information here in the Microsoft Knowledge Base as it becomes available.

KBCategory: kbtool kb3rdparty kbhw kbprb

KBSubcategory: wpp95 win95 diskmem

Additional reference words: 95

Microsoft Knowledge Base Information for Article Q130293

Last modified on 08-JUN-1995

Applies to Microsoft Windows 95

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Norton Desktop Groups Not Converted by Windows 95

PSS ID Number: Q130293

[?] Article Information

[?]SYMPTOMS

[?]CAUSE

[?]RESOLUTION

[?]STATUS

[?]MORE INFORMATION

SYMPTOMS

When you upgrade Windows version 3.x to Windows 95 and you are using Norton Desktop for Windows, the Windows 95 Setup program does not convert Norton Desktop groups to Windows 95 folders.

CAUSE

Norton Desktop places desktop icons in Quick Access groups (.QAG files) instead of Group (.GRP) files as Microsoft Windows 3.x does. The Windows 95 Setup program can convert only .GRP files.

RESOLUTION

To retain Norton Desktop icons when you upgrade to Windows 95, convert the Norton Desktop groups from .QAG files to .GRP files using the conversion utility provided by Symantec. For information about using or obtaining this utility, please contact Symantec.

After you convert .QAG files to .GRP files, use the Windows 95 GRPCONV.EXE tool to convert the .GRP files to Windows 95 folders. For more information about using the GRPCONV.EXE tool, please see the following article in the Microsoft Knowledge Base:

ARTICLE-ID: Q119941

TITLE   : How to Rebuild, Convert, Troubleshoot Folders in Windows 95

(Click here [?] to jump to the article)

STATUS

This situation is most likely caused by design changes in Windows 95.   Microsoft has confirmed that it is not caused by a problem in Windows 95.   For more information about resolving this issue, please contact Symantec.

MORE INFORMATION

The third-party products discussed in this article are manufactured by a vendor independent of Microsoft; we make no warranty, implied or otherwise, regarding these products' performance or reliability.

KBCategory: kb3rdparty kbprb

KBSubcategory: wpp95 win95

Additional reference words: 95

Microsoft Knowledge Base Information for Article Q130362

Last modified on 27-JUN-1995

Applies to Microsoft Windows 95

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How to Install the HP JetAdmin Service in Windows 95

PSS ID Number: Q130362

[?] Article Information

[?]**SUMMARY**

[?]**MORE INFORMATION**

SUMMARY

The Hewlett-Packard (HP) JetAdmin service is an administrative tool you can use to install and configure HP printers connected to a network using an HPJetDirect print server. This article describes how to install the HP JetAdmin service.

Note that the HP JetAdmin service that is included with Windows 95 was written by Hewlett-Packard. If you need further information about this service, please contact Hewlett-Packard or consult the online Help file.

MORE INFORMATION

Before you can install the HP JetAdmin service in Windows 95, you must print a test page. Please see the printer's documentation for information about how to print a test page.

NOTE: Many external HP JetDirect devices have a Test Page button.

The test page contains two pertinent pieces of information:

1. The firmware revision number. (Note that the firmware revision number for the JetDirect card must be 3.06a or higher to work with Windows 95.)
2. The network address of the JetDirect card.

To install the HP JetAdmin service, follow these steps:

1. Click the Start button, point to Settings, then click Control Panel.
2. Double click the Network icon.
3. Click the Add button, double-click Service, then click the Have Disk button.
4. Double-click the HPJETADM directory.(NOTE: If Setup prompts you for the MFC30.DLL file, select the Retail or WIN95 directory and Setup will continue)
5. Restart your computer when you are prompted to do so.

When Windows 95 restarts, an icon for the HP JetAdmin service appears in Control Panel and HP Network Printers appears in Network Neighborhood.

For information about configuring a new printer, see the Windows 95 on-line help topic, " To set up a new printer.

If you are currently viewing this in Windows 95, Click here [?] to display the help topic.

KBCategory: kbprint kb3rdparty
KBSubcategory: wpp95 win95

Additional reference words: 95

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Applies to Microsoft Windows 95

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How to Enable Print Notification with NetWare Print Servers

PSS ID Number: Q131004

[?] Article Information

[?] **SYMPTOMS**

[?] **CAUSE**

[?] **RESOLUTION**

[?] **MORE INFORMATION**

SYMPTOMS

When you use the Microsoft Client for NetWare Networks (NWREDIR.VXD) to print to a NetWare print queue, print notification is not an option in the properties for the printer.

CAUSE

Windows 95 provides the following common Novell(r) NetWare capture settings:

[?]   Banner Page

[?]   Form Feed

[?]   Expand Tabs

[?]   Form

[?]   Timeout

Capture settings that do not appear in the printer properties can be enabled using the NetWare CAPTURE command.

RESOLUTION

To receive notification when a print job is finished on a NetWare print queue, follow these steps:

1. Use the following command in your user or system login script.

   capture L=<x> /server=<y> /queue=<z> /notify

   Where <x> is the LPT port, <y> is the NetWare server name, and <z> is the NetWare print queue name you are using.

   For more information about the CAPTURE command, please consult your NetWare administrator, documentation, or dealer.

2. Install the printer.

3. Run WINPOPUP.EXE from the Windows directory. (WINPOPUP.EXE is installed when you install the Microsoft Client for Microsoft Networks or NetWare Networks.)

After you follow these steps, the NetWare print server uses WinPopUp to send you print notifications.

MORE INFORMATION

The third-party product discussed in this article is manufactured by a vendor independent of Microsoft; we make no warranty, implied or otherwise, regarding this product's performance or reliability.

KBCategory: kbprint kbnetwork kb3rdparty

KBSubcategory: wpp95 win95 3rdpartynet

Additional reference words: 95

Microsoft Knowledge Base Information for Article Q119941

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Applies to Microsoft Windows 95

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How to Rebuild, Convert, Troubleshoot Folders in Windows 95

PSS ID Number: Q119941

[?] Article Information

[?] **SUMMARY**

[?] **MORE INFORMATION**

SUMMARY

This article discusses how Windows 95 converts existing Windows and Windows for Workgroups groups to Windows 95 folders, how to rebuild folders, how the [Restrictions] section from the PROGMAN.INI file is transferred to Windows 95, and how to troubleshoot failed conversions.

MORE INFORMATION

NOTE: In this article, the term "Windows" refers to Windows versions 3.1 and 3.11 and Windows for Workgroups versions 3.1 and 3.11.

Groups Versus Folders

Windows uses groups and group items represented by icons to provide access to programs. The default groups for Windows are Main, Accessories, Games, and StartUp. An example of an item within the Main group is Control Panel.

Windows 95 uses folders and links to provide the same functionality as groups and items in previous versions of Windows.

Converting Groups to Folders

To facilitate the upgrade from Windows to Windows 95, an executable file named GRPCONV.EXE is included with Windows 95. This file provides the translation of groups and group items to folders and links.

Each group is converted to a folder, and its items are converted to shell links, which are placed within that particular folder.

GRPCONV.EXE uses information from the registry to track changes in group files that have occurred since the last time GRPCONV.EXE was run. There are no entries in either the SYSTEM.INI or WIN.INI file that take precedence over these system registry entries.

The last modified date and time of the PROGMAN.INI file and all group files are stored in the system registry:

  HKEY_CURRENT_USER

GRPCONV.EXE runs automatically after Setup has copied most of the files needed for a complete installation and rebooted your computer. You can also run GRPCONV.EXE manually. GRPCONV.EXE supports the following switches:

[?]   /S

  GRPCONV.EXE, when run with the /S switch, rebuilds the default Windows 95 folders. A status dialog box titled "Start Menu Shortcuts" appears during the rebuilding process. When it is complete, you are returned to the desktop.

[?]   /M

  GRPCONV.EXE, when run with the /M switch, lets you manually convert existing Windows groups to Windows 95 folders. You can convert only one group at a time using this method. If the groups are in the directory in which you install Windows 95, they are automatically converted during Setup.

To re-create the default folders that ship with Windows 95:

1. Click the Start button, and then click Run.

2. Type the following command:

   grpconv /s

Use the following steps to convert existing Windows groups to the Windows 95 format:

1. Click the Start button, and then click Run.

2. Type the following:

   grpconv /m

3. Click the group you want to convert.

4. Do one of the following:

   Click Open, then click Yes in the "Program Manager GroupConverter" dialog box.

   When you click Yes, a status dialog box titled "Start Menu Shortcuts" appears during the rebuilding process. When it is complete, you are returned to the desktop.

   -or-

   Convert the group by double-clicking the group name. For example, if you have a group called MYGROUP.GRP, you can double-click MYGROUP.GRP to convert it to the Windows 95 folder format.

Other GRPCONV.EXE Specifics

The first time GRPCONV.EXE runs, the search path criteria for finding existing groups is strictly based on the contents of the PROGMAN.INI file in the current Windows directory (if it exists).

Group names and item names are not sorted prior to conversion. Group conversion begins with the first group in the directory, and shell links are created beginning with the first item in a group.

Memory required for conversion of groups is allocated per group item as needed and then released all at once at the end of processing each group. No temporary files are created during conversion.

All data in a .GRP file, except icon location (x, y coordinates in a group), is used during conversion and migrated to folders in the Windows 95 folder.

GRPCONV.EXE calls the shell link creation APIs directly, and as such does not call any executables during conversion.

Windows Program Manager has been known to create corrupted .GRP files that may work in their native environment, but have the potential to cause errors during conversion in Windows 95. GRPCONV.EXE recognizes corrupted .GRP files and properly converts them.

If one or more groups are not converted to folders, or if one or more items in a group are not converted to links, follow the methods outlined in the "Troubleshooting Group Conversion" section below.

Restrictions Migration for Upgrades

GRPCONV.EXE migrates the [Restrictions] section of the PROGMAN.INI file from previous versions of Windows into the Policies section of the system registry.

Troubleshooting Group Conversion

If a group fails to be converted or if an error is displayed during conversion, use the following steps to troubleshoot the problem:

1. Use GRPCONV.EXE to convert a group file that was previously converted successfully. If this fails, GRPCONV.EXE has been corrupted, and you must replace this file with the GRPCONV.EXE file from your original Windows 95 disks. If this step is successful, continue with step 2.

2. Run the PROGMAN.EXE file that ships with Windows 95 and view the group that did not convert. If it displays and acts correctly in Program Manager, create a new group and copy (do not move) the items from the original group to the new one.

3. Close Program Manager and run GRPCONV.EXE in interactive mode (grpconv /m) to convert the newly created group. If this step fails, continue with step 4.

4. Run Program Manager, delete the items in the newly created group, and copy a few of the items from the original group into the new group. If this fails, repeat this step with different items until you have determined which item is causing the failure.

NOTE:

It is also possible for a virus to cause conversion failure.

KBCategory: kbtool kbtshoot kbusage kbenv

KBSubcategory: wpp95 win95 appscomp

Additional reference words: 95 tshoot

Microsoft Knowledge Base Information for Article Q120389

Last modified on 08-JUN-1995

Applies to Microsoft Windows 95

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How to Disable MS-DOS Mode in Windows 95

PSS ID Number: Q120389

[?] Article Information

[?] **SYMPTOMS**

[?] **CAUSE**

[?] **WORKAROUND**

SYMPTOMS

After you change an MS-DOS-based application, such as MS-DOS Prompt, to run in MS-DOS mode, you cannot find a way to exit and turn off MS-DOS mode (for example, ALT+ENTER does not work).

CAUSE

After you choose to run MS-DOS Prompt in MS-DOS mode, you cannot switch   back to Windows 95 until you exit MS-DOS Prompt. This behavior occurs because in MS-DOS mode, you are now running MS-DOS Prompt by closing all applications and effectively shutting down Windows 95.

WORKAROUND

Type "exit" (without the quotation marks) to quit MS-DOS Prompt and return to Windows 95. In Windows 95, you can change the properties of MS-DOS Prompt by performing the following steps:

1. Locate the .PIF file for MS-DOS Prompt. You can use Windows Explorer, My Computer, or the Find command on the Start menu to locate the file.

   The filename for MS-DOS Prompt is either MS-DOSPR.PIF or the long filename MS-DOS Prompt.PIF.

   NOTE: You may have multiple MS-DOS Prompt .PIF files in different folders. For example, there may be one in the Start Menu folder and another in the Programs folder. Be sure to change the correct one.

2. Use the right (secondary) mouse button to click the filename and then click Properties.

3. Click the Program tab, then click the Advanced button.

4. Clear the MS-DOS Mode check box and click OK.

KBCategory: kbusage

KBSubcategory: wpp95

Additional reference words: 95 window

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16-Bit Applications That Ship with Windows 95

PSS ID Number: Q122869

Article Information

SUMMARY

SUMMARY

The following are 16-bit applications that ship with Windows 95:

GAMES

Program Name	Executable
FreeCell	FREECELL.EXE
Microsoft Hearts Network	MSHEARTS.EXE
Rumor (Party Line)	RUMOR.EXE
Solitaire	SOL.EXE

UTILITIES

Program Name	Executable
Chat	WINCHAT.EXE
Disk Defragmenter	DEFRAG.EXE
DriveSpace	DRVSPACE.EXE
ScanDisk for Windows	SCANDSKW.EXE
System Configuration Editor	SYSEDIT.EXE
Windows 3.1 File Manager	WINFILE.EXE
Windows 3.1 Program Manager	PROGMAN.EXE
Windows 95 Tour	TOUR.EXE
Windows Version	WINVER.EXE

All programs that reside in the Windows \COMMAND directory are 16-bit applications.   However, all other programs that ship with Windows 95 are 32-bit applications.

KBCategory: kbtool

KBSubcategory: wpp95 win95 appscomp

Additional reference words: 95

Microsoft Knowledge Base Information for Article Q127851

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Applies to Microsoft Windows 95

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Problems Accessing Windows NT FAT Drives Larger than 2 GB

PSS ID Number: Q127851

[?] Article Information

[?]SUMMARY

[?]MORE INFORMATION

SUMMARY

Microsoft Windows NT supports the creation of primary partitions and logical drives of up to 4 gigabytes (GB) using the File Allocation Table (FAT) file system, but Windows 95 and Microsoft MS-DOS do not support these drives. The limit for drives using the FAT file system in Windows 95 and MS-DOS is 2 GB.

MORE INFORMATION

Both MS-DOS and Windows 95 use a 16-bit FAT for logical drives larger than 15 megabytes (MB). The maximum number of clusters for a 16-bit FAT drive is 64K, or 65,536 bytes (where 1K = 1024 bytes). In addition, the maximum cluster size in MS-DOS and Windows 95 is 32K, or 32,768 bytes. Therefore, the maximum logical drive size in MS-DOS and Windows 95 is calculated as follows:

    32K x 64K = 2048 MB = 2 GB

Windows NT uses a 64K maximum cluster size on 16-bit FAT drives. The maximum logical drive size in Windows NT is calculated as follows:

    64K x 64K = 4096 MB = 4 GB

NOTE:

On a FAT drive, space is allocated by clusters. That is, a file that is smaller than the drive's cluster size will still be allocated one full cluster, thus wasting the additional space in the cluster. Similarly, a file that is large enough to fill 3-1/2 clusters will be allocated four full clusters. Using a smaller cluster size will typically result in less wasted space on the drive.

The cluster size for a FAT drive is determined when the drive is formatted and varies depending on the size of the logical drive. For more information about cluster and logical drive sizes in MS-DOS, please see the following article in the Microsoft Knowledge Base:

  TITLE: FAT Type and Cluster Size Depends on Logical Drive Size

  ID: Q67321

Windows 95 and MS-DOS use the FDISK utility to partition a disk. When it accesses a hard disk, FDISK uses the system AT ROM BIOS INT13h interface, which has a maximum of 1024 cylinders, 255 heads, and 63 sectors per track.

FDISK can access any drive within the limits imposed by the AT ROM BIOS, which means that FDISK can access drives of up to 8 GB, calculated as follows:

  1024 cylinders x 255 sectors x 63 sectors per track x 512 bytes per sector = 8,422,686,720 bytes, or roughly 8 GB

The original IDE hardware interface is limited to 16 heads, which reduces the maximum drive size to 504 MB. Newer IDE (ATAPI) technology, however, uses a translation scheme called Logical Block Addressing (LBA) to exceed the 504-MB limit as imposed by the system AT ROM BIOS and IDE specification. SCSI and ESDI hard drive controllers use similar translation methods that are usually built into the controller card's ROM BIOS to exceed the 504-MB drive size limit. For more information about the use of large hard disks with MS-DOS and Windows 95, please see the following article in the Microsoft Knowledge Base:

TITLE: Windows 95 Support for Large IDE Hard Disks

ID: Q126855

The FDISK utility in MS-DOS and Windows 95 can create an extended partition larger than 2 GB. FDISK can then create multiple formatted drives of up to 2 GB in this extended partition that conform to the AT ROM BIOS constraints mentioned earlier. FDISK will not, however, allow the creation of a primary FAT partition or logical drive in an extended FAT partition that is larger than 2 GB. Note also that, as mentioned earlier, logical drives larger than 504 MB cannot be accessed using MS-DOS or Windows 95 unless LBA or geometry translation is used.

Windows NT allows you to create 4 GB FAT drives, either as a primary partition or as a logical drive in an extended partition. Because MS-DOS and Windows 95 have a maximum partition size of 2 GB, FAT drives larger than 2 GB created using Windows NT cannot be reliably accessed using MS-DOS or Windows 95.

NOTE:

Microsoft does not recommend using MS-DOS or Windows 95 with a 4 GB FAT drive created in Windows NT. If you use Windows NT's dual boot feature to boot MS-DOS or Windows 95, you should be able to access the drive, but you may experience unexpected behaviors. In particular, some applications or utilities may incorrectly report that 0 bytes of free space exist on the drive.

KBCategory: kbtool kbnetwork kbinterop kbsetup

KBSubcategory: wpp95 win95 diskmem

Additional reference words: 95 msdos

Microsoft Knowledge Base Information for Article Q127988

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Applies to Microsoft Windows 95

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Plug and Play NIC Err Msg: Hardware Does Not Respond...

PSS ID Number: Q127988

[?] Article Information

[?]**SUMMARY**

[?]**MORE INFORMATION**

SUMMARY

When a Plug and Play NIC, such as the Realtek Longshine NIC, is configured to use an NDIS 2 driver, you may receive an error message similar to the following when you start your computer:

    \DEV\MS2000$ Error: Hardware does not respond.

    Error loading device driver NE2000.DOS

    Error 7306:   the driver failed to initialize...

In spite of this error message, full network functionality is available in Windows 95.

MORE INFORMATION

A Plug and Play card is disabled until it is turned on either by the BIOS or a software driver. In this case, the NDIS 2 driver, NE2000.DOS, does not turn on the card. Windows 95 later initializes the NDIS 3 driver, which then activates the card, enabling connectivity. The error message is correct at the moment it is generated, but another driver subsequently corrects the problem.

This behavior occurs only if the card has been manually configured for a real-mode 16-bit NDIS driver with protected-mode protocols only. In a configuration with real-mode protocols, such as DLC, the protocols are not available.

Note that the error message is ordinarily hidden by the startup screen. To see this error message you must press the ESC key or add the line

    "LOGO=0" in the MSDOS.SYS file.

The products discussed here are manufactured by vendors independent of Microsoft; we make no warranty, implied or otherwise, regarding these products' performance or reliability.

REFERENCES

For more information about the contents of the MSDOS.SYS file, please see the following article in the Microsoft Knowledge Base:

    ARTICLE-ID: Q118579

    TITLE   : Contents of the Windows 95 MSDOS.SYS File

    (Click here [?] to jump to the article)

KBCategory: kbnetwork kbsetup kberrmsg

KBSubcategory: wpp95 win95 ndis2

Additional reference words: 95 pnp

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Applies to Microsoft Windows 95

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Windows 95 Setup Switches

PSS ID Number: Q128400

 Article Information

SUMMARY

MORE INFORMATION

SUMMARY

This article describes the switches you can use with the Windows 95 Setup program.

MORE INFORMATION

/? -   This switch provides a brief summary of the /t:<dir> switch.

/c -   This switch causes Setup to not run SMARTDrive.

/d -   If you do not want Setup to use your existing copy of Windows, use this switch.

/id - If you do not want Setup to check for the minimum disk space required to install Windows 95, use this switch.

/it - If you do not want Setup to check for the presence of "dirty" or "deadly" terminate-and-stay-resident programs (TSRs) that are known to cause problems with Windows 95 Setup, use this switch.

/is - This switch causes Setup to not run ScanDisk.

/l   -   Use this switch if you have a Logitech mouse and want it enabled during Setup.

/n - This switch causes Setup to run without a mouse.

-s -   Use this switch to use an alternate SETUP.INF file.

/t:<dir> - This switch lets you specify where Setup will copy its temporary fies.   WARNING: Any existing files in this directory will be deleted.

/p -   This switch causes Setup to pass the following string(s) directly to Detection Manager (or SYSDETMG.DLL). Setup does not interpret the content of the string. The string can contain one or more detection options. For example,

    setup /p x=io(300-30f,240-24f)

/P Detection Switch Option String Defined

    The string can contain one or more detections switches separated by a semicolon (;)

    Some switches are simply On/Off switches. The absence of the switch simplies Off; the presence of the switch turns it On.   A minus sign (-) appended immediately after a switch turns it Off

    Some switches take parameters in the form of   <c>=<params>.   If there is more than one parameter to a switch, the parameteres are separated by a coma (,)

    There must not be any spaces in the detection option string.

Valid Detection Switches

a - This switch enables safe detection. It tells each detection module to try safer detection methods. Safer detection methods may not detect devices correctly.

The default during Setup is enabled. The default in other cases is disabled.

b - This switch enables Prompt Before mode. It prompts you before a detection module is called so that you can step through each detection module manually and decide if you want to skip it.

The default is disabled.

c - This switch enables class detection. Class detection is a mechanism for finding hints for a certain class of devices. For example, adapter class detection looks for hints in the CONFIG.SYS and SYSTEM.INI

files for CD-ROM drivers. If it does not find any, Setup displays a CD-ROM check box asking if you have a CD-ROM drive.

The default during Setup is enabled. The default when you use the Add New Hardware tool and docking/undocking detection is disabled.

d=<name> - This switch detects the listed detection modules only, where <name> is a detection module name or a device class name.

Detection module names (such as DetectPIC and DetectAHA154x) are found in the MSDET.INF file. Device class names can be SCSIAdapter, net, and so on.

e - This switch enables Setup mode detection.

The default during Setup is enabled. The default in other cases is disabled.

f - This switch enables Clean Registry mode. It forces Detection to clean the root branch of the registry before starting. This switch is ignored when Setup is run in the Windows 95 graphical user interface (GUI).

The default is disabled.

g=<n> - This switch specifies the verbose level, where <n> is 0 to 3. This switch controls how verbose the built-in progress bar is. At maximum level (3), it shows all the resources of the detected devices along with the progress bar. This switch can help to identify which detection module causes a certain problem. For example, if your mouse stops responding (hangs) during detection but the system continues, there is no way to determine from the log files which module hung the mouse. By turning this option on and constantly moving the mouse during Setup, you can determine which module is running when the mouse hangs.

The default is disabled (0).

l=<n> - This switch specifies the logging level for DETLOG.TXT, where <n> is 0 to 3.

The default is maximum logging (3).

m - This switch enables Mini-windows mode.

This is enabled only when Setup is run under MS-DOS.

n - This switch enables No Recovery mode. This option can be used to turn off the Windows 95 Setup recovery mechanism (for example, this switch prevents the creation of the DETCRASH.LOG file).

The default is disabled.

o=<traceoutput> - This switch specifies the trace output. The information is written to the TRACELOG.TXT file in the current directory.

This option is available only in the Debug version of SYSDETMG.DLL.

p - This switch enables performance logging. It writes some performance timing information to the DETLOG.TXT file.

The default is disabled.

r - This switch enables Recovery mode. It causes Detection to usethe DETCRASH.LOG file, if found, for recovery. If this switch is not enabled, Detection ignores and deletes DETCRASH.LOG even if it is found.

This switch is used if Smart Recovery is selected during Setup, otherwise it is not used.

s=<name> - This switch skips the listed detection modules or classes of detection modules, where <name> is a detection module name or a device class name.

Detection module names (such as DetectPIC and DetectAHA154x) are found in the MSDET.INF file. Device class names are SCSIAdapter, net, and so on.

t=<n> - This switch specifies the trace level, where <n> is 0 to 9.

The default is disabled (0).

This option is available only in the Debug version of SYSDETMG.DLL.

v - This switch enables Verify Only mode. Detection has two stages:

1. Verify existing devices in the registry.
2. etect new devices.

This switch tells Detection to perform only stage 1. This switch is used by the PCMCIA Wizard to verify legacy devices in the registry.

The default is disabled.

x=<res list> - This switch excludes the listed resources from detection, where <res list> is one of four possibilities:

- io(xxx-yyy,xxx-yyy,...)

- mem(xxxxx-yyyyy,xxxxx-yyyyy,...)

- irq(x,y,z,...)

- dma(x,y,z,...)

This switch protects resources so that no detection modules can access them.

KBCategory: kbsetup kbref kbtshoot

KBSubcategory: wpp95 win95

Additional reference words: 95

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Last modified on 08-JUN-1995

Applies to Microsoft Windows 95

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Using the Windows 95 Extract Tool (EXTRACT.EXE)

PSS ID Number: Q129605

[?] Article Information

[?]SUMMARY

[?]MORE INFORMATION

SUMMARY

Windows 95 is available on CD-ROM or floppy disks, both of which contain compressed cabinet files. These cabinet files contain the actual Windows 95 files. Because this method of compression differs from that used with previous versions of Windows, there is a new utility to decompress individual Windows files.

You can use the Extract tool (EXTRACT.EXE) to decompress Windows 95 files from the original CD-ROM or disks. This article describes how to use the Extract tool and contains the following sections:

[?]	Location of Cabinet Files
[?]	Extracting Windows 95 Files from an Unknown Cabinet File
[?]	Finding Windows 95 Files
[?]	Extracting Windows 95 Files from a Known Cabinet File
[?]	Listing the Contents of Cabinet Files
[?]	Copying Cabinet Files to a Hard Disk
[?]	Other Optional Switches

MORE INFORMATION

The Extract tool has only a command-line interface (that is, there is no GUI interface). Because Windows 95 does not allow you to delete or overwrite a file that is in use, you may have to restart your computer in Command Prompt Only mode before you can use the Extract tool. If you receive an "Access denied" error message when you try to delete a file before using the Extract tool, or when you use the Extract tool to overwrite an existing file, follow these steps to restart your computer in Command Prompt Only mode and then use the Extract tool:

1. Click the Start button, then click Shut Down.

2. Click the Restart The Computer option button, then click Yes.

3. When you see the "Starting Windows 95" message, press the F8 key, then choose Command Prompt Only.

Location of Cabinet Files

From a CD-ROM:

If you are extracting Windows 95 files from a CD-ROM, all the cabinet files, including the PRECOPY1.CAB, PRECOPY2.CAB, and MINI.CAB cabinet files, are located in the WIN95\WIN95 directory. For example, if you want to extract a Windows 95 file from the WIN95_02.CAB file, and the CD-ROM drive is drive D, use the following <cabinet> parameter for the EXTRACT command:

    D:\WIN95\WIN95\WIN95_02.CAB

From Disks:

If you are extracting Windows 95 files from disks, use the following table to determine which disk contains the cabinet file you want:

Cabinet File	Disk
MINI.CAB	Disk 1
PRECOPY1.CAB	Disk 1

PRECOPY2.CAB	Disk 2
WIN95_nn.CAB	Disk nn

For example, if you want to extract a file from the WIN95_10.CAB file on a disk in drive A, insert Disk 10 in drive A and use the following <cabinet>parameter for the EXTRACT command:

    A:\WIN95_10.CAB

NOTE:

If you use the /A switch with the EXTRACT   command, insert the disk containing the first cabinet file mentioned on the command line. You will be prompted to insert additional disks as they are needed.

Extracting Windows 95 Files from an Unknown Cabinet File

Extracting a Single File:

If you do not know which cabinet file contains the Windows 95 file you want to extract, use the following command to search all the cabinet files in sequential order and then extract the file once it is found:

    EXTRACT /A <cabinet> <filename> /L <destination>

For example, to extract the UNIDRV.DLL file from disks in drive A into theWINDOWS\SYSTEM directory on drive C, use the following command:

    EXTRACT /A A:\WIN95_02.CAB UNIDRV.DLL /L C:\WINDOWS\SYSTEM

NOTE: The /A switch causes the Extract tool to search all the cabinet files in the cabinet chain, starting with the first cabinet file mentioned. Note that if you are extracting from a CD-ROM you must modify the <cabinet> parameter accordingly to reflect the actual location of the cabinet files.

If the Extract tool cannot find the specified file in any of the cabinet files, the file may be located in the MINI.CAB, PRECOPY1.CAB, or PRECOPY2.CAB cabinet file. You can use the following two commands to search these cabinet files:

    EXTRACT /A A:\PRECOPY1.CAB <filename> /L <destination>
    EXTRACT A:\MINI.CAB <filename> /L <destination>

NOTE: The first command searches the PRECOPY1.CAB and PRECOPY2.CAB cabinet files. The second command searches the MINI.CAB cabinet file. Note that if you are extracting from a CD-ROM, you must modify the <cabinet> parameter in these commands accordingly.

Extracting Multiple Files:

To extract multiple files, use the same syntax as above, but use a wildcard designation for the <filename> parameter. For example, to extract all the files with a .TXT extension from disks in drive A to the WINDOWS directory on drive C, use the following command:

    EXTRACT /A A:\WIN95_02.CAB *.TXT /L C:\WINDOWS

Note that if you are extracting from a CD-ROM, you must modify the <cabinet> parameter in this command accordingly.

<u>Finding Windows 95 Files</u>

Finding a Single File:

You can use the Extract tool to determine which cabinet file contains a particular Windows 95 file. When you use this syntax, the Extract tool searches the cabinet files but does not extract the file once it is found:

EXTRACT /A /D <cabinet> <filename>

For example, to find the UNIDRV.DLL file using disks in the A drive, use the following command:

EXTRACT /A /D A:\WIN95_02.CAB UNIDRV.DLL

NOTE:

The /A switch causes the Extract tool to search all the cabinet files in the cabinet chain, starting with the first cabinet file mentioned.

If the Extract tool cannot find the specified file in any of the cabinet files, the file may be located in the MINI.CAB, PRECOPY1.CAB, or PRECOPY2.CAB cabinet file. You can use the following two commands to search these cabinet files:

EXTRACT /A /D A:\PRECOPY1.CAB <filename>
EXTRACT /D A:\MINI.CAB <filename>

NOTE: The first command searches the PRECOPY1.CAB and PRECOPY2.CAB cabinet files. The second command searches the MINI.CAB cabinet file. Note that if you are using a CD-ROM, you must modify the <cabinet> parameter in these commands accordingly.

Finding Multiple Files:

To find multiple files, use the same syntax as above, but use a wildcard designation for the <filename> parameter. For example, to find all the files with a .TXT extension using disks in the A drive, use the following command:

EXTRACT /A /D A:\WIN95_02.CAB *.TXT

Extracting Windows 95 Files from a Known Cabinet File

Extracting a Single File:

If you know which cabinet file contains the file you want to extract, use the following syntax to extract the file:

EXTRACT <cabinet> <filename> /L <destination>

For example, to extract the UNIDRV.DLL file from the WIN95_09.CAB file on a disk in drive A to the WINDOWS\ SYSTEM directory on drive C, use the following command:

EXTRACT A:\WIN95_09.CAB UNIDRV.DLL /L C:\WINDOWS\SYSTEM

Extracting Multiple Files:

To extract multiple files from a cabinet file, use the same syntax as above, but use a wildcard designation for the <filename> parameter. For example, to extract all the files that have a .TXT extension from the WIN95_06.CAB file on a disk in drive A to the WINDOWS directory on drive C, use the following command:

EXTRACT A:\WIN95_06.CAB *.TXT /L C:\WINDOWS\SYSTEM

Listing the Contents of Cabinet Files

You can use the Extract tool to list the contents of cabinet files without actually extracting any files. To display

the contents of a cabinet file, use the following syntax:

EXTRACT /D <cabinet>

To display the contents of all the cabinet files in a cabinet chain, starting with the specified cabinet file, use the following syntax:

EXTRACT /A /D <cabinet>

For example, to display the contents of all the cabinet files using disks in drive A, starting with the WIN95_02.CAB file, use the following command:

EXTRACT /A /D A:\WIN95_02.CAB

NOTE: The /A switch causes the Extract tool to list the contents of all the cabinet files in the cabinet chain, starting with the first cabinet file mentioned.

Copying Cabinet Files to a Hard Disk

Although you cannot make copies of the original Windows 95 disks using the utilities that are included with Windows 95, you can use the Extract tool to copy cabinet files from a CD-ROM or floppy disk to your hard disk. To do so, use the following syntax:

EXTRACT /C <cabinet> <destination>

For example, to copy the WIN95_02.CAB file from a disk in drive A to the WINDOWS directory on drive C, use the following command:

EXTRACT /C A:\WIN95_02.CAB C:\WINDOWS

NOTE: You cannot use the /A and /C switches at the same time. Therefore, you cannot copy all the cabinet files using a single command.

<u>Other Optional Switches</u>

[?]   Use the /Y switch to cause the Extract tool to not prompt you before overwriting an existing file. If you use this switch when you are extracting a file, any file in the destination directory with the same name as the file you are extracting is automatically overwritten.

For example, to extract the UNIDRV.DLL file from the WIN95_02.CAB file on a disk in drive A to the WINDOWSdirectory on drive C and automatically overwrite any existing UNIDRV.DLL file that is already there, use the following command:

EXTRACT /Y /A A:\WIN95_02.CAB UNIDRV.DLL /L C:\WINDOWS\SYSTEM

[?]   Use the /E switch in place of the "*.*" wildcard designation when you are extracting or finding multiple files. For example, to extract all the files from the WIN95_06.CAB file on a disk in drive A to the WINDOWS directory on drive C, use either of the following commands:

EXTRACT /E A:\WIN95_06.CAB /L C:\WINDOW

EXTRACT A:\WIN95_06.CAB *.* /L C:\WINDOWS

For a complete list of the command-line switches for the Extract tool, type"extract" (without quotation marks) at a command prompt.

KBCategory: kbtool kbusage

KBSubcategory: wpp95 win95 appscomp

Additional reference words: 95

Microsoft Knowledge Base Information for Article Q130946

Last modified on 31-JUL-1995

Applies to Microsoft Windows 95

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How to Troubleshoot Windows 95 Backup

PSS ID Number: Q130946

[?] Article Information

[?]**SUMMARY**

[?]**MORE INFORMATION**

SUMMARY

This article describes steps you can take to troubleshoot problems with Windows 95 <u>Backup</u>.

MORE INFORMATION

Tape Drive Not Detected

Verify that the tape drive you are using is supported by Microsoft Backup.For information about supported tape drives in Backup, please see the on-line Help or the following article in the Microsoft Knowledge Base:

  ARTICLE-ID: Q124730

  TITLE: Tape Backup Units Supported in Windows 95

Problems Restoring Files

If you experience a problem restoring files, follow these steps:

1. Refer to your tape backup unit's documentation for the proper cleaning instructions, then clean the tape drive.

2. Set your computer to a slower speed (for example, turn off turbo mode).

3. Try to restore the files in Windows 95 <u>Safe Mode</u>. You can start Windows 95 in Safe mode by pressing F5 at the "Starting Windows" message or by pressing F8 at the "Starting Windows" message and choosing "Start Windows, bypassing startup files" from the Windows 95 Startup menu.

   NOTE:

   If the tape backup drive requires the existence of a protected-mode driver, it will not work in <u>Safe Mode</u>. For example, Colorado Trakker drives do not work in Safe mode because VCOMM does not load.

4. Try to restore the files on a different computer.

5. Verify that there is enough swap file space. The size of the swap file grows with the number of files involved in the backup, restore, or compare operation.

Problems Backing Up or Restoring Over the Network

If you cannot back up or restore files over a network, try a different network <u>protocol</u>, or try to copy a large file across the network with the XCOPY command. This problem is usually related to the network or

network configuration and not Microsoft Backup.

Tape Fails to Format

If the tape cannot be formatted, try these steps:

1. Verify that you are using a compatible tape format. For example, you cannot format a 3010 tape in a QIC-80 drive and you cannot format a QIC-80 wide tape in a QIC-80 drive.

2. The tape may be bad or worn out. Try to format a different tape.

   NOTE:

While it may be possible to format the tape by degaussing (or bulk-erasing) the tape, this will not correct or repair a damaged tape. There are two reasons why you may be able to format a degaussed tape:

The bad block count (which is stored in the header of the tape) is set to zero.

The bad blocks appear to be corrected, so that the tape works until the bad blocks are detected again. If you use such a tape, you may encounter errors again, or you may not be able to recover data after performing a backup, since data may be stored in a bad block on the tape.

3. Try to format the tape in Windows 95 <u>Safe Mode</u>. You can start Windows 95 in Safe mode by pressing F5 at the "Starting Windows" message or by pressing F8 at the "Starting Windows" message and choosing "Start Windows, bypassing startup files" from the Windows 95 Startup menu.

   NOTE:

   If the tape backup drive requires the existence of a protected-mode driver, it will not work in <u>Safe Mode</u>. For example, Trakker drives do not work in Safe mode because VCOMM does not load.

4. There may be a video DMA conflict. Start the format operation, then try the following steps:

   A. Minimize the progress indicator. If formatting still fails, try step B.

   B. Change the video resolution to 640 x 480 x 16 colors. If formatting still fails, try step C.

   C. Try formatting the tape in a full-screen MS-DOS command prompt session. If this works, use Device Manager to look for a DMA conflict between the video card and the floppy drive controller.

Tape Comparison Fails

If the tape comparison fails, try the following steps:

1. Bulk-erase the tape.

2. Try a new tape.

Colorado Trakker Tape Backup Unit

If you are experiencing random problems with a Trakker tape drive on a parallel port, make sure the parallel port is not configured in the computer's CMOS settings as an ECP or EPP port. If it is, use the computer's <u>BIOS</u> Setup utility to reconfigure the port to a standard parallel port. For more information about the computer's BIOS Setup utility, please consult your computer documentation or manufacturer.

Additional Troubleshooting Steps

If you continue to have problems with Backup, follow these steps:

1. Refer to the tape backup unit's documentation for the proper cleaning instructions, then clean the tape drive.

2. Verify that all of the power connections are securely and properly attached.

3. Verify that the jumpers are set in a compatible mode (please refer to the tape backup unit's documentation for the proper settings).

4. If you have an internal tape drive, position it as far as possible from the hard disk. If you have an external tape drive, position it as far as possible from the monitor.

KBCategory: kbtool kbtshoot

KBSubcategory: wpp95 win95 appscomp

Additional reference words: 95 msbackup

Microsoft Knowledge Base Information for Article Q124890

Last modified on 08-JUN-1995

Applies to Microsoft Windows 95

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How to Use Modem AT Commands in HyperTerminal

PSS ID Number: Q124890

[?] Article Information

To use AT commands in HyperTerminal, follow these steps:

1. Start HyperTerminal.

2. Enter a name for the connection (for example, Test) in the Name box.

3. Click an icon for the connection in the Icon box, and then click OK.

4. In the Connect Using box, click Direct To Com X (where X is the port your modem is connected to) and then click OK.

5. Verify the settings on the Port Settings tab and then click OK. You can now type AT commands.

6. Quit HyperTerminal. When you are prompted "Save session <name>?" click Yes if you want to save the session so that you can use AT commands at another time.

KBCategory: kbusage

KBSubcategory: wpp95 win95 wincomm

Additional reference words: 95 terminal hyperterm

Microsoft Knowledge Base Information for Article Q126632

Last modified on 04-JUL-1995

Applies to Microsoft Windows 95

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Mouse Detected as PS/2-Style or Bus Does Not Work During Setup

PSS ID Number: Q126632

[?] Article Information

[?] **SYMPTOMS**

[?] **CAUSE**

[?] **WORKAROUND**

SYMPTOMS

When you are setting up Windows, the mouse attached to your computer is incorrectly identified as a PS/2-style or an Inport (bus) mouse and the mouse does not work.

CAUSE

Setup detects mouse ports in the following order: Inport, PS/2, serial. When the detection routine finds the mouse port, it stops searching. For example, if Setup finds an Inport card, it stops searching for the mouse.

Inport Card

If an Inport-style mouse card is installed in the computer, the detection routine sees this card first and uses it, even if the mouse is not attached to it. This occurs because the Inport card is the circuit board for the mouse. Detaching the mouse from the card does not disable the card.

PS/2-Style Mouse

If a PS/2-style mouse is installed, the 0x04 bit is set in the equipment flags. In some computers, the BIOS mistakenly sets this bit when a second hard disk is installed and no PS/2-style mouse exists. When Setup issues an INT 11 (get equipment flags) and sees that this bit is set, it determines that there is a PS/2-style mouse attached to your computer.

WORKAROUND

To work around this problem, use one of the following methods:

[?]   For an Inport card, remove the card from the computer before you run Setup.

[?]   For a PS/2-style mouse port, contact your computer vendor about a possible BIOS upgrade.

[?]   For either type of mouse, set the correct type in the "MouseType=" line in the MOUSE.INI file before you run Setup. Note that the mouse driver you are using must support the use of a MOUSE.INI file for this method to work. For additional information about the "MouseType=" setting, please see the following article in the Microsoft Knowledge Base:

ARTICLE-ID: Q73370

TITLE: Correct Entries for "MouseType=" in MOUSE.INI

KBCategory: kbsetup kbhw kbtshoot

KBSubcategory: wpp95 win95

Additional reference words: 95 3.10 3.11 hangs

Microsoft Knowledge Base Information for Article Q127022

Last modified on 08-JUN-1995

Applies to Microsoft Windows 95

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16-Bit DMA May Cause Static or System Hang

PSS ID Number: Q127022

[?] Article Information

[?]**SYMPTOMS**

[?]**CAUSE**

[?]**WORKAROUND**

SYMPTOMS

In Windows 95 you may experience one of the following behaviors:

[?]   When you play a wave (.WAV) file, you hear static.

[?]   When you enable a 16-bit sound scheme (for example, Robotz or Utopia), Windows 95 may stop responding (hang).

CAUSE

This behavior can be caused by a lack of support for 16-bit direct memory access (DMA) on your computer.

WORKAROUND

If the sound card in your computer is set for a 16-bit DMA channel (5, 6, or 7), use Device Manager to change the card's configuration to an 8-bit DMA channel (0, 1, or 3). If the sound card is set for an 8-bit DMA channel, change it to a 16-bit DMA channel.

You may also need to run the configuration tool that is shipped with the sound card to change its DMA channel to match the Device Manager setting. If no configuration tool is shipped with the sound card, you may need to change jumpers on the card.

How to Change the DMA Channel

To change the DMA channel setting for the sound card in Device Manager, follow these steps:

1. Click the Start button, point to Settings, and then click Control Panel.

2. Double-click the System icon.

3. Click the Device Manager tab, then double-click Sound, Video, And Game Controllers.

4. Double-click the sound card that is installed in your computer.

5. Click the Resources tab.

6. Double-click Direct Memory Access, then change the DMA setting to the setting you want.

7. Click OK. When you are prompted to do so, restart your computer.

KBCategory: kbhw kbsetup

KBSubcategory: wpp95 win95

Additional reference words: 95 media vision proaudio spectrum mv pas sound blaster pro sb sbpro wwt

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Microsoft Knowledge Base Information for Article Q127050

Last modified on 08-JUN-1995

Applies to Microsoft Windows 95

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How to Disable the FIFO Buffer on a 16550 UART Chip

PSS ID Number: Q127050

[?] Article Information

[?]**SUMMARY**

[?]**MORE INFORMATION**

SUMMARY

This article describes how to disable the FIFO buffer on the 16550 UART chip if it is not functioning properly on your computer.

MORE INFORMATION

To disable the FIFO buffer on the 16550 UART chip, add the string value

Settings

to the following entries in the Registry:

COM Port	Registry Entry
COM1	HKEY_Local_Machine\Enum\Root\ *PNP0500\0000
COM2	HKEY_Local_Machine\Enum\Root\ *PNP0500\0001
COM3	HKEY_Local_Machine\Enum\Root\ *PNP0500\0002
COM4	HKEY_Local_Machine\Enum\Root\ *PNP0500\0003

Set the new value to

00 00 00 00

For information about how to edit the registry, view the Changing Keys And Values online Help topic in Registry Editor (REGEDIT.EXE).

Note that you should make a backup copy of the registry files (SYSTEM.DAT and USER.DAT) before you edit the registry.

WARNING: Using Registry Editor incorrectly can cause serious problems that may require you to reinstall Windows 95. Microsoft cannot guarantee that problems resulting from the incorrect use of Registry Editor can be solved. Use Registry Editor at your own risk.

Note that the COMxFIFO=0 and COMxFIFO=1 settings from the [386Enh] section of the Windows version 3.1x SYSTEM.INI file do not work in Windows 95.

KBCategory: kbhw kbtshoot

KBSubcategory: wpp95 win95 wincomm msnetwork

Additional reference words: 95 comxfifo

Microsoft Knowledge Base Information for Article Q127209

Last modified on 08-JUN-1995

Applies to Microsoft Windows 95

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Orchid Vidiola Capture Card Causes Setup to Hang

PSS ID Number: Q127209

[?] Article Information

[?] **SUMMARY**

[?] **MORE INFORMATION**

SUMMARY

When you are installing Windows 95 on a computer that has an Orchid Vidiola Capture card, Setup may stop responding (hang) during the hardware detection routine.

MORE INFORMATION

The Orchid Vidiola Capture card is not supported for Setup's hardware detection routine. When Setup sends a detection query to this card, the card returns an invalid value that causes the hardware detection routine to hang. You must turn off and restart the computer and run Setup again, selecting the Smart Recovery option, to continue. Setup then skips the detection of the Orchid Vidiola Capture card.

The third-party product discussed here is manufactured by a vendor independent of Microsoft; we make no warranty, implied or otherwise, regarding this product's performance or reliability.

KBCategory: kbsetup kbhw

KBSubcategory: wpp95 win95

Additional reference words: 95

Microsoft Knowledge Base Information for Article Q129049

Last modified on 08-JUN-1995

Applies to Microsoft Windows 95

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How to Perform 10-Digit Dialing in Windows 95

PSS ID Number: Q129049

[?] Article Information

[?]**SYMPTOMS**

[?]**CAUSE**

[?]**WORKAROUND**

SYMPTOMS

When you try to dial a 10-digit number (the telephone number plus the area code), Windows 95 ignores the Area Code field of the number to be dialed if it matches your local area code.

CAUSE

Windows 95 is designed to conform to the North American Dialing Standard. This standard requires you to dial a one, plus the area code and the telephone number for all long-distance numbers. If the telephone number is a local call, you do not need to dial the area code.

Some regional telephone companies use area code overlays that require you to dial the area code plus the telephone number for all calls. If it is a long-distance call, you must precede this number with a one. Windows 95 is not designed to comply with this 10-digit dialing scheme.

WORKAROUND

There are three methods for working around this problem.

Method 1

You can create your own dialing rules in the Dialing Properties dialog box. Use the following steps to create a custom calling card that dials all local calls with 10 digits:

1. Click the Start button, point to Settings, then click Control Panel.

2. <u>Double-click</u> the Modems icon, click the Dialing Properties button, then click the Dial Using Calling Card check box.

3. Click the New button, type a name for the calling card (for example, Direct Dial), then click the OK button.

4. Click the Advanced button and then fill out the Dialing Rules dialog box as follows:

Field	Dialing Rule
Calls Within The Same Area Code	FG
Long Distance Calls	1FG
International Calls	011EFG

   NOTE: Use the right mouse button to click these field names and then click What's This? to see information about valid entries for each field. For example, an entry of FG means to dial the area code and the local number.

5. Click the Close button to save the dialing rules, then click OK.

This method causes Windows 95 to dial all telephone numbers with the same area code as your own with 10 digits. When you use this method, Dialing properties (such as call waiting or outside line access numbers) are used.

You can use this method with HyperTerminal, Dial-Up Networking, and The Microsoft Network.

Method 2

Windows 95 does not limit the number of digits you can enter in the Phone Number field. You can, therefore, set the Area Code field to match your local area code and you can enter the 10-digit telephone number to dial in the Phone Number field.

For example, if your local area code is 555, you can enter 555 in the Area Code field and a phone number such as 555 123-4567 in the Phone Number field. Windows 95 will dial this phone number with 10 digits.

When you use this method, Dialing properties (such as call waiting or outside line access numbers) are used. You can use this method with HyperTerminal, Dial-Up Networking, and The Microsoft Network.

Method 3

Windows 95-based applications include a "Use country code and area code" check box in the dialog box where you enter the phone number to be dialed. If you clear the "Use country code and area code" check box, the number you enter in the Phone Number field is dialed exactly as you enter it. Dialing properties (such as call waiting and outside line access numbers) are not applied.

For example, if your local area code is 555, click the Modify button beside the Phone Number field, then clear the "Use country code and area code" check box. If you must dial a 9 to gain an outside line, you would enter "9 555 123-4567" (without quotation marks) in the Phone Number field.

When you use this method you must enter every digit that is to be dialed in the Phone Number field. The digits are not automatically adapted as you change locations, but you have complete control over the number that is dialed.

You can use this method with HyperTerminal, Dial-Up Networking, and The Microsoft Network.

KBCategory: kbtool kbprb

KBSubcategory: wpp95 win95 wincomm wintapi msnetwork

Additional reference words: 95 dun msn hyperterm

Microsoft Knowledge Base Information for Article Q129262

Last modified on 08-JUN-1995

Applies to Microsoft Windows 95

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Fax Transmissions Fail with DSI Scout Plus Fax/Modem

PSS ID Number: Q129262

[?] Article Information

[?] **SYMPTOMS**

[?] **CAUSE**

[?] **RESOLUTION**

[?] **MORE INFORMATION**

SYMPTOMS

When you are using a Digicom Systems (DSI) Scout Plus fax/modem, fax transmissions fail.

CAUSE

DSI Scout Plus fax/modems fail to negotiate with some brands of fax/modems and fax machines because of the manner in which flow control is implemented on this fax/modem.

For example, it has been reported that the DSI Scout Plus fax/modem cannot negotiate with the following equipment:

[?]   Compaq 2411

[?]   Compaq 224ATF

RESOLUTION

To use the DSI Scout Plus fax/modem successfully with Windows 95, you must change the flow control method. To do so, change the SetupCommand key to "ATS7=255&D3*F2" (without quotations marks) in the following registry entry:

HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\At Work Fax\Local Modems\TAPIxxxxx

After you make this change, restart Microsoft Exchange.

For information about how to edit the registry, view the Changing Keys And Values online Help topic in Registry Editor (REGEDIT.EXE). If you are currently viewing this in Windows 95, Click here [?] to locate the help topic.   You should make a backup copy of the registry files (SYSTEM.DAT and USER.DAT) before you edit the registry.
WARNING: Using Registry Editor incorrectly can cause serious problems that may require you to reinstall Windows 95. Microsoft cannot guarantee that problems resulting from the incorrect use of Registry Editor can be solved. Use Registry Editor at your own risk.

MORE INFORMATION

The third-party product discussed in this article is manufactured by a vendor independent of Microsoft; we make no warranty, implied or otherwise, regarding this product's performance or reliability.

KBCategory: kbatwork kbhw kb3rdparty

KBSubcategory: wpp95 win95 wincomm

Additional reference words: 95 msfax ms fax

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Microsoft Knowledge Base Information for Article Q131242

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Applies to Microsoft Windows 95

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Message: This Resource Setting Cannot Be Modified

PSS ID Number: Q131242

[?] Article Information

[?]**SYMPTOMS**

[?]**CAUSE**

[?]**RESOLUTION**

SYMPTOMS

When you click the Change Setting button to modify the <u>IRQ</u> or Input/Output range in the properties for a device in Device Manager, you receive the following message:

> This resource setting cannot be modified.

Note that this occurs only when the Use Automatic Settings check box is not selected.

CAUSE

The Change Setting button works only for resources that can be changed. Not all resources can be changed in a basic configuration. The message stated above notifies you that the resource setting you have selected cannot be changed.

RESOLUTION

For information about basic configuration settings and options you can change when you are configuring COM ports, please see the following article in the Microsoft Knowledge Base:

ARTICLE-ID: Q123992

TITLE: Basic Configurations for COM Ports in Windows95

(Click here [?]to jump to the article)

REFERENCES

Microsoft Windows 95 "Resource Kit

KBCategory: kbenv

KBSubcategory: wpp95 win95 wincomm

Additional reference words: 95 comm

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Microsoft Knowledge Base Information for Article Q116250

Last modified on 21-JUN-1995

Applies to Microsoft Windows 95

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Windows 95 Err Msg: Registry File Was Not Found

PSS ID Number: Q116250

[?] Article Information

[?] **SYMPTOMS**

[?] **CAUSE**

[?] **RESOLUTION**

SYMPTOMS

When you try to load Windows 95, the following error message appears:

> Registry File was not found. Registry services may be inoperative for this session.

After the error message appears, you may be returned to an MS-DOS command prompt.

CAUSE

This behavior can occur if the registry file (SYSTEM.DAT) is missing from the Windows 95 directory or if it is corrupted. The error can also occur if the [Paths] section is missing from the MSDOS.SYS file.

RESOLUTION

[?]   Add the [Paths] section to the MSDOS.SYS file. For additional information, please see the following article in the Microsoft Knowledge Base:

> Article-ID: Q118579

> Title: Windows 95: Contents of the MSDOS.SYS File

> (Click here [?] to jump to the article)

-or-

[?]   Check your system for an existing SYSTEM.DAT file using the following steps:

1. In the Windows 95 directory, type the following command to see if SYSTEM.DAT is present:

   attrib system.dat

2. If the SYSTEM.DAT file exists, proceed with steps 3 and 4; otherwise, skip to step 5.

3. Use the MS-DOS ATTRIB command to remove the Read-Only, System, and Hidden attributes of the SYSTEM.DAT file:

   attrib system.dat -r -s -h

4. Rename the SYSTEM.DAT file to SYSTEM.BAD with the following command:

   rename system.dat system.bad

5. Reboot your computer. During the boot process, if Windows 95 cannot find the Registry file, it uses SYSTEM.DA0. If this file works well, it is renamed to SYSTEM.DAT.

-or-

[?]   If the above steps fails, rerun Windows 95 Setup to re-create the SYSTEM.DAT file from the original disks.

KBCategory: kberrmsg kbhw kbenv

KBSubcategory: wpp95 win95

Additional reference words: 95 err msg register

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Microsoft Knowledge Base Information for Article Q124917

Last modified on 08-JUN-1995

Applies to Microsoft Windows 95

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How Disk Defragmenter Reports Fragmentation

PSS ID Number: Q124917

[?] Article Information

[?]**SYMPTOMS**

[?]**CAUSE**

[?]**MORE INFORMATION**

SYMPTOMS

[?]   When you run Microsoft Disk Defragmenter a second time immediately after defragmenting your hard disk, it reports that a small percentage of fragmentation still exists.

   -or-

[?]   Disk Defragenter reports that it is unnecessary to defragment your hard disk if the fragmentation level is below 10 percent.

CAUSE

The following information applies to physical drives only: Disk Defragmenter examines your disk directories and creates a database of files and their associated clusters. For Windows 95 Disk Defragmenter to identify these files as unmovable, they are marked with Hidden and System attributes. These unmovable file clusters, along with any bad sectors, can cause contiguous files to be interrupted by one or more clusters. This interruption, hough negligible to the performance of the drive, is still considered a degree of fragmentation and is reported as such.

These symptoms may also occur if you select Consolidate Free Space Only under Advanced Options without ever performing a "Full defragmentation (both files and free space)."

MORE INFORMATION

Disk Defragmenter is designed to work this way; therefore, this behavior requires no workaround.

NOTE: You should NEVER remove the attributes from mounted <u>CVF</u>s and defragment the HOST under Windows 95.

KBCategory: kbtool

KBSubcategory: wpp95 win95 diskmem

Additional reference words: 95 defrag.exe defrag

Microsoft Knowledge Base Information for Article Q126855

Last modified on 27-JUL-1995

Applies to Microsoft Windows 95

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Windows 95 Support for Large IDE Hard Disks

PSS ID Number: Q126855

[?] Article Information

[?] SUMMARY

[?] MORE INFORMATION

SUMMARY

Windows 95 supports the use of Integrated Drive Electronics (IDE) hard disks larger than 504 MB (1024 cylinders) using any one of the following methods:

[?]   ROM BIOS support for INT13h extensions (for example: Logical Block Addressing, or LBA).

[?]   Hard disk bus adapter (hard disk controller) support for INT13h extensions (for example: LBA)

[?]   Using only the first 1024 cylinders of the drive

[?]   Real-mode driver support for geometry translation

NOTE: The INT13h extensions discussed here are defined in the "Western Digital Enhanced IDE Implementation Guide".

In addition, the Windows 95 protected-mode IDE disk driver (ESDI_506.PDR)is used to provide 32-bit disk access when you use any of the first three methods listed above. When you use a real-mode driver to provide geometry translation, 32-bit disk access is provided by ESDI_506.PDR only if you use version 7.0 of OnTrack Disk Manager's XBIOS drivers.

MORE INFORMATION

IDE hard disks using the AT Attachment (ATA) interface are accessed via the system AT ROM BIOS INT13h services. IDE identifies a hard disk's capacity to the system BIOS by specifying the number of cylinders, heads, and sectors per track (CHS) in the CMOS memory.

Sectors are always 512 bytes in size, so the capacity of an IDE hard disk can be determined with the following formula:

cylinders x heads x sectors per track x 512 (bytes per sector) = capacity

The system BIOS INT13h interface allows for a maximum of 1024 cylinders, 255 heads, and 63 sectors per track. The IDE interface allows for a maximum of 65,536 cylinders, 16 heads, and 255 sectors per track. To ensure compatible communication between the system BIOS and the IDE interface, the least common denominators of 1024 cylinders, 16 heads, and 63 sectors per track must be used. When you are using the INT13h services to access a hard disk, therefore, the largest drive that can be accessed is 504 MB, calculated as follows:

1024 cylinders x 16 heads x 63 sectors per track x 512 = 528,482,304 bytes, or 504 MB

NOTE: Some hard disk manufacturers consider 1 MB to be 1,000,000 bytes and would therefore consider 528,482,304 bytes to be 528 MB. In standard programming vocabulary and in MS-DOS and Windows 95, however, 1 MB is equal to 1,048,576 bytes, so 528,482,304 bytes is equal to 504 MB.

IDE hard disks larger than 504 MB require more than 1024 cylinders in the CMOS memory (or they could instead use more than 63 sectors per track, but this is very rare). As a result, drives of this size will not be compatible with the system BIOS INT13h interface and the entire drive cannot be used unless geometry translation is being employed by the hard disk controller. Because most IDE controllers do not use geometry translation, IDE hard disks are almost always subject to the 1024-cylinder limit as imposed by the system AT ROM BIOS.

NOTE: Small Computer System Interface (SCSI) controllers usually include a device driver or BIOS ROM that replaces the system AT ROM BIOS services when communicating with a SCSI hard disk and therefore are not limited to 1024 cylinders (504 MB). Enhanced Small Device Interface (ESDI) drives use BIOS ROM-based INT13h functionality to provide drive geometry translation that is compatible with the ATA interface. Also note that when

you are using IDE hard disks, it is possible to have a CMOS Setup allow you to view the full number of cylinders but still have the ROM BIOS limited to only 1024 cylinders.

MS-DOS and Windows 95 support IDE drives that exceed the 504-MB (1024 cylinder) limit using either geometry translation or LBA. Geometry translation is implemented by BIOS drivers that translate the IDE hard disk's actual geometry into geometry that will fit within the system BIOS' INT13h limitations. LBA is implemented by the system BIOS or hard disk bus adapter, which translates the CHS information that is passed to the BIOS into a 28-bit logical block address that is used by the drive to retrieve data from the disk.

To use an IDE hard disk larger than 504 MB (1024 cylinders) with MS-DOS or Windows 95, use one of the following methods:

ROM BIOS Support for INT13h Extensions

Update your computer's ROM BIOS to a version that supports INT13h extensions. A BIOS that supports LBA provides automatic translation for IDE hard disks that are configured for more than 1024 cylinders. This allows you to partition and format the entire drive with MS-DOS or Windows 95 and to use the Windows 95 protected-mode disk driver (ESDI_506.PDR) for 32-bit disk access.

NOTE: This solution requires that you set the drive type to 47 (user defined) in the CMOS memory and specify the correct CHS information for the drive. In addition, you must enable the INT13h extensions in the CMOS memory and define the number of sectors per block. Contact your computer manufacturer for information about updating your ROM BIOS or enabling LBA support in the CMOS memory. For information about setting CHS information for your hard disk in the CMOS memory, contact your hard drive manufacturer.

For more information about INT13H EXTENSIONS, please see the following article in the Microsoft Knowledge Base:

> ARTICLE-ID: Q122052

> TITLE: Logical Block Addressing (LBA) Defined

-or-

Click here to jump to the Support Assistant Topic, What is LBA (Logical Block Addressing)

Hard Disk Bus Adapter Support for INT13h Extensions

Purchase a hard disk controller card that supports INT13H Extensions or performs geometry translation. This allows you to partition and format the entire disk with MS-DOS or Windows 95 and to use the Windows 95 protected- mode disk driver (ESDI_506.PDR) for 32-bit disk access.

NOTE: Most INT13h Extensions controllers require you to set the drive type to 47 in the CMOS memory, specify the correct CHS information, and enable translation on the controller. In these cases, the drive type is an arbitrary selection that is defined by the manufacturer of the controller. Drive type 1, for example, specifies a 10-MB disk with 306 cylinders, 4 heads, and 17 sectors per track. For information about purchasing a hard disk controller that supports INT13h Extensions or performs geometry translation, contact your hard disk or hard disk controller manufacturer.

Real-Mode Driver Support for Translation

Use a third-party software utility to perform geometry translation. Examples of this type of translation software include SpeedStor from Storage Dimensions, EZ-Drive from Micro House, and Disk Manager from OnTrack Computer Systems. If you use version 6.03 of OnTrack Disk Manager's XBIOS drivers (both the Master Boot Record and CONFIG.SYS drivers must be version 6.03), the Windows 95 protected-mode driver (ESDI_506.PDR) obtains the actual geometry and sector skew factor from the OnTrack driver using an API defined in OnTrack Disk Manager's XBIOS specification. In this case, 32-bit disk access is available in Windows 95. If you use an earlier version of XBIOS or another third-party utility, ESDI_506.PDR will unload and disk access will occur in real mode using the system BIOS' INT13h interface.

NOTE: Disk Manager 6.03 is supported in protect mode for drives on the primary IDE channel. For drives on the secondary IDE channel, Disk Manager 7.0 is required.

Windows 95 does not include protect mode support for Micro House's EZ-Drive in the Windows Preview Program

release.

OnTrack Disk Manager's XBIOS driver (XBIOS.OVL) is stored in the root directory of the boot drive and is loaded from the Master Boot Record to support the primary partition (drive C). The CONFIG.SYS driver (DMDRVR.BIN) supports extended partitions and must be loaded to access any drives in the extended partition.

NOTE: This solution requires you to set the drive type to 47 (user defined) in the CMOS memory and specify the correct CHS parameters for the drive. For information about setting CHS information for your drive in the CMOS memory, contact your hard drive manufacturer. In addition, these programs usually require you to partition and format the drive with a special utility provided with the third-party software. For information about this procedure, consult the documentation included with the software or contact the software manufacturer.

Use Only the First 1024 Cylinders of the Disk

Specify drive type 47 (user defined) in the CMOS memory and specify the CHS parameters so that no more than 1024 cylinders are used. This allows you to partition and format the drive to a 504 MB capacity with MS-DOS or Windows 95 and to use the Windows 95 protected-mode disk driver (ESDI_506.PDR) for 32-bit disk access. For information about setting CHS information for your drive in the CMOS memory, contact your hard drive manufacturer.

Using Large Hard Disks with Windows and Windows for Workgroups

The methods described above will also let you use a drive larger than 504 MB (1024 cylinders) with Windows version 3.0 or higher or Windows for Workgroups version 3.1 or 3.11. In addition, when you use one of these methods you can use the Windows for Workgroups 3.11 32-bit file access (VFAT) feature on most computers. Note that using INT13h extensions or geometry translation as described above does not allow you to use the Windows or Windows for Workgroups 32-bit disk access feature.

In Windows and Windows for Workgroups versions 3.1 and higher, 32-bit disk access is provided by a FastDisk driver called WDCTRL. WDCTRL compares the total number of cylinders specified for the hard disk in the CMOS memory in the BIOS Parameter Block (BPB) with the number of cylinders reported by the hard disk in response to an Identify Drive command. If the BIOS reports more than 1024 cylinders, WDCTRL validation fails regardless of whether the system BIOS or bus adapter supports geometry translation or INT13h extensions.

To use 32-bit disk access with hard disks that are configured for more than 1024 cylinders and are therefore incompatible with WDCTRL, you must use a third-party FastDisk driver provided by the manufacturer of the hard disk or hard disk controller. You can also use such a FastDisk driver in place of ESDI_506.PDR to provide 32-bit disk access in Windows 95, hough this should not be necessary for most hard disks.

Disk Manager is manufactured by OnTrack Computer Systems, a vendor independent of Microsoft; we make no warranty, implied or otherwise, regarding this product's performance or reliability.

SpeedStor is manufactured by Storage Dimensions, a vendor independent of Microsoft; we make no warranty, implied or otherwise, regarding this product's performance or reliability.

EZ-Drive is manufactured by Micro House, a vendor independent of Microsoft; we make no warranty, implied or otherwise, regarding this product's performance or reliability.

KBCategory: kbtool kb3rdparty kbenv kbhw

KBSubcategory: wpp95 win95 diskmem

Additional reference words: 3.x 5.x 6.00 6.20 6.21 6.22 95 atapi wd enhanced eide fast-ata msdos ms-dos ms dos

Microsoft Knowledge Base Information for Article Q128327

Last modified on 08-JUN-1995

Applies to Microsoft Windows 95

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How Windows 95 Manages Virtual Memory

PSS ID Number: Q128327

[?] Article Information

[?]**SUMMARY**

[?]**MORE INFORMATION**

SUMMARY

This article contains information and commonly asked questions about <u>virtual memory</u> in Microsoft Windows 95.

Windows 95 uses a dynamic virtual memory manager to handle swap file duties. You should use the default virtual memory settings whenever possible. However, if you have limited hard disk space you may want to set some of the virtual memory settings manually.

MORE INFORMATION

In order to provide more memory to applications than is physically present in the computer in the form of <u>RAM</u>, Windows 95 uses hard disk space to simulate RAM. The amount of RAM in the computer plus the size of the paging file (also known as the swap file) equals the total physical memory, or virtual memory, size. Windows 95 uses a dynamic paging file that remains at a size of 0K until it is needed. The paging file can grow to use all the

available space on the hard disk if it is necessary. This is the default setting for the paging file. You should use this setting if possible.

If you have limited hard disk space, other applications may reduce the amount of virtual memory below that needed by Windows 95 and its applications. If this occurs, choose the "Let me specify my own virtual memory settings" option button on the Performance tab of the My Computer property sheet. You can use this option to set a minimum and maximum size for the paging file.

You can also choose to use no virtual memory. You should use this option only if there is enough <u>RAM</u> to meet all the needs of Windows 95 and the applications you run.

QUESTIONS AND ANSWERS

1. Q. In Microsoft Windows version 3.x, a temporary swap file is slower than a permanent swap file. Will letting Windows 95 set my virtual memory slow down my computer?

   A. No. The temporary swap file in Windows 3.x has to switch between real mode and protected mode, slowing down the computer. As Windows 95 runs only in protected mode, the swap file is as fast or faster than the permanent swap file in Windows 3.x.

2. Q. I compressed my hard disk with DriveSpace. Can I still select my own virtual memory settings? In Windows 3.x I cannot use a permanent swap file on a compressed drive.

   A. If your compressed drive is supported by a protected-mode driver, it is better to use the compressed drive for the paging file. If the compressed drive is not supported by a protected-mode driver then you must place the paging file on the host drive.

3. Q. How can I determine whether my compressed drive is supported by a protected-mode driver?

   A. At this time there are protected-mode drivers only for DoubleSpace and DriveSpace compressed drives. You can also check the IOS.INI file (if it exists) in the Windows directory to see which drives require real-mode support.

KBCategory: kbother

KBSubcategory: wpp95 win95 diskmem winmem

Additional reference words: 95

Microsoft Knowledge Base Information for Article Q128495

Last modified on 04-JUL-1995

Applies to Microsoft Windows 95

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System Hangs with Audio CD and NEC Intersect CDR-37 Drive

PSS ID Number: Q128495

[?] Article Information

[?] **SYMPTOMS**

[?] **CAUSE**

[?] **RESOLUTION**

[?] **STATUS**

SYMPTOMS

Your computer stops responding (hangs) when you try to use an audio compact disk (CD) in a NEC Intersect CDR-37 CD-ROM drive. Ejecting the CD causes the error message "Drive Not Ready" to occur. You can use the system normally once you close the error message box.

CAUSE

The NEC Intersect CDR-37 CD-ROM drive is not supported for CD Audio when you are using the Windows 95 protected-mode drivers because it does not respond correctly to CD Audio commands.

RESOLUTION

This drive should function correctly with audio CDs when you are using real-mode CD-ROM and MSCDEX.EXE drivers. To use real-mode drivers instead of the Windows 95 protected-mode drivers, load the CD-ROM driver in the CONFIG.SYS file, and load MSCDEX.EXE in the AUTOEXEC.BAT file following the manufacturer's instructions. Note that if these drivers were already installed when you installed Windows 95, they may still be in the CONFIG.SYS and AUTOEXEC.BAT files, but be remarked out.

If using the real-mode drivers does not resolve the problem, you may need to disable the CD-ROM drive in Device Manager. To do so, follow these steps:

1. Double-click My Computer.

2. Double-click Control Panel.

3. Double-click the System icon.

4. Click the Device Manager tab.

5. Click the CD-ROM drive, then click the Properties button. Note that you may need to expand a branch of the hardware tree by double-clicking the branch or by clicking the plus sign (+) to the left of the branch before you can click the CD-ROM drive.

6. Click the Original Configuration (Current) check box to remove the check mark.

7. Click the OK button.

8. Click OK.

NOTE: If the CD-ROM drive is on its own controller, you may also need to disable the controller. To do so, follow the steps above but choose the CD-ROM controller card in step 5.

STATUS

Microsoft is researching this problem and will post new information here in the Microsoft Knowledge Base as it becomes available.

KBCategory: kbsound kbhw kb3rdparty kbenv kbprb

KBSubcategory: wpp95 win95 diskmem

Additional reference words: 95

Microsoft Knowledge Base Information for Article Q128960

Last modified on 20-Jul-1995

Applies to Microsoft Windows 95

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Disk Defragmenter Err Msg: Error Defragmenting Drive C

PSS ID Number: Q128960

[?] Article Information

[?] **SYMPTOMS**

[?] **CAUSE**

[?] **RESOLUTION**

[?] **MORE INFORMATION**

SYMPTOMS

When you run the Windows 95 Disk Defragmenter tool on drive C, you may receive the following error message:

Error Defragmenting Drive C

Windows cannot defragment this drive now because it has been locked by a disk utility. Quit any utilities that may have locked this drive, and then try defragmenting the drive again.

CAUSE

This error can occur under the following conditions:

[?]   rive C is attached to an IDE controller.

[?]   There is an Adaptec AHA-1542C SCSI controller with another hard disk attached to it in your computer.

[?]   The ID for the SCSI hard disk is set to 0 (zero).

RESOLUTION

To correct this problem, set the ID of the SCSI hard disk to anything except 0. For information about how to change the ID setting, please refer to the Adaptec controller documentation.

MORE INFORMATION

The third-party products discussed in this article are manufactured by vendors independent of Microsoft; we make no warranty, implied or otherwise, regarding these products' performance or reliability.

KBCategory: kberrmsg kbtool

KBSubcategory: wpp95 win95 defrag diskmem

Additional reference words: 95

Microsoft Knowledge Base Information for Article Q129671

Last modified on 08-JUN-1995

Applies to Microsoft Windows 95

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Problems Using Real-Mode Compression Driver in Windows 95

PSS ID Number: Q129671

[?] Article Information

[?]**SYMPTOMS**

[?]**CAUSE**

[?]**RESOLUTION**

[?]**STATUS**

[?]**MORE INFORMATION**

SYMPTOMS

When you are using the DriveSpace compression tool included with Windows 95, you may experience any of the following problems:

[?]   You cannot mount removable media from the DriveSpace tool. When you try to mount compressed drives located on removable media, DriveSpace restarts your computer in mini-Windows mode and then mounts the drive. However, when your computer restarts normally, the removable drive is not mounted.

[?]   Automatic mounting does not work when you start Windows 95 normally (when you start the GUI). Even though you select the Automatically Mount New Compressed Drives option from the Advanced menu in DriveSpace, Windows 95 does not automatically mount a compressed drive if it is located on a removable media (such as a floppy disk). However, the drive is mounted when you start Windows 95 to a command prompt.

[?]   You are unable to compress a RAMDrive from the DriveSpace tool. When you try to compress a RAMDrive, your computer restarts several times, and you receive the following message:

> To continue this task, Windows needs to restart your computer now.

> If your computer is set up to run more than one operating system, make sure that it restarts Windows 95. Windows 95 will finish this task in an environment that looks similar to earlier versions of Windows.

> Do you want to continue?

If you click Yes, your computer restarts in Mini-windows mode, and the following error message is displayed:

> Cannot examine drive <x>:

where <x> is the RAMDrive. The computer then restarts again in mini-Windows mode and DriveSpace compresses the RAMDrive. However, when your computer restarts normally, the RAMDrive is not compressed.

[?]   You cannot unmount a compressed drive from the DriveSpace tool. When you try to unmount a compressed drive, you receive the following message:

> Windows will unmount drive <x> as soon as you restart your computer. Would you like to restart your computer now?

> Caution: If you do not restart your computer now, you may lose your changes.

If you click Yes, Windows 95 restarts, but the compressed drive is still mounted.

CAUSE

These problems can occur if the real-mode DriveSpace driver (DRVSPACE.BIN or DBLSPACE.BIN) is loaded for one of the following reasons:

[?]   The protected-mode DriveSpace compression driver (DRVSPACX.VXD) is missing or damaged.

[?]   The real-mode DoubleSpace or DriveSpace compression driver from Microsoft MS-DOS version 6.0 or later was loaded when the computer was started. If either DBLSPACE.BIN or DRVSPACE.BIN from MS-DOS 6.0 or later is present in memory when Windows 95 starts, DRVSPACX.VXD is not loaded.

RESOLUTION

Make sure that the protected-mode DriveSpace driver loads when Windows 95 starts by following these steps:

1. Make sure that the DRVSPACX.VXD file is present in the Windows\SYSTEM\IOSUBSYS. If the file is not present,

extract it to that directory from the original Windows 95 CD-ROM or from Disk 9.

For more information about the Extract tool, type "extract" (without quotation marks) at a command prompt, or see the following article in the Microsoft Knowledge Base:

ARTICLE-ID: Q129605

TITLE:Using the Windows 95 Extract Tool (EXTRACT.EXE)

(Click here to jump to the article)

When you extract the DRVSPACX.VXD file, the source location for the file is "A:\WIN95_09.CAB" if you are extracting from Disk 9 in drive A, or "D:\WIN95\WIN95\WIN95_09.CAB" if you are extracting from a CD-ROM in drive D.

2. Copy the DRVSPACE.BIN file from the Windows\COMMAND directory to the root directory of the hard disk as both DRVSPACE.BIN and DBLSPACE.BIN.   To do so, type the following lines at a command prompt:

COPY C:\WINDOWS\COMMAND\DRVSPACE.BIN C:\DRVSPACE.BIN /Y

COPY C:\WINDOWS\COMMAND\DRVSPACE.BIN C:\DBLSPACE.BIN /Y

NOTE: The /Y switch causes the COPY command to replace existing files without prompting you for confirmation.

If drive C is compressed, also copy the DRVSPACE.BIN file to the root directory of the <u>host</u> drive. To do so, type the following commands at a command prompt:

COPY C:\WINDOWS\COMMAND\DRVSPACE.BIN <x>:\DRVSPACE.BIN /Y

COPY C:\WINDOWS\COMMAND\DRVSPACE.BIN <x>:\DBLSPACE.BIN /Y

where <x> is the host drive for drive C.

After performing these steps, check to see if the problem has been resolved. If it has not, perform the following additional step:

3. If you did not extract the DRVSPACX.VXD file in step 1 because it already exists in the Windows\SYSTEM\ IOSUBSYS, extract it now. In addition, extract the DRVSPACE.BIN file from Disk 1 or the CD-ROM to the Windows\COMMAND. After extracting this file, repeat step 2.

STATUS

Microsoft has confirmed this to be a problem in Microsoft Windows 95. We are researching this problem and will post new information here in the Microsoft Knowledge Base as it becomes available.

MORE INFORMATION

The Windows 95 DriveSpace compression driver (DRVSPACX.VXD) provides protected-mode access to both DoubleSpace and DriveSpace compressed drives.

When your computer starts, the Windows 95 real-mode compression driver (DRVSPACE.BIN or DBLSPACE.BIN) is used to mount any compressed drives specified in the DRVSPACE.INI or DBLSPACE.INI file. When Windows 95 starts, DRVSPACX.VXD replaces DRVSPACE.BIN or DBLSPACE.BIN and provides the functionality of these real-mode compression drivers in protected mode.

KBCategory: kbtool kberrmsg kbbuglist

KBSubcategory: wpp95 win95 diskmem

Additional reference words: 95

Microsoft Knowledge Base Information for Article Q130179

Last modified on 21-JUN-1995

Applies to Microsoft Windows 95

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Troubleshooting MS-DOS Compatibility Mode on Hard Disks

PSS ID Number: Q130179

[?] Article Information

[?] **SYMPTOMS**

[?] **CAUSE**

[?] **RESOLUTION**

[?] **MORE INFORMATION**

SYMPTOMS

The Performance tab in System properties shows that one or more of the hard disks in your computer is using MS-DOS Compatibility mode. MS-DOS compatibility mode may be in use for either the file system or for virtual memory.

CAUSE

MS-DOS Compatibility mode may be in use for any of the following reasons:

[?] An "unsafe" device driver, memory-resident program, or virus hooked the INT21h or INT13h chain before Windows 95 loaded.

[?] The hard disk controller in your computer was not detected by Windows 95.

[?] The hard disk controller was removed from the current configuration in Device Manager.

[?] There is a resource conflict between the hard disk controller and another hardware device.

[?] The Windows 95 protected-mode driver is missing or damaged.

[?] The Windows 95 32-bit protected-mode disk drivers detected a non standard configuration or incompatible hardware.

RESOLUTION

To correct the problem, follow these steps:

1. Use the Performance tab in System properties to identify which drive is using MS-DOS Compatibility mode and why.

   NOTE: Floppy disk drives and CD-ROM drives operating in MS-DOS Compatibility mode cause the Performance tab to display the message "Some drives are using MS-DOS compatibility" for the file system, but this article applies only to troubleshooting hard disks operating in MS-DOS Compatibility mode.

   A. If the driver name listed as causing MS-DOS Compatibility mode is MBRINT13.SYS, your computer may be infected with a boot-sector virus, or you are running real-mode geometry translation software   (for an IDE hard disk with more than 1024 cylinders) that is not compatible with Windows 95 protected-mode disk drivers.

   For information about real-mode geometry translation software that is compatible with Windows 95 protected-mode disk drivers, please see the following article in the Microsoft Knowledge Base:

   ARTICLE-ID: Q126855

   TITLE: Windows 95 Support for Large IDE Hard Disks

   For information about detecting and removing boot-sector viruses, please see the following articles in the Microsoft Knowledge Base:

   ARTICLE-ID: Q82923

   TITLE: Methods to Detect a Boot-Sector Virus

   ARTICLE-ID: Q129972

   TITLE: Description of Computer Viruses

B. If a driver that is listed in the CONFIG.SYS file is named, contact the driver's manufacturer to determine whether there is a version of the driver that allows protected-mode access in Windows 95.

If no driver is listed on the Performance tab, continue with Step 2.

2. Check to make sure that the hard disk controller is listed in Device Manager. If it is not listed, install it with the Add New Hardware Wizard. If the Wizard does not detect the controller, run the Wizard again but do not let the Wizard detect the hardware in your computer. Instead, select the controller from the hardware list. If the controller is not listed, contact the manufacturer of the hard disk controller to determine whether there is a Windows 95 protected-mode disk driver or a Windows 3.1 32-bit disk access (FastDisk) driver available.

NOTE: If the hard disk controller is listed in Device Manager but has a red X over it, it has been removed from the current hardware profile. Click Properties for the controller in Device Manager and then click the check box corresponding to the current hardware profile under Device Usage.

3. If the hard disk controller is listed in Device Manager but has a yellow exclamation point over it, there is an IRQ, I/O, DMA, or RAM address conflict with another device, the protected-mode driver is missing or damaged, or the "Disable all 32-bit protected-mode disk drivers" check box is selected in File System properties.

A. Check to make sure that the "Disable all 32-bit protected-mode disk drivers" check box has not been selected on the Troubleshooting tab   in File System properties.

B. Resolve any resource (IRQ, I/O, DMA, or RAM address) conflicts with other devices. Consult the controller's documentation for information about resource usage and changing resource usage.

C. Check to make sure that the protected-mode driver is in the Windows\SYSTEM\IOSUBSYS directory and is loading properly. To determine which driver is providing 32-bit disk access, click Properties for the controller in Device Manager and click the Driver tab to see which driver files are associated with the controller.

Restart Windows 95 and press F8 at the "Starting Windows 95" message. Select a Logged (/BOOTLOG.TXT) start. Examine the just-created BOOTLOG.TXT file to determine if the driver listed above is loading properly.

If the BOOTLOG.TXT file shows an "Init Failure" or "Load Failure" message for the driver listed above, proceed with step D. If the BOOTLOG.TXT file shows an "INITCOMPLETESUCCESS" message for the drive listed above, examine the IOS.LOG file.

Windows 95 creates an IOS.LOG file in the Windows directory if any drives are using MS-DOS Compatibility mode. The first few lines of the IOS.LOG file may contain information describing why the protected-mode disk driver failed to load. Please have this information available if you contact Microsoft Product Support Services about this problem.

D. Make sure the protected-mode driver is not damaged.

For all ESDI and IDE drives, Windows 95 uses ESDI_506.PDR in the IOSUBSYS directory to provide 32-bit disk access. For SCSI controllers, Windows 95 uses SCSIPORT.PDR and a "mini-port" (.MPD) driver to provide 32-bit disk access.

Manually extract the appropriate .PDR or .MPD files from the Windows 95 disks or CD-ROM, or run Setup and choose the Verify option.

4. Contact the hard disk controller's manufacturer for information about Windows 95 compatibility. You may be able to get protected-mode, 32-bit disk access in Windows 95 by using one of the following methods:

  Disable any enhanced features (such as caching, fast or turbo mode, reduced data transfer rates, and so on) on the controller (SCSI, IDE, or ESDI) or system BIOS (IDE only).

  Obtain a protected-mode Windows 95 disk driver, or Windows 3.1 FastDisk driver for the controller.

MORE INFORMATION

A real-mode driver is "safe" if its functionality does not exceed the functionality of the corresponding Windows 95 protected-mode driver. If a real-mode driver is safe, the protected-mode driver can take over all I/O operations for the corresponding device. Otherwise, Windows 95 routes all I/O operations through the real-mode driver.

An example of an unsafe driver is a real-mode IDE/ESDI driver that uses dynamic encryption for security reasons.

Since Windows 95 does not provide encryption, Windows 95 does not allow the protected-mode IDE/ESDI driver to take over the real-mode driver. Any real-mode driver with functionality on the following list is considered unsafe:

- Data compression that is not compatible with DoubleSpace
- Data encryption
- Disk mirroring
- Bad sector mapping
- Fault tolerance (for example, maintenance of ECC correction on a separate disk)
- Vendor-specific IOCTLs
- Microsoft-defined IOCTLs with vendor-extended features

The safe driver list (the IOS.INI file) is a Windows 95-maintained list of safe drivers. Each entry in the list identifies a driver or TSR that Windows 95 can take over with the corresponding protected-mode driver. The safe driver list includes the name of the driver or TSR. This name should be the same as the name in the CONFIG.SYS or AUTOEXEC.BAT file.

Windows 95 does not store the version number of the driver or TSR in the list, so it is the responsibility of the vendor to change the name of the driver if a future version of the driver is enhanced in a manner that makes the driver unsafe.

By default, the following drivers are considered safe:

- MS-DOS 5.0-compatible real-mode block device drivers
- INT 13 monitors (hooks INT 13 for monitoring INT 13 I/O but does not access the hardware directly or modify the I/O buffer)
- INT 13 hooker (hooks INT 13 for altering INT 13 I/O but does not access the hardware directly)
- INT 13 driver (provides INT 13 functionality and directly accesses the hardware)
- ASPI Manager (implements ASPI for MS-DOS specification)
- CAM Manager (implements MS-DOS CAM specification)

NOTE: If the real-mode driver you are using has better performance or provides some functions that are not be present in the Windows 95 protected-mode driver, the driver's vendor should remove the driver from the safe driver list. The system will use real mode to access the drive. If the real-mode driver you are using can be safely taken over by protected-mode drivers, the driver's vendor can add that driver to the safe driver list.

Disk Manager is manufactured by OnTrack Computer Systems, a vendor independent of Microsoft; we make no warranty, implied or otherwise, regarding this product's performance or reliability.

EZ-Drive is manufactured by Micro House, a vendor independent of Microsoft; we make no warranty, implied or otherwise, regarding this product's performance or reliability.

Microsoft Knowledge Base Information for Article Q131690

Last modified on 31-JUL-1995

Applies to Microsoft Windows 95

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Troubleshooting Floppy Disk Drive Problems in Windows 95

PSS ID Number: Q131690
[?] Article Information
[?] **SUMMARY**
[?] **MORE INFORMATION**

SUMMARY

This article lists troubleshooting tips you can use to help resolve problems with floppy disk drives in Windows 95.

MORE INFORMATION

If you are having problems with a floppy disk drive (such as receiving the error message "Error reading drive <X>:"), try the troubleshooting tips in the following sections.

Safe Mode

Start Windows 95 in Safe Mode by restarting your computer and pressing the F5 key when you see the "Starting Windows 95" message. Try to access the floppy disk drive after Windows 95 starts. If you can access the floppy disk drive, follow these steps:

1. Use the right mouse button to click My Computer, then click Properties on the menu that appears.

2. Click the Device Manager tab.

3. Double-click Floppy Disk Controllers.

4. Click the floppy disk controller for the drive you are having problems with, then click Properties.

5. Click the Original Configuration (Current) check box to clear it. This disables the Windows 95 protected-mode driver for the floppy disk drive controller.

6. Click OK.

7. Restart Windows 95 normally.

If you can access the floppy disk drive successfully after following the above steps, the following conditions may be true:

[?]   The floppy disk drive controller may not be supported in protected-mode.

[?]   There are drivers loading in the CONFIG.SYS or AUTOEXEC.BAT file that may be necessary for protected-mode access.

[?]   There are drivers loading in the CONFIG.SYS or AUTOEXEC.BAT file that may be causing conflicts in Windows 95 and need to be remarked out.

Damaged Disks

Use the following steps to check for a damaged disk:

1. Use a disk utility (such as ScanDisk) to test the disk for damage.

   NOTE: Do not use a non-Windows 95-aware disk utility on DMF disks. Non-Windows 95-aware disk utilities can damage DMF disks. The Windows 95 ScanDisk tool recognizes and does not damage DMF disks.

   Before you run a disk utility, please see the following article in the Microsoft Knowledge Base:

        ARTICLE-ID: Q120442

        TITLE: Using Hard Disk Utilities with Windows 95

2. Type the following command at an MS-DOS command prompt

        copy <drive>*.* nul

where <drive> is the floppy disk drive you are having problems with. For example, if you are having problems with drive A, insert a disk you are having problems with in drive A and type the following command:

copy a:*.* nul

This command copies the files on the disk to a null device. If there is a problem copying the files, error messages appear on the screen.

DMF Disks

If you are having problems only with DMF disks, please see the following article in the Microsoft Knowledge Base:

ARTICLE-ID: Q118580

TITLE: Troubleshooting DMF Floppy Disks

CMOS Settings

Consult your computer's documentation or manufacturer to make sure that your computer's CMOS settings are correct.

Irwin Tape Backup

Windows 95 Setup removes the following statement from the [386Enh] section of the SYSTEM.INI file:

device=<path>\VIRWT.386

If you re-install the Irwin Tape Backup software after you install Windows 95, this statement is placed in the SYSTEM.INI file again and can cause conflicts with floppy disk access in Windows 95.

KBCategory: kbtshoot kbhw

KBSubcategory: wpp95 win95

Additional reference words: 95 clean boot

Microsoft Knowledge Base Information for Article Q124001

Last modified on 08-JUN-1995

Applies to Microsoft Windows 95

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After Upgrade from WFWG, Different Network Adapter Listed

PSS ID Number: Q124001

[?] Article Information

[?] **SYMPTOMS**

[?] **CAUSE**

[?] **MORE INFORMATION**

SYMPTOMS

After you upgrade a Windows for Workgroups 3.11 installation to Windows 95, the <u>network adapter</u> listed in Windows 95 is not the same adapter that was listed in the previous installation of Windows for Workgroups.

Example

After you upgrade a Windows for Workgroups 3.11 installation that lists an SMC Ethercard (all types except 8013/a) as the network adapter, Windows 95 lists the SMC Ethercard Plus 16 w/boot ROM Socket (WD/8013EBT) as the network adapter.

CAUSE

The SMC Ethercard (all types except 8013/a) <u>driver</u> that Windows for Workgroups uses is a generic entry that works with multiple network adapters. Windows 95 detects the exact network adapter model using the generic driver and displays that, instead of the generic driver name, as the network adapter.

MORE INFORMATION

Windows for Workgroups 3.11 has the ability to use generic drivers. However, when using a driver that supports multiple models, it displays the generic driver name instead of listing the exact card that is using the driver. Windows 95 has the ability to use generic drivers and display the exact adapter using the generic driver.

KBCategory: kbsetup kbenv kbnetwork

KBSubcategory: wpp95 win95

Additional reference words: 95 smc 8013/a nethw

Microsoft Knowledge Base Information for Article Q131084

Last modified on 27-JUN-1995

Applies to Microsoft Windows 95

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Corrupt Swap File Dual Booting Windows 3.1

PSS ID Number: Q131084

[?] Article Information

[?] **SYMPTOMS**

[?] **CAUSE**

[?] **RESOLUTION**

SYMPTOMS

When you start Windows or Windows for Workgroups versions 3.1 or 3.11 on a computer that has Windows 95 and dual boot installed, you may receive a warning about a corrupt swap file. This occurs only after you run Windows 95 and then boot the previous version of Windows.

CAUSE

Windows 95 makes changes to the swap file (386SPART.PAR) that are not recognized by the previous version of Windows.

RESOLUTION

To work around this problem, use any one of the following methods:

[?]   Delete the swap file and create a new one. To do so, follow these steps:

1. When you are prompted to delete the corrupt swap file, choose Yes.

2. After the previous version of Windows starts, double-click the 386 Enhanced icon in Control Panel.

3. Click the Virtual Memory button.

4. Click the Change button. Create a temporary swap file instead of a permanent one.

[?]   Install Windows 95 on a different drive than the previous version of Windows.

[?]   Set up a working permanent swap file in the previous version of Windows, and then add the following lines to the [386Enh] section of the Windows 95 SYSTEM.INI file

PagingFile=<Win31xPagingFile>

MinPagingFileSize=<SizeInK>

where <Win31xPagingFile> is the swap file (usually C:\386SPART.PAR) and <SizeInK> is the size of <Win31xPagingFile> divided by 1024.

KBCategory: kbusage kbsetup kbenv kberrmsg

KBSubcategory: wpp95 win95 win31 wfw wfwg winboot

Additional reference words: 95 swapfile

Microsoft Knowledge Base Information for Article Q131652

Last modified on 16-JUN-1995

Applies to Microsoft Windows 95

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How to Change the Setup Source Path in Windows 95

PSS ID Number: Q131652

[?] Article Information

[?]**SUMMARY**

[?]**MORE INFORMATION**

SUMMARY

This article describes how to change the path from which Windows 95 Setup obtains source files. If, for example, you originally installed Windows 95 from floppy disks, but later obtained a Windows 95 CD-ROM, you might want to change the Setup source path to retrieve files from the CD-ROM instead of from the floppy disks.

MORE INFORMATION

To change the Setup source path, follow these steps:

1. Click the Start button, click Run, type "poledit" (without quotation marks) in the Open box, then click OK to start System Policy Editor.

   NOTE: System Policy Editor is available in the ADMIN\APPTOOLS\POLEDIT directory on the Windows 95 CD-ROM. You must install System Policy Editor before you can use it.

2. On the File menu, click Open Registry, then double-click Local Computer.

3. Click the plus sign (+) next to System.

4. Click Network Path For Windows Setup, then type the new source path.

5. Save the changes to the registry, exit System Policy Editor, and then restart Windows 95.

NOTE: The information in this article assumes that you have the CD-ROM version of Windows 95. If you do not have the CD-ROM version of Windows 95, you can change the following registry key:

   HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Windows\CurrentVersion\Setup

For information about how to edit the registry view the Changing Keys And Values online Help topic in Registry Editor (REGEDIT.EXE). Note that you should make a backup copy of the registry files (SYSTEM.DAT and USER.DAT) before you edit the registry.

WARNING: Using Registry Editor incorrectly can cause serious problems that may require you to reinstall Windows 95. Microsoft cannot guarantee that problems resulting from the incorrect use of Registry Editor can be solved.

Use Registry Editor at your own risk.

KBCategory: kbsetup kbtool

KBSubcategory: wpp95 win95

Additional reference words: 95

Microsoft Knowledge Base Information for Article Q131663

Last modified on 16-JUN-1995

Applies to Microsoft Windows 95

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Setup Error Message: Error SU0358

PSS ID Number: Q131663

[?] Article Information

[?] **SYMPTOMS**

[?] **CAUSE**

[?] **RESOLUTION**

[?] **MORE INFORMATION**

SYMPTOMS

When you are installing Windows 95, you may receive the following error message:

> Error SU0358

Setup detected one or more MS-DOS-based programs running on your computer. Close your MS-DOS programs, and then click OK to continue. Or, click Cancel to quit Setup.

CAUSE

Setup cannot continue while an MS-DOS-based program is running. The MS-DOS-based program may be running in the background so that it is not visible when you press ALT+TAB or in the Close Program dialog box.

RESOLUTION

To work around this problem, use any one of the following methods:

[?]   Press ALT+TAB to cycle through the running programs and close the MS-DOS-based program.

[?]   Press CTRL+ALT+DEL to <u>open</u> the Close Program dialog box and close the MS-DOS-based program.

[?]   Cancel Setup. Remove the MS-DOS-based program from the Startup group or from the Load= or Run= line in the WIN.INI file and then restart Windows.

MORE INFORMATION

The WinPrinter driver by LaserMaster is an example of an MS-DOS-based program that runs in the background and is not visible when you press ALT+TAB or CTRL+ALT+DEL. To disable WinPrinter, remove the WinPrinter icons from the Startup group, then run Windows 95 Setup again.

The third-party products discussed in this article are manufactured by a vendor independent of Microsoft; we make no warranty, implied or otherwise, regarding these products' performance or reliability.

KBCategory: kbsetup kberrmsg

KBSubcategory: wpp95 win95

Additional reference words: 95 winjet winspool

Microsoft Knowledge Base Information for Article Q121244

Last modified on 31-JUL-1995

Applies to Microsoft Windows 95

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How to Change the Drive Letter of a CD-ROM Drive

PSS ID Number: Q121244

[?] Article Information

You can change the drive letter of a <u>CD-ROM</u> drive by performing the following steps:

1. Click the Start button, point to Settings, and then click Control Panel.

2. Double-click the System icon, then click the Device Manager tab.

3. <u>Select</u> the CD-ROM you want to change from the list, then click the Properties button.

4. Click the Settings tab.

5. In the Reserved Drive Letters section, set Start Drive Letter and End Drive Letter to the drive letter you want the CD-ROM to use. Click the OK button.

6. Click the Start button, click Shut Down, then click Restart The Computer.

The CD-ROM drive letter should now be the letter you selected.

KBCategory: kbusage kbmm kbui

KBSubcategory: wpp95 win95 winshell

Additional reference words: 95 cdrom

Microsoft Knowledge Base Information for Article Q126025

Last modified on 28-JUL-1995

Applies to Microsoft Windows 95

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Preventing Windows 95 from Playing Audio CDs Automatically

PSS ID Number: Q126025

[?] Article Information

[?] **SUMMARY**

[?] **MORE INFORMATION**

SUMMARY

Microsoft Windows 95 can play an audio CD automatically when you insert it into a CD-ROM drive. This article describes how to disable this feature.

MORE INFORMATION

To prevent Windows 95 from playing an audio CD automatically, use either of the following methods.

Method 1

The following steps describe how to prevent Windows 95 from playing all audio CDs automatically:

1. Double-click My Computer.

2. On the View menu, click Options.

3. Click the File Types tab, then double-click AudioCD in the Registered File Types box.

4. Click the Set Default button (the word "Play" will no longer appear in bold in the Actions box) and then click the Close button.

5. Click the Close button.

To allow Windows 95 to play audio CDs automatically, follow the above steps again. The word "Play" should appear in bold in step 4. If audio CDs still do not play automatically, follow these steps:

1. Click the Start button, point to Settings, and then click Control Panel.

2. Double-click the System icon.

3. Click the Device Manager tab, double-click CD-ROM, then double-click the installed CD-ROM device.

4. Click the Settings tab, then click the Auto Insert Notification check box so that the box is checked.

5. Click the Close button until you are prompted to restart your computer, then click the Yes button.

Method 2

To prevent Windows 95 from playing an audio CD automatically, press down and hold the SHIFT key as you insert the audio CD in the CD-ROM drive.

NOTE: If you are playing an audio CD with Windows 95 CD Player and insert a second audio CD in another CD-ROM, the first CD will stop playing. The CD Player will restart using the new audio CD. This will only occur if both CD-ROM units are using a Windows 95 protected mode driver and you have Auto Insert Notification enabled.

KBCategory: kbmm kbhw kbenv kbusage kbui

KBSubcategory: wpp95 win95

Additional reference words: 95 autoplay

Microsoft Knowledge Base Information for Article Q122050

Last modified on 08-JUN-1995

Applies to Microsoft Windows 95

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ICM Printers Supported in Windows 95

[?] Article Information

The following is a list of printers that support Image Color Matching (ICM) in Windows 95:

Canon BubbleJet BJC600

Canon BubbleJet BJC800

Epson Color Stylus

Hewlett-Packard DeskJet 500C

Hewlett-Packard DeskJet 550C

Hewlett-Packard DeskJet 560C

Hewlett-Packard DeskJet 1200C

Hewlett-Packard DeskJet 1200C PostScript

Hewlett-Packard PaintJet 300XL

Hewlett-Packard PaintJet 300XL PostScript

Kodak ColorEase

Tektronix Phaser 200I

IBM/Lexmark 4079 PS

QMS ColorScript 100 Model 30i

Tektronix Phaser III PXi

KBCategory: kbprint kbhw kb3rdparty   kbsetup

KBSubcategory: wpp95 win95

Additional reference words: 95 3rdparty hp bj bubble jet bubble-jet deskjet desk-jet paint jet paint-jet ps pscript

Microsoft Knowledge Base Information for Article Q122495

Last modified on 08-JUN-1995

Applies to Microsoft Windows 95

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How to Set Up an Extended Capabilities Port in Windows 95

PSS ID Number: Q122495
[?] Article Information
[?]**SUMMARY**
[?]**MORE INFORMATION**

SUMMARY

This article lists the steps necessary to enable extended capabilities port (ECP) support in Microsoft Windows 95.

MORE INFORMATION

1. Consult your hardware manual to determine the IRQ and DMA settings for the ECP port(s) you want to use. (This information is required to enable ECP support.)

2. Click the Start button, point to Settings, and then click Control Panel.

3. Double-click the System icon.

   NOTE: You can skip steps 2 and 3 if you click the My Computer icon on the desktop with the right (secondary) mouse button and then click Properties.

4. Click the Device Manager tab, then double-click Ports (COM & LPT).

5. Double-click the Extended Capabilities Port (ECP).

   NOTE: This port appears only if Windows 95 detected it.

6. Click the Resources tab, then click Basic Configuration 2 in the Setting Based On field.

   NOTE: See below for a description of the basic configuration settings for extended capabilities ports.

7. Change the IRQ and DMA values to whatever you have the ECP set to, and make sure that the "No devices are conflicting" message appears in the Conflicting Devices List.

   NOTE: If you have multiple ECP ports, you must repeat the above steps to configure the DMA and IRQ values of each port.

8. Click OK until you are prompted to shut down your computer.

9. Shut down your computer and then restart it.

An extended capabilities port has five possible configurations

(0 through 4):

[?]   Basic Configuration 0

   Standard I/O ranges for LPT ports only

[?]   Basic Configuration 1

   Standard I/O ranges for LPT ports and any IRQ setting

[?]   Basic Configuration 2

   Standard I/O ranges for LPT ports, any IRQ setting, and any DMA setting

[?]   Basic Configuration 3

   Any I/O ranges for LPT ports only

[?]   Basic Configuration 4

   Any I/O ranges for LPT ports and any IRQ setting

KBCategory: kbhw kbsetup kbprint kbusage kb3rdparty

KBSubcategory: wpp95 win95

Additional reference words: 95

Microsoft Knowledge Base Information for Article Q122515

Last modified on 08-JUN-1995

Applies to Microsoft Windows 95

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Notepad ErrMsg Points to Control Panel for Configuring Printer

PSS ID Number: Q122515

[?] Article Information

[?] **SYMPTOMS**

[?] **CAUSE**

[?] **RESOLUTION**

SYMPTOMS

When you print from NOTEPAD.EXE, you receive the following error message:

> Cannot print the <filename> file. Be sure that your printer is connected properly and use Control Panel to verify that the printer is configured properly.

CAUSE

This application message is a holdover from Windows 3.x, in which you opened the Printers area in Control Panel to adjust printer configurations.

RESOLUTION

To check your printer configuration in Windows 95, perform the following steps:

1. Click the Start button, point to Settings, and then click Printers.

2. Click the desired printer with the right (secondary) mouse button.

3. Click Properties.

Now you can adjust the configuration information for your printer.

KBCategory: kbusage kbtool kberrmsg kbprint kbui kbenv

KBSubcategory: wpp95 win95

Additional reference words: 95 notepad err msg

Microsoft Knowledge Base Information for Article Q122710

Last modified on 04-JUL-1995

Applies to Microsoft Windows 95

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Display Drivers Included with Windows 95 and Supported Modes

PSS ID Number: Q122710

[?] Article Information

[?] **SUMMARY**

[?] **MORE INFORMATION**

SUMMARY

This article provides information about the display drivers included with Windows 95 and the supported modes of those drivers.

Colors are described in bits per pixel (bpp), the following table lists the bpp-to-colors conversion:

1bpp	=	Monochrome
4bpp	=	16 colors
8bpp	=	256 colors
15bpp	=	32,768 (32K) colors
16bpp	=	65536 (64K) colors
24bpp	=	16.7 million colors
32bpp	=	4.2 billion (4GB) colors

Resolutions are described in horizontal number of pixels multiplied by (x) vertical number of pixels.

MORE INFORMATION

Standard Graphics Adapter (VGA)

Modes supported:

640x480	- Monochrome/16 colors

SuperVGA

Modes supported:

640x480	- colors:	16/256/64K/ 16.7M
800x600	- colors:	16/256/64K
1024x768	- colors:	256

ATI VGA Wonder

Modes supported:

640x480	- colors:	16/256/64K/ 16.7M

800x600	- colors:	16/256/64K
1024x768	- colors:	256

ATI Mach 8

Modes supported:

640x480	- colors:	16/256
800x600	- colors:	16/256
1024x768	- colors:	256

ATI Mach 32

Modes supported:

640x480	- colors:	16/256/64K/ 16.7M
800x600	- colors:	16/256/64K/ 16.7M
1024x768	- colors:	16/256/64K
1280x1024	- colors:	16/256/64K

ATI Mach 64

Modes supported:

640x480	- colors:	16/256/64K/ 16.7M/4G
800x600	- colors:	16/256/64K/ 16.7M/4G
1024x768	- colors:	16/256/64K/ 16.7M/4G
1280x1024	- colors:	16/256/64K

Chips & Technologies Super VGA

Modes supported:

640x480	- colors:	16/256
800x600	- colors:	16/256
1024x768	- colors:	256

Chips & Technologies Accelerator

Modes supported:

640x480	- colors:	16/256/64K/16.7M
800x600	- colors:	16/256/64K/16.7M
1024x768	- colors:	16/256/64K
1280x1024	- colors:	256

Cirrus Logic

Modes supported:

640x480	- colors:	16/256
800x600	- colors:	16/256
1024x768	- colors:	256

Cirrus Logic Laptop

Modes supported:

640x480	- colors:	16/256
800x600	- colors:	16/256
1024x768	- color	256

	s:	
1280x10 24	- colors:	256

Cirrus Logic 5429/5434

Modes supported:

640x480	- colors:	16/256/64K/ 16.7M
800x600	- colors:	16/256/64K/ 16.7M
1024x76 8	- colors:	256/64K/16.7M
1280x10 24	- colors:	256

Compaq Qvision

Modes supported:

640x480	- colors:	16/256/64K/ 4GM
800x600	- colors:	16/256/64K
1024x76 8	- colors:	256 64K
1280x10 24	- colors:	256

Compaq Advanced VGA (AVGA)

Modes supported:

640x480	- colors:	16/256
800x600	- colors:	16

Oak Technology

Modes supported:

640x480	- colors:	16/256

| 800x600 | - colors: | 16/256 |

| 1024x768 | - colors: | 256 |

S3 Inc. 911/924
Modes supported:

640x480	- colors:	16/256/64K
800x600	- colors:	16/256/64K
1024x768	- colors:	256

S3 Inc. 801/928/964
Modes supported:

640x480	- colors:	16/256/64K/ 16.7M
800x600	- colors:	16/256/64K/ 16.7M
1024x768	- colors:	16/256/64K/ 16.7M
1280x1024	- colors:	16/256/64K/ 16.7M
1600x1200	- colors:	256

Trident Microsystems
Modes supported:

640x480	- colors:	16/256
800x600	- colors:	16/256
1024x768	- colors:	256

Tseng Labs ET4000

Modes supported:

640x480	- colors:	16/256/64K/ 16.7M
800x600	- colors:	16/256/64K
1024x768	- colors:	256

Tseng Labs w32

Modes supported:

640x480	- colors:	16/256/64K/ 16.7M
800x600	- colors:	16/256/64K/ 16.7M
1024x768	- colors:	16/256
1280x1024	- colors:	256

Video Seven VRAM / VRAM II / 1024i

Modes supported:

640x480	- colors:	16/256
800x600	- colors:	16/256
1024x768	- colors:	256

Western Digital

Modes supported:

640x480	- colors:	16/256/64K/ 16.7M
800x600	- colors:	16/256/64K/ 16.7M
1024x768	- color	16/256

	s:	
1280x10 24	- colors:	256

XGA

Modes supported:

640x480	- colors:	16/256/64K
1024x76 8	- colors:	16/256

XGA/2

Modes supported:

640x480	- colors:	16/256/64K
800x600	- colors:	256
1024x76 8	- colors:	16/256

KBCategory: kbdisplay kb3rdparty kbusage kbenv kbref kbhw kbprint kbsetup

KBSubcategory: wpp95 win95 winshell

Additional reference words: 95 3rdparty

Microsoft Knowledge Base Information for Article Q122959

Last modified on 30-NOV-1994

Applies to Microsoft Windows 95

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Bus-Mastering SCSI Controller Problem with Etherlink 16/16TP

PSS ID Number: Q122959

[?] Article Information

[?] **SYMPTOMS**

[?] **CAUSE**

[?] **RESOLUTION**

[?] **MORE INFORMATION**

SYMPTOMS

When you are using a 3Com EtherLink 16 (3C507) or EtherLink l6 TP (3C507TP) network adapter, one or more of the following problems may occur:

[?] Windows for Workgroups stops responding (hangs) when you try to quit Windows.

[?] Your machine displays time-out errors or hangs during the LOGON process.

[?] Large file transfers to and from the servers result in data corruption.

CAUSE

The 3Com EtherLink 16 (3C507) and EtherLink l6 TP (3C507TP) adapters are incompatible with bus-mastering SCSI hard disk controllers in Intel EISA-based personal computers.

RESOLUTION

3Com has created a hardware upgrade to correct this problem. The upgrade requires replacing the programmable array logic (PAL) chip on the 3C507 adapter. This upgrade lengthens the amount of time the network adapter waits for a signal from the bus. Contact 3Com for information about obtaining this upgrade.

MORE INFORMATION

When a bus-mastering device takes over the PC bus, it may hold the bus for an indefinite period of time, causing the 3C507 to experience a time-out.

The 3C507 adapter relies heavily on the PC bus for timing information.

The 3C507 network interface card is manufactured by 3Com, a vendor independent of Microsoft; we make no warranty, implied or otherwise, regarding this product's performance or reliability.

KBCategory: kbnetwork kb3rdparty kbhw

KBSubcategory: wfw wfwg

Additional reference words: 3rdparty 3.11 fix netcard nic interface adaptec bustek scsi controller 1740 1742 2740 2742

Microsoft Knowledge Base Information for Article Q123097

Last modified on 08-JUN-1995

Applies to Microsoft Windows 95

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Shared Network Printer Driver Is Installed

PSS ID Number: Q123097

[?] Article Information

[?] **SYMPTOMS**

[?] **CAUSE**

[?] **WORKAROUND**

SYMPTOMS

In Windows 95, when you use Point and Print or the Add Printer Wizard to install a network printer, the printer driver that the network printer is using is installed. For example:

A Windows 95 computer is sharing a Hewlett-Packard LaserJet IIISi printer that is capable of printing PCL or PostScript. If this printer is installed on the server as a PostScript printer, the PostScript driver is installed across the network. If this printer is installed on the server as a PCL printer, the PCL driver is installed across the network.

CAUSE

Windows 95 is designed to install the printer driver that the server is using.

WORKAROUND

NOTE: These steps describe how to print using PostScript to a network printer that is using the PCL driver. These steps can also be used for a shared PostScript printer that you want to print to in PCL.

If you prefer to use the PostScript printer driver on a network printer that is being shared as PCL, use one of the methods below.

Method 1: If you haven't yet installed the printer, use the following steps:

1. Click the Start button, point to Settings, and then click Printers.
2. Double-click the Add Printer icon.
3. Follow the Add Printer Wizard instructions to install the PostScript printer of your choice as a local printer.
4. Click the PostScript printer icon with the right (secondary) mouse button, then click Properties.
5. Click the Details tab and type the network path in the Print to: box.
6. Click OK.

Method 2: If you have already installed the printer, use the following steps:

1. Click the Start button, point to Settings, and then click Printers.
2. Click the PCL printer icon with the right (secondary) mouse button, then click Properties.
3. Click the Details tab, click New beside the Driver option, then click Yes when you are asked to continue.
4. Click the manufacturer, then double-click the appropriate printer model. For example, to install the HP IIISi PostScript driver, click HP, then double-click HP LaserJet IIISi PostScript.
5. Click OK.

Method 3: Install the PostScript and PCL printer driver on the server computer with two different share names. For example:

Install the HP LaserJet IIISi printer and share it as \\<server>\IIISi.

Install the HP LaserJet IIISi PostScript printer and share it as \\<server>\IIISiPS. Everyone who attaches to this share to print now has a choice of PostScript or PCL.

KBCategory: kbprint kbsetup kbgraphic

KBSubcategory: wpp95 win95 msnets 3rdpartynet

Additional reference words: 95 laser jet

Microsoft Knowledge Base Information for Article Q124712

Last modified on 27-JUL-1995

Applies to Microsoft Windows 95

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NetWare Administrator Does Not Work with NWREDIR Loaded

PSS ID Number: Q124712

[?] Article Information

[?] **SYMPTOMS**

[?] **CAUSE**

[?] **RESOLUTION**

SYMPTOMS

The Novell NetWare Administrator program (NWADMIN.EXE) will not function on a computer running Microsoft Windows 95 configured with the Microsoft client for NetWare networks. When you try to run the NWADMIN.EXE program, an MS-DOS window opens and displays the following error message:

   This program must be run under Microsoft Windows.

CAUSE

The NetWare Administrator program does not work with NWREDIR (the Windows 95 protected-mode redirecter for NetWare) loaded. The NetWare Administrator program will work only with the VLM (the NetWare MS-DOS requester).

RESOLUTION

You must use the real-mode VLM instead of NWREDIR in order for the NetWare Administrator program to work. Contact Novell Technical Support if you need technical assistance to configure VLM.

KBCategory: kbsetup kbenv kbnetwork kberrmsg kb3rdparty

KBSubcategory: wpp95 win95 3rdpartynet

Additional reference words: 95 novell redirector shell err msg 3rdparty

Microsoft Knowledge Base Information for Article Q125445

Last modified on 06-JUL-1995

Applies to Microsoft Windows 95

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Wizards Do Not Appear in ALT+TAB Task List

PSS ID Number: Q125445

[?] Article Information

[?] **SYMPTOMS**

[?] **CAUSE**

[?] **RESOLUTION**

SYMPTOMS

If you press ALT+TAB to switch away from a <u>Wizard</u>, you cannot switch back to the Wizard by pressing ALT+TAB again. If you are not using a mouse or the mouse is not currently functioning, there does not appear to be any way to switch back to the Wizard.

CAUSE

Wizards do not appear in the task list that appears when you press ALT+TAB because they are not executable programs.

RESOLUTION

Use the ALT+ESC key combination to switch to the Wizard, or click the Wizard with the mouse.

KBCategory: kbsetup kbenv kbui

KBSubcategory: wpp95 win95

Additional reference words: 95

Microsoft Knowledge Base Information for Article Q126038

Last modified on 08-JUN-1995

Applies to Microsoft Windows 95

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Some Trantor SCSI Devices Not Found by Hardware Detection

[?] Article Information

[?] **SYMPTOMS**

[?] **MORE INFORMATION**

SYMPTOMS

The following devices are the only Trantor SCSI devices that are found and configured to use protected-mode drivers by the hardware detection in Windows 95:

 T130

 T130B

 T3x8

You must configure all other Trantor SCSI devices to use protected-mode drivers manually with the Add New Hardware Wizard.

MORE INFORMATION

Trantor SCSI devices are manufactured by Trantor, a vendor independent of Microsoft; we make no warranty, implied or otherwise, regarding these products' performance or reliability.

KBCategory: kb3rdparty kbsetup kbhw

KBSubcategory: wpp95 win95 kbhw winboot windrvr

Additional reference words: 95

Microsoft Knowledge Base Information for Article Q126355

Last modified on 04-JUL-1995

Applies to Microsoft Windows 95

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Intel EtherExpress Pro Detected as 82595-Based Ethernet

PSS ID Number: Q126355

[?] Article Information

[?] **SYMPTOMS**

[?] **CAUSE**

[?] **RESOLUTION**

SYMPTOMS

When you install an Intel EtherExpress Pro network interface card in your computer, Windows 95 detects the card as an Intel 82595-based Ethernet card.

CAUSE

Windows 95 cannot safely query the EPROM on the Intel EtherExpress Pro card while attempting to detect the network interface card that is installed because the EtherExpress Pro card may be in use. As a result, the detection routine cannot determine the card's Vendor ID and cannot identify the card beyond the fact that it is an 82595-based card.

RESOLUTION

Do not try to redetect the network interface card. Windows 95 uses the same drivers and configuration for EtherExpress Pro cards and 82595-based Ethernet cards. The only difference is the description of the card. None of the EtherExpress Pro card's functionality is lost.

KBCategory: kbnetwork kb3rdparty kbsetup kbhw

KBSubcategory: wpp95 win95

Additional reference words: 95

Microsoft Knowledge Base Information for Article Q128029

Last modified on 04-JUL-1995

Applies to Microsoft Windows 95

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Vector Fonts Not Available After Installing Plotter

PSS ID Number: Q128029

[?] Article Information

[?] **SYMPTOMS**

[?] **CAUSE**

[?] **RESOLUTION**

[?] **MORE INFORMATION**

SYMPTOMS

After you install a plotter driver that is included with Windows 95, one or more of the following fonts may not be available to use with that plotter:

[?]   Roman

[?]   Modern

[?]   Script

In addition, the font files are not listed as being available in the Add Fonts dialog box.

CAUSE

When you install a plotter driver, Windows 95 may not copy the necessary font files for these vector fonts to the hard disk.

RESOLUTION

To install these fonts manually, follow these steps:

1. Click the Start button, point to Programs, then click MS-DOS Prompt.

2. Insert the CD-ROM containing the Windows 95 .CAB files or the floppy disk containing the appropriate .CAB file.

3. Move to the Windowssubdirectory by typing

   cd\<windows>\fonts>

   where <windows> is the directory in which Windows 95 is installed.

4. Type the following command

   extract <drive>:win95_<n>.cab <fontname>.fon

   where <drive> is the drive containing the .CAB file, <n> is the number of the .CAB file containing the font, and <fontname> is the name of the font (Modern, Roman, or Script).

5. Repeat step 4, if necessary, to install other fonts that may be missing.

6. Click the Start button, point to Settings, then click Control Panel.

7. Double-click the Fonts folder.

8. On the File menu, click Install New Font.

9. Click the font you want to install and then click OK.

MORE INFORMATION

Some of these fonts may already be installed or be available to install from the hard disk, but not have been loaded when you installed the plotter driver. Windows 95 retains these fonts if you install Windows 95 over a previous version of Microsoft Windows that has these fonts installed.

KBCategory: kbprint kbdisplay kbsetup

KBSubcategory: wpp95 win95

Additional reference words: 95

Microsoft Knowledge Base Information for Article Q128034

Last modified on 04-JUL-1995

Applies to Microsoft Windows 95

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OEM Printer Driver May Be Overwritten by Windows 95 Setup

PSS ID Number: Q128034

[?] Article Information

[?]**SUMMARY**

[?]**MORE INFORMATION**

SUMMARY

If you install an OEM-supplied <u>printer driver</u> designed for Windows version 3.x and then later reinstall Windows 95, any configuration information for that driver may be lost.

MORE INFORMATION

When you install Windows 95, Setup automatically updates any <u>printer driver</u> for which there is a Windows 95 driver using a default configuration. If you need to use a driver designed for version 3.x, you will have to reinstall and reconfigure it after reinstalling Windows 95.

KBCategory: kbprint

KBSubcategory: wpp95 win95

Additional reference words: 95

Microsoft Knowledge Base Information for Article Q128345

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Applies to Microsoft Windows 95

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Troubleshooting Printing Problems in Windows 95

PSS ID Number: Q128345

[?] Article Information

[?] SUMMARY

[?] MORE INFORMATION

SUMMARY

This article describes troubleshooting steps that may help you solve printing problems in Microsoft Windows 95.

MORE INFORMATION

Printers.txt

Windows 95 includes a file called Printers.txt. This file is located in the Windows folder and contains information about known printing issues. This file may help you solve printing problems.

Print Troubleshooter

Windows 95 includes a Print Troubleshooter tool. Before you perform any troubleshooting steps, try the Print Troubleshooter tool. To use the Print Troubleshooter tool, follow these steps:

1. Click the Start button, then click Help.

2. On the Contents tab, double-click the Troubleshooting topic.

3. Double-click the If You Have Trouble Printing topic.

Note that the Windows 95 Resource Kit also includes a Print Troubleshooter tool. This tool is more detailed than the Print Troubleshooter in Windows 95.

Online Help

In addition to the Print Troubleshooter, there is extensive online help available in Windows 95. Click a printer option field with the right mouse button, then click "What's This?" on the menu that appears to see detailed information about that option.

Print from an MS-DOS Prompt

If you cannot print at all in Windows 95, try the following steps:

1. Verify that the printer is turned on and is online without any printer errors.

2. Perform a self-test on the printer. The method for performing a self-test is different for different printers. Check your printer's documentation for instructions.

   If the self-test fails, contact your printer manufacturer for assistance.

3. If possible, set up the printer on your local computer. Verify that no printer sharing devices or daisy-chained devices (such as SCSI CD-ROMs) are between the computer and printer.

4. Restart your computer. Press the F8 key when you see the "Starting Windows 95" message, then choose "Safe mode command prompt only."

   NOTE: Windows-based applications cannot print when you start Windows 95 in Safe Mode.

5. Type the following line and then press ENTER:

        copy c:\autoexec.bat lpt1

   For a PostScript printer, type

```
copy c:\<path>\testps.txt lpt1
```
where <path> is the location of the Windows\SYSTEM directory.

NOTE: If your printer is not connected to LPT1, substitute the correct port name in the lines above.

These commands copy a file to the printer. If the file is not printed, there may be a problem with the port, the cable, or the printer. You may want to try using a different printer cable or a different printer.

Print from Notepad and WordPad

1. With the printer still connected locally, restart your computer normally.

2. Click the Start button, point to Programs, point to Accessories, then click Notepad or WordPad.

3. Type some text in Notepad or WordPad and then try to print the text.

Device Manager Settings

1. If you cannot print from Notepad, verify that the port is set up correctly in Device Manager (for example, verify that there are no conflicts and that the port's resources are set correctly).

   NOTE: To open Device Manager, use the right mouse button to click My Computer and then click Properties on the menu that appears.

2. Click the Device Manager tab, double-click "Ports (COM & LPT)," then double-click the appropriate port for your printer [for example, "Printer Port (LPT1)"].

3. Click the Resources tab and verify that the settings are correct for your printer port. For example, the input/output range for a standard LPT1 port is 0378-037A (a physical LPT2 port typically uses I/O 278). Also verify that the conflicting devices list reads "No conflicts."

Remove and Reinstall the Printer Port

1. If a conflict exists or the port's settings are incorrect, use Device Manager to remove the printer port.

   NOTE: To open Device Manager, use the right mouse button to click My Computer and then click Properties on the menu that appears.

2. Click the Device Manager tab, double-click "Ports (COM & LPT)," then click the appropriate port for your printer [for example, "Printer Port (LPT1)"].

3. Click the Remove button and then restart your computer.

4. Click the Start button, point to Settings, then click Control Panel.

5. Double-click the Add New Hardware icon, and let Windows 95 detect the hardware in your computer.

Hard Disk Maintenance

There should be at least 3 megabytes (MB) of free space on the hard disk that contains your temporary directory.

Remove Temporary and Spool Files:

1. Restart your computer. Press the F8 key when you see the "Starting Windows 95" message, then choose "Safe mode command prompt only."

   NOTE: Windows-based applications cannot print when you start Windows 95 in Safe Mode.

2. Type "set" (without quotation marks) and press ENTER. Note the location of the TEMP variable.

3. Change to the directory noted in step 2. For example, if TEMP is set to c:\windows\temp, type the following line and then press ENTER:

   ```
   cd\windows\temp
   ```

4. Delete any temporary files in this directory. Temporary files typically have a .TMP extension. To delete these files, type the following line and then press ENTER:

      del *.tmp

   NOTE: You should not delete these files from within the Windows 95 graphical user interface (GUI) because Windows 95 or a Windows-based application may be using one of these files.

5. Type the following line and press ENTER to change to the spool directory:

      cd\windows\spool\printers

6. Delete any spool files in this directory. Spool files typically have a .SPL extension. To delete these files, type the following line and then press ENTER:

      del *.spl

ScanDisk and Disk Defragmenter:

If the hard disk becomes fragmented or there are cross-linked files on the hard disk, you can encounter printing problems. To check for these problems, follow these steps:

1. Restart your computer normally.

2. Click the Start button, point to Programs, point to Accessories, point to System Tools, then click ScanDisk.

3. When ScanDisk is finished, click the Start button, point to Programs, point to Accessories, point to System Tools, then click Disk Defragmenter.

You Can Print from a Command Prompt But Not Windows-Based Programs

If you can print from a command prompt but not from any Windows-based application, there may be a problem with the spool settings or with bidirectional communication.

1. Click the Start button, point to Settings, then click Printers.

2. Use the right mouse button to click the printer you are trying to print to and then click Properties on the menu that appears.

3. Click the Details tab, click the Spool Settings button, then click the Print Directly To The Printer option button.

4. If your printer supports bidirectional communication, click the "Disable bidirectional support for this printer" option button.

   NOTE: Bidirectional printing relies on the 1284 IEEE specification. If your printer cable does not conform to this specification and is not of reasonable length, bidirectional printing does not work in Windows 95.

5. Click the OK button.

6. Try to print from Notepad or WordPad.

7. If you can print from Notepad or WordPad, try different combinations of spool settings and bidirectional support until you find a combination that works. For example, try disabling bidirectional support with RAW and EMF spool data format settings. Also, try bidirectional support with the RAW spool data format.

   NOTE: RAW is the only spool data format supported for PostScript printers.

Printing Problems Occur Only in One Application

If you can print from Notepad, WordPad, and other applications, try the following steps:

1. What exactly is the printing problem? Does the application print graphics properly, or are you having problems with just one font?

2. Does the problem occur in one document only, or all documents within the application? As a test, try to print a blank page inside the application. If this prints, the application may have problems with memory or fonts.

3. Are you using a 32-bit or 16-bit application? 32-bit applications use the system registry to obtain needed information, while 16-bit applications may use .INI files. If you are having a printing problem with a 16-bit application, perhaps an .INI file needs to be modified to accommodate the application.

4. Reinstall the application.

5. Contact the manufacturer of the application for specific settings that might affect printing.

Windows 3.x Required Disabling Fast Printing Direct To Port

If you had to disable the Fast Printing Direct To Port option in Windows 3.1 or Windows for Workgroups 3.x, you should disable the Check Port State option in Windows 95. To do so, follow these steps:

1. Click the Start button, point to Settings, then click Printers.

2. Use the right mouse button to click the printer you want to use, then click Properties on the menu that appears.

3. Click the Details tab, click the Port Settings button, then click the Check Port Status check box to clear it.

The BIOS in some computers incorrectly reports that the printer port is busy or not available. By default, Windows 95 checks for these errors.   Clearing the Check Port State check box causes Windows 95 to ignore these messages.

Change the Printer Driver

If you have problems printing in Windows 95, try the Generic/Text Only printer driver. To do so, follow these steps:

1. Click the Start button, point to Settings, then click Printers.

2. Double-click the Add Printer icon and follow the instructions in the Add Printer Wizard to install the Generic/Text Only printer driver.

3. Try to print from your application with this driver.

Change the Printer's Emulation Mode:

Many printers have emulation modes that allow you to print with a different printer driver. Refer to the printer documentation or manufacturer about using emulation modes on your printer.

NOTE: Most printers require that you change a setting on the printer to use emulation modes.

1. Click the Start button, point to Settings, then click Printers.

2. Double-click the Add Printer icon and follow the instructions in the Add Printer Wizard to install the printer driver for the printer that your printer emulates.

NOTE: For PostScript printers, try installing the Apple LaserWriter driver (this is a PostScript driver that works with most PostScript printers).

Windows 3.1 Printer Driver:

Windows 95 supports over 800 printers directly and can also use Windows version 3.1 and 3.11 printer drivers. When you install Windows 95, if a Windows 95 printer driver is available for the printer you are using, that printer driver is installed. If there is no Windows 95 printer driver available for your printer, the Windows 3.x printer driver is left in place and should work with Windows 95.

NOTE: Windows 3.x printer drivers cannot take advantage of some of the printing enhancements in Windows 95.

A newer printer driver for Windows 95 may be available in the future from Microsoft or from your printer's manufacturer. Contact your printer's manufacturer for further details.

For additional information about using Windows 3.1 drivers in Windows 95, please see the following article in the Microsoft Knowledge Base:

    ARTICLE-ID: Q132946

    TITLE   : How to Install Windows 3.1 Drivers in Windows 95

NOTE: If the printing problems exist for more than one driver, the problem is most likely not driver-specific.

Remove and Reinstall the Printer Driver

If the printing problem seems to be corrected by using a different printer driver, follow these steps to remove and reinstall the printer driver:

1. Click the Start button, point to Settings, then click Printers.

2. Use the right mouse button to click the printer you want to remove, then click Delete on the menu that appears.

3. If you are prompted to remove all the files associated with the printer, click Yes.

4. Click the Start button, point to Settings, then click Printers.

5. Double-click the Add Printer icon and follow the instructions in the Add Printer Wizard to reinstall the Windows 95 printer driver.

Verify Printer Properties

Incorrect printer property settings can cause poor or incomplete output, or can cause your printer not to print at all. Follow these steps to check the printer property settings:

1. Click the Start button, point to Settings, then click Printers.

2. Use the right mouse button to click the printer you want to check, then click Properties on the menu that appears.

3. Verify that the printer properties (such as printer memory and paper size) are correct.

   NOTE: For PostScript printers, you must copy the TESTPS.TXT file to the printer port to determine the appropriate available printer memory setting for the Device Options tab. The TESTPS.TXT file lists a "Max Suggested VM (KB)" value for the printer. Use this value on the Device Options tab. See the "Print from an MS-DOS Prompt" section of this article for information about how to print the TESTPS.TXT file on PostScript printers.

Network Printing Problems

If you have problems printing to a network printer, try these steps:

1. Print to a local printer.

2. Print to a file, then copy the file to the print server. To try this, follow these steps:

   a. Click the Start button, point to Settings, then click Printers.

   b. Use the right mouse button to click the printer you want to use, then click Properties on the menu that appears.

   c. Click the Details tab, then click File in the Print To The Following Port box.

   d. Print a document from any application. When you are prompted, enter a filename for the print job.

   e. Click the Start button, point to Programs, then click MS-DOS Prompt.

   f. At the MS-DOS prompt, type the following line and then press ENTER

        copy <path><filename> <printer port>

   where <path> is the location of the file you created in step D, <filename> is the name of the file you created in step D, and <printer port> is the port the printer is attached to. For example, if you created a file named PRNTEST in the root directory of drive C and the printer is attached to LPT1, type the following line:

        copy c:\prnttest lpt1

3. Capture a printer port for the network printer rather than using a universal naming convention (UNC) connection. To do so, follow these steps:

   a. Click the Start button, point to Settings, then click Printers.

b. Use the right mouse button to click the printer you want to use, then click Properties on the menu that appears.

c. Click the Details tab, then click the Capture Printer Port button.

d. Click the port you want to capture (such as LPT2) and the path to the network printer (such as \\ServerName\PrinterShare).

NOTE: If you want this connection to be available each time you start Windows 95, click the Reconnect At Logon check box to select it.

4. Try to print the document from another computer on the network.

5. If you still cannot print to the network printer, perform standard network troubleshooting steps, such as:

[?]   Try to browse the print server.

[?]   Remove and reinstall your network protocols.

Printing Speed

Printing speed in Windows 95 is measured in one of two ways:

[?]   Return to application (RTA) speed. This is defined as the length of time from when you click Print to when you regain control of the system.

[?]   Printer page drop speed. This is defined as the length of time from when you click print to when the print job is complete.

You can affect each of these times by changing spool settings. To change spool settings, follow these steps:

1. Click the Start button, point to Settings, then click Printers.

2. Use the right mouse button to click the printer you want to use, then click Properties on the menu that appears.

3. Click the Details tab, then click the Spool Settings button.

   For faster RTA speed:

   a. Click "Start printing after first page is spooled."

   b. In most cases, choose EMF as the spool data format.

   NOTE: PostScript printers support only the RAW spool data format.

   For faster printer page drop speed:

   a. Click the Print Directly To The Printer option button.

       -or-

   b. Click "Start printing after last page is spooled." (Note that this is how the Windows 3.1 spooler works.) In some cases, this option prevents laser printer engines from turning on and off during a print job.

Try LPT1.DOS

If you have problems printing to a local printer, try the LPT1.DOS port. This method is similar to printing to a file and then copying the file to the printer port. To enable the LPT1.DOS port, follow these steps:

1. Click the Start button, point to Settings, then click Printers.

2. Use the right mouse button to click the printer you want to use, then click Properties on the menu that appears.

3. On the Details tab, click Add Port.

4. In the Add Port dialog box, click Other, click Local Port, click OK, then type "LPT1.DOS" (without quotation marks) in the Enter A Port Name box. Click OK.

NOTE: Printing to the LPT1.DOS port may be slower than printing to the LPT1port.

Additional Information

Try the following steps to enable the Print TrueType As Graphics option:

1. Click the Start button, point to Settings, then click Printers.

2. Use the right mouse button to click the printer you want to use, then click Properties on the menu that appears.

3. Click the Fonts tab, then click the Print TrueType As Graphics option.

Try these steps to lower the printer's resolution:

1. Click the Start button, point to Settings, then click Printers.

2. Use the right mouse button to click the printer you want to use, then click Properties on the menu that appears.

3. Click the Graphics tab, then click a lower resolution or dots per inch (DPI) for your printer.

Simplify the Document:

If you cannot print a complex document, try removing some of the graphic elements in the document, or convert all the fonts in the document to a printer-resident font such as Courier.

If a specific graphic object in a document is printed poorly, make sure the graphic object is compatible with the printer. For example, an Encapsulated PostScript (EPS) graphic object is intended for use on PostScript printers only. On a non-PostScript printer, such a graphic object will be printed poorly in an otherwise satisfactory printout.

Reset the Printer:

Try turning off the printer. After 5 to 10 seconds, turn the printer back on. Many printing problems are the result of a printer's memory being full of downloaded fonts.

Hewlett-Packard LaserJet 4:

If you print to a Hewlett-Packard LaserJet 4, change the graphics mode from Vector to Raster. This takes less memory, and is especially useful if you receive an "Error 21" error message on the printer.

Extra Page Printed with Each Print Job:

For information about this issue, please see the following article in the Microsoft Knowledge Base:

    ARTICLE-ID: Q132425

    TITLE   : Extra Page Printed with Each Print Job

KBCategory: kbprint kbtshoot

KBSubcategory: wpp95 win95

Additional reference words: 95

Microsoft Knowledge Base Information for Article Q130153

Last modified on 08-JUN-1995

Applies to Microsoft Windows 95

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No Printout with Adobe PostScript Printer Driver 2.1.1

PSS ID Number: Q130153

[?] Article Information

[?] **SYMPTOMS**

[?] **CAUSE**

[?] **RESOLUTION**

SYMPTOMS

When you try to print to a PostScript printer on the network, either of the following problems may occur:

[?]   Nothing is printed.

[?]   You receive a general protection (GP) fault error message similar to the following error message:

     SPOOL32 caused a general protection fault in module ADOBEPS.DRV

CAUSE

These problems can occur if you are using the Adobe PostScript <u>printer driver</u> version 2.1.1. This printer driver cannot print over a network.

The Adobe PostScript <u>printer driver</u> version 2.1.1 appends a colon (:) to the end of the network path before it calls OpenJob(). The colon causes the network path to the print spooler to be invalid.

RESOLUTION

To resolve this problem, use either of the following methods:

[?]   Update to a Windows 95 PostScript printer driver.

[?]   Print to a file, then copy the file to the network printer port. For information about how to do so, please see the following article in the Microsoft Knowledge Base:

     ARTICLE-ID: Q128345

     TITLE: Troubleshooting Printing Problems in Windows 95

     (Click here [?] to jump to the article)

KBCategory: kbprint kbnetwork kberrmsg

KBSubcategory: wpp95 win95 gpf

Additional reference words: 95

Microsoft Knowledge Base Information for Article Q122051

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How Windows 95 Performs a Safe Mode Start

PSS ID Number: Q122051

[?] Article Information

[?]**SUMMARY**

[?]**MORE INFORMATION**

SUMMARY

This article discusses how Windows 95 boots in Safe Mode. A Safe Mode boot can be invoked in the following ways:

[?]   By pressing F5 at the "Starting Windows" message.

[?]   By choosing "Start Windows, bypassing startup files" from the Windows 95 Startup menu.

[?]   Automatically, if Windows did not start on the previous attempt.

MORE INFORMATION

How Windows 95 boots in Safe Mode:

1. Windows 95 bypasses the Registry and the AUTOEXEC.BAT and CONFIG.SYS files.

2. HIMEM.SYS is loaded.

3. IFSHLP.SYS is loaded.

4. Windows 95 obtains path information from the MSDOS.SYS file.

5. If Windows 95 files are found, the command Win /D:m (which enables a Safe Mode boot) is executed and COMMAND.COM is skipped. If Windows 95 files are not found, COMMAND.COM is executed.

6. When Win /D:m is executed, Windows 95 looks for a SYSTEM.CB file in the Windows directory. If this file is not present, a clean SYSTEM.CB is loaded from memory.

   A clean SYSTEM.CB file loads the following virtual device drivers (VxDs):

   mouse=*vmouse

   device=*configmg

   device=*vwin32

   device=*vfbackup

   device=*vshare

   device=*vcomm

   device=*ifsmgr

   device=*ios

   device=*vfat

   device=*vcache

   device=*vcond

   device=*int13

   device=*vxdldr

   device=*vdef

   device=*dynapage

   device=*reboot

   device=*vsd

device=*parity

device=*biosxlat

device=*vmcpd

device=*vkd

device=*vdd

device=*ebios

device=*vtdapi

device=*vmpoll

woafont=dosapp.fon

7. After these VxDs are loaded, and just before WIN.COM loads the shell, the SYSTEM.CB file is discarded and the original SYSTEM.INI file is restored.

8. Windows 95 now uses the original Registry settings and SYSTEM.INI and WIN.INI files. This effectively bypasses the [Boot] and [386Enh] sections of the SYSTEM.INI file.

9. The shell resizes the <u>desktop</u> to a resolution of 640 x 480.

KBCategory: kbenv kbui

KBSubcategory: wpp95 win95 winboot diskmem

Additional reference words: 95 failsafe clean boot start up

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Last modified on 08-JUN-1995

Applies to Microsoft Windows 95

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How to Print Device Manager Contents to a Text File

PSS ID Number: Q127156

[?] Article Information
[?]**SYMPTOMS**
[?]**CAUSE**
[?]**RESOLUTION**
[?]**MORE INFORMATION**

SYMPTOMS

When you print the contents of Device Manager to a file, the file does not contain readable information.

CAUSE

By default, Windows 95 does not support printing Device Manager information to a text file. When Windows 95 prints Device Manager information to a file, it uses printer-specific language instead of plain text.

RESOLUTION

To print Device Manager information to a readable text file, install and use the Generic/Text Only printer. To install the Generic/Text Only printer, follow these steps:

1. Click the Start button, point to Settings, and then click Printers.

2. Double-click the Add Printer icon.

3. Click the Next button.

4. When you are prompted "How is this printer attached to your computer?" click the Local Printer option button, and then click Next.

5. In the Manufacturers box, click Generic. In the Printers box, click Generic/Text Only, and then click Next.

6. In the Available Ports box, click FILE, and then click Next.

7. When you are prompted "Do you want your Windows-based programs to use this printer as the default printer?" click the No option button, and then click Next.

8. When you are prompted "Would you like to print a test page?" click the No option button, and then click the Finish button.

MORE INFORMATION

To print the contents of Device Manager to a file, follow these steps:

1. Use the right mouse button to click My Computer, and then click Properties on the menu that appears.

2. Click the Device Manager tab, then click the Print button.

3. In the Report Type box, click the option button for the report you want.

   NOTE: To print the Selected Class Or Device report, you must first click the class or device you want on the Device Manager Tab.

4. Click the Setup button.

5. In the Specific Printer box, click Generic/Text Only On FILE, and then click the OK button.

6. Click OK.

7. In the File Name box, type the path and name that you want to use for the file, and then click OK.

KBCategory: kbui kbhw kbprint

KBSubcategory: wpp95 win95

Additional reference words: 95 howto wwt

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PCMCIA Socket Not Detected on IBM ThinkPad 720C

PSS ID Number: Q128900

[?] Article Information

[?]**SYMPTOMS**

[?]**CAUSE**

[?]**RESOLUTION**

[?]**MORE INFORMATION**

SYMPTOMS

The detection routine in Windows 95 Setup does not detect the PCMCIA socket in your IBM ThinkPad 720C. The PCMCIA socket is also not detected when you run the Add New Hardware Wizard from Control Panel. As a result, protected- mode socket services are not provided.

CAUSE

The IBM ThinkPad 720C PCMCIA socket uses the Stinger chip set. The Stinger chip set is not a supported PCMCIA socket chip set for Windows 95 protected-mode socket services.

RESOLUTION

To use the PCMCIA socket on your IBM ThinkPad 720C, install the real-mode socket drivers using the manufacturer's instructions.

MORE INFORMATION

To use protected-mode network interface card (NIC) drivers with a PCMCIA NIC, the PCMCIA socket must be supported for protected-mode socket services. Therefore, you cannot use protected-mode NIC drivers when you are using a PCMCIA NIC in the IBM ThinkPad 720C.

KBCategory: kbsetup kbhw kb3rdparty

KBSubcategory: wpp95 win95 diskmem

Additional reference words: 95

Microsoft Knowledge Base Information for Article Q128932

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Applies to Microsoft Windows 95

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How Windows 95 Resolves Shortcut Links

PSS ID Number: Q128932

[?] Article Information

[?]**SUMMARY**

[?]**MORE INFORMATION**

SUMMARY

A shortcut is a link to a Windows Explorer shell object that is used to access that shell object without creating an actual copy of the object. You can create shortcuts for any items that you use often, including files, folders, disk drives, other computers, or printers.

If you create a shortcut to an object and the name or location of that object then changes, Windows 95 automatically attempts to update, or resolve, the shortcut the next time you try to use it. The process of resolving a shortcut works for shortcuts that reference an object on your local computer, as well as for shortcuts that reference an object on another computer on the network, although resolution of a network shortcut may be restricted by the access rights that you have on the remote computer.

This article describes the process that Windows 95 uses to resolve local and network shortcuts.

MORE INFORMATION

Local Shortcuts

Windows 95 uses the following process to resolve local shortcuts:

1. Windows 95 looks for the object in the static location specified in the   shortcut. This location, along with all the other properties for that   shortcut, are stored in a corresponding .LNK file and can be viewed by using the right mouse button to click the shortcut and then clicking Properties on the menu that appears.

   The static location is specified using the standard drive and directory path naming convention. For example,

      c:\windows\filename.ext

2. If the object is not found in the static location, Windows 95 looks in the same target directory for an object that has the same creation time and attributes as the original object, but a different name. This logic allows Windows 95 to find the object if it is in the same location as it was originally, but has been renamed.

3. Windows 95 then searches the subdirectories of the original target directory for an object with the same name or creation time as the original object. If no such object is found, Windows 95 proceeds with a recursive search of the original target drive for an object that meets one of these criteria. If a matching object is found, a dialog box is displayed, allowing you to verify that the found object is in fact the correct object.

   NOTE: Only the original target drive is searched. For example, if the shortcut originally referenced an object on local drive C, only drive C is searched for an object with the same name or creation time as the original object. No other local drives are searched.

4. Finally, if Windows 95 is unable to find the object using the methods described above, a dialog box is displayed in which you must enter the correct location and name of the object.

Network Shortcuts

If you attempt to open a shortcut that references an object on another computer on the network, and that object cannot be found at the static location specified in the shortcut, Windows 95 attempts to resolve that shortcut using a process similar to that described above. However, the following additional considerations should be taken into account when Windows 95 attempts to resolve a network shortcut:

[?]   For network shortcuts, the static location may be specified using a Universal Naming Convention (UNC) name, rather than the standard drive and directory path naming convention. For example, the location might look like \\REMOTE_COMPUTER\WINDOWS\FILENAME.EXT

 Windows 95 searches the subdirectories of the original target directory only if you have access to those subdirectories. If the target computer uses share-level security, you have access to all the subdirectories of the target directory, assuming that you have access to the target directory itself. If the target computer uses user-level security, you may not have access to subdirectories of the target directory.

 When it is performing a recursive search of the original target drive, Windows 95 starts from the original target directory and moves up the directory tree to the highest parent directory that it has access to. This parent directory essentially becomes the root directory of the recursive search, as Windows 95 searches all directories of this directory that you have access to.

KBCategory: kbui kbenv kbnetwork

KBSubcategory: wpp95 win95

Additional reference words: 95

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How to Change Existing File Type Associations to New Programs

PSS ID Number: Q129050

[?] Article Information

[?]**SYMPTOMS**

[?]**CAUSE**

[?]**RESOLUTION**

SYMPTOMS

When you try to add a file type to the Registered File Types list, you receive the following error message, even if you cannot find the file extension in the list:

The extension '.<EXT>' is already in use by file type '<Name>'. Choose another extension.

CAUSE

Multiple file types can be registered to one application. In this case, the file type does not appear in the Registered File Types list, but instead appears in the details for another registered file type.

For example, the registered file type Microsoft Word 6.0 Document can contain .RTF, .DOC, and .DOT extensions. Even though these file types do not appear in the Registered File Types list, they are registered to Microsoft Word 6.0.

RESOLUTION

To change the association of a file type that does not appear in the Registered File Types list, follow these steps:

1. In My Computer or Windows Explorer, press and hold down the SHIFT key while you click a file of the appropriate type with the right mouse button.

2. On the menu that appears, click Open With.

3. If you are prompted to, enter a description for the file type. In the "Choose the program you want to use" box, click the program you want to use for this file type.

4. If the "Always use this program to open this file" check box is not selected, click the check box to select it.

5. Click the OK button.

KBCategory: kbui kbenv kberrmsg

KBSubcategory: wpp95 win95 winshell

Additional reference words: 95

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Settings for the 16550 UART FIFO Buffer

PSS ID Number: Q131016
[?] Article Information
[?]SUMMARY
[?]MORE INFORMATION

SUMMARY

This article describes the FIFO settings for a 16550 UART chip and how to change them.

MORE INFORMATION

Windows 95 provides two methods for accessing the 16550 UART FIFO buffer settings. Each method is a global setting and can affect PCMCIA, internal, and external modems. Use one of the following methods to access the Advanced Port Settings dialog box:

Method 1

1. Click the Start button, point to Settings, then click Control Panel.

2. Double-click Modems.

3. On the General tab, click Properties.

4. On the Connection tab, click Port Settings.

   NOTE: This setting can be changed from any modem properties dialog box.   If you change this setting in one connectoid, it affects all connectoids.

Method 2

1. Click the Start button, point to Settings, then click Control Panel.

2. Double-click System.

3. On the Device Manager tab, double-click Ports (COM & LPT).

4. Double-click the communications port (COMx) you want to change.

5. On the Port Settings tab, click Advanced.

   In the Advanced Port Settings dialog box you can:
   [?]   Enable/disable the FIFO buffer for the 16550 chip.

      NOTE: The COMxFIFO setting that can be manually added to the [386Enh] section of the SYSTEM.INI file does not affect Windows-based programs in Windows 95. This setting only affects MS-DOS-based programs.
   [?]   Increase/decrease the Receive buffer.
   [?]   Increase/decrease the Transmit buffer.

Enable/Disable the FIFO Buffer

To disable the FIFO buffer for a 16550 UART chip, click the "Use FIFO buffers (requires 16550 compatible UART)" check box to clear it.

Receive Buffer

The Receive Buffer slider supports the values 1 (low), 4, 8, and 14 (high).

The default value of 8 should be sufficient in most cases. If you decrease this value, more interrupts are sent to

the processor, slowing bytes into the UART. If you increase this value from 8 to 14, characters may overrun the FIFO buffer.

Transmit Buffer

The Transmit Buffer slider supports the values 1 (low), 6, 11, and 16 (high).

If you experience problems uploading files, decrease the default value of 16. If you decrease the buffer from 16, more interrupts are sent to the processor, slowing down the rate at which bytes are sent into the UART Transmit buffer, reducing serial overruns. The higher the number, the fewer interrupts are sent, increasing system performance during uploads.

KBCategory: kbui kbenv

KBSubcategory: wpp95 win95 wincomm msnetwork

Additional reference words: 95

Network Browsing Basics

Network Neighborhood is the central point for browsing in Windows 95. It offers the following benefits:

[?]   Users can browse the network as easily as browsing the local hard disk.

[?]   Users can create shortcuts to network resources on the desktop.

[?]   Users can easily connect to network resources by clicking the Map Network Drive button that appears on most toolbars.

[?]   Users can open files and complete other actions by using new common dialog boxes in applications. This new standard provides a consistent way to open or save files on both network and local drives.

[?]   The network administrator can customize Network Neighborhood by using system policies. A custom Network Neighborhood can include shortcuts to commonly used resources, including Dial-Up Networking resources.

You can plan ahead to set up workgroups for effective browsing by using the WRKGRP.INI file to control the workgroups that people can choose.

Note

[?]   If your enterprise network based on Microsoft Networking is connected by a slow-link wide area network (WAN) and includes satellite offices with only Windows 95, then workstations in the satellite cannot browse the central corporate network. Consequently. they can only connect to computers outside of their workgroups by typing the computer name in a Map Network Connection dialog box. To provide full browsing capabilities, the satellite office must have a Windows NT server.

Browsing Overview

Browsing in Windows 95 is the same for all network providers, whether the network is based on Windows NT Server, Novell(r) NetWare, another network, or Windows 95 itself.

Users can browse network resources to connect to them. For example, users on NetWare networks can see NetWare servers and printers, plus computers running File and Printer Sharing for NetWare Networks.

Users on Microsoft networks can find network resources by scrolling through a list of available workgroups, a list of available computers in a workgroup, or a list of available resources on a given computer.

See the following topics for more information:

Using Network Neighborhood

Browsing in common dialog boxes

Browsing with the Net View command

Using Network Neighborhood

The Network Neighborhood icon on the desktop is the primary means by which you browse the network. In both Network Neighborhood and Entire Network views, you can access shared resources on a server without having to map a network drive. To connect to and browse the resource, simply double-click an icon.

To create a shortcut on the desktop to a network resource

1 In Network Neighborhood, find the network resource for which you want to create a shortcut.

2 Using the right mouse button, drag the icon for that resource onto the desktop.

3 In the context menu, click Create Shortcut Here.

4 Double-click the shortcut icon to view the contents of the network directory in a new window. This shortcut is available every time you start Windows 95.

The administrator can use system policies to create a custom Network Neighborhood for individuals or multiple users. Other system policies can be set to control users' access to browsing.

To create a custom Network Neighborhood

1 Create a folder that will contain the custom Network Neighborhood. Place it in a central location if multiple users will access it, or place it in the following location on a local computer:

c:\windows\profiles\username\nethood

2 Place any shortcuts that you want in the custom Network Neighborhood. Make sure that the path specified in the Target box on the Shortcut Properties dialog box is a UNC name rather than a mapped directory. Otherwise, users who access resources using these shortcuts must have the same drives mapped in their logon scripts.

Caution: Do not place folders in the custom Network Neighborhood. Windows 95 does not support this, and unpredictable results can occur.

3 In System Policy Editor, enable the policy named Custom Network Neighborhood.

[?]   You can use Registry mode to enable this option on a local or a remote computer.

[?]   You can use Policy mode to create or modify a policy file for one or more users. The next time you log on, the Custom Network Neighborhood will appear on the desktop.

Browsing in Common Dialog Boxes

The new common dialog boxes (such as File Open and File Save) are standard in applications that use the Windows 95 user interface. They provide a consistent way to open or save files on network resources and local drives. Also, users can browse Network Neighborhood directly from the common dialog boxes and can perform most basic file-management tasks while working in a common dialog box.

Note

     Windows-based applications created for earlier versions of Windows do not use the new common dialog boxes.

In Windows 95, you can create new directories (also called folders) when you are saving a document (unlike Windows 3.1, in which you had to start File Manager or exit to the MS-DOS command prompt). This means that you can also create a new directory on a shared network resource when saving documents, as shown in the following procedure. This procedure can be used in any application that uses the Window 95 common dialog boxes.

To create a new folder from within a common dialog box (an example)

1 Click the Start button, point to Programs, point to Accessories, and then click Paint.

2 On the File menu, click Open, and then click the Look In list.

3 Click a network resource in Network Neighborhood.

4 Click the Create New Folder button. The button is represented by a small yellow folder icon. Move the pointer over the folder to receive a ToolTip.

   Notice that the new folder is created on the network resource.

Browsing with the Net View Command

Browsing network resources at the command prompt is handled by the real-mode networking components. You can use the **net view** command to request a list of computers in a given workgroup. The **net view** command requests a list of computers directly from the master browse server.

[?]   To display a list of computers with shared resources in a workgroup, at the command prompt, type **net view** and then press ENTER.

Net View Syntax

net view [\\\\computername]

or

net view [/workgroup:workgroupname]

Net View Parameters

computername

     Specifies the name of the computer that has shared resources you want to view.

workgroup

     Specifies that you want to view the computers that share resources in another workgroup.

workgroupname

     Specifies the workgroup that has computer names you want to view.

Browsing on Microsoft Networks

The Windows 95 browsing scheme for Microsoft Networks is based on the scheme currently used for Windows NT and Windows for Workgroups. The Windows 95 browse service attempts to minimize the network traffic related to browsing while supporting both small and large networks. This topic describes how the browse service designates browse servers and maintains the browse list.

Designating a Master Browse Server for Microsoft Networks

The Windows 95 browse service uses the concept of a master browse server and a backup browse server to maintain the browse list. There is only one master browse server per workgroup for each protocol used in the workgroup; however, there may be one or more backup browse servers for each protocol for a given workgroup.

The master browse server maintains the master list of workgroups, domains, and computers in a given workgroup. To minimize the network traffic when handling browsing services, backup browse servers can be designated in a workgroup to help off-load some query requests. Usually there is one browse server for every 15 computers in a given workgroup.

When Windows 95 is started, it first checks to see if a master browse server is already present for the given workgroup. If a master browse server does not exist, Windows determines which server will be the master browse server for the workgroup.

If a master browse server already exists, Windows 95 detects the number of computers in the workgroup and the number of browse servers present. If the number of computers in the workgroup exceeds the defined ratio of browse servers to computers in a workgroup, an additional computer in the workgroup may become a backup browse server.

The Browse Master parameter in the Advanced properties for File and Printer Sharing for Microsoft Networks controls which computers can become browse servers in a workgroup. If this parameter is set to Automatic, the master browse server can designate that computer as a backup browse server when needed.

Tip for Using the Net View Command to Check the Browse Server

The **net view** command is a valuable troubleshooting tool if you suspect the browse list maintained by a backup browse server is incomplete or inaccurate. You can use the **net view** command to get the list of known computers directly from the master browse server.

If the list of computers returned by a master browse server is inaccurate, you can quit Windows to reset the computer. Another computer will then become the designated master browse server for the workgroup.

Building the Browse List for Microsoft Networks

In Windows 95, the browse service maintains an up-to-date list of domains, workgroups, and computers, and provides this list to applications when requested. The user sees the list in the following types of circumstances:

⍰   If a Windows 95 user requests a list of computers in a workgroup, the browse service on the local computer randomly chooses a browse <u>server</u> and sends the request.

⍰   If a user selects a workgroup to which the computer does not belong, Windows 95 requests a list of the workgroup computers from a browse server in the selected workgroup.

      The selected browse server also sends a list of other workgroups it knows about, which are defined on the network, along with a list of computers in the workgroup to which the user belongs.

      The browse list is displayed in Map Network Drive and Connect Network Printer dialog boxes, or anywhere that Windows 95 presents lists of resources that can be browsed. You can also display the browse list by using the **net view** command. The list can contain the names of domains, workgroups, and computers running the File and Printer Sharing service, including the following:

⍰   Computers running Windows 95, Windows for Workgroups, and Windows NT Workstation

⍰   Windows NT Server domains and servers

⍰   Workgroups defined in Windows 95, Windows for Workgroups, and Windows NT

⍰   Workgroup Add-On for MS-DOS peer servers

⍰   LAN Manager 2.x domains and servers

Adding New Computers to the Browse List

When a computer running Windows 95 is started on the network, the master browse server adds that computer to the list of available computers in the workgroup. The master browse server then notifies <u>backup</u> browse servers of the change to the browse list. The backup browse servers then request the new information to update their local browse lists. It may take as long as 15 minutes before a backup browse server receives an updated browse list, so a new computer on the network may not appear in a user's request for a browse list until this time has elapsed.

Removing Computers from the Browse List

When a user shuts down a computer properly (for example, when a user shuts down Windows 95 before powering off the computer or restarting the computer), Windows tells the master browse server that the computer is shutting down. The master browse server then notifies backup browse servers of the change to the browse list. The backup browse servers request the changes to the browse list.

If a user turns off the computer without shutting down Windows first, the computer does not send a message to the master browse server, and the computer name may continue to appear in the browse list until the name entry times out, which can take up to 45 minutes.

Customizing Windows 95 with WRKGRP.INI Files

Windows 95 Setup recognizes an initialization file named WRKGRP.INI that system administrators can use to specify a list of valid workgroups that users can join. You can use WRKGRP.INI in these ways:

 To help reduce the proliferation of workgroup names at your site

 To control the workgroup choices that users can make

 To specify defaults for the preferred server and domain on a per-workgroup basis

The WRKGRP.INI file is stored in the Windows directory on the server that contains the Windows 95 source files.

Windows 95 Setup maps the workgroup to the proper logon domain, preferred server, and other values to values defined in WRKGRP.INI, and stores these values in the registry. The same values are used to control the related options available in the Network properties in Control Panel. The WRKGRP.INI file contains the following sections.

Section	Description
[Options]	Specifies the recognized options for using WRKGRP.INI.
[Workgroups]	Contains a list of workgroups from which the user can choose.

For each workgroup, administrators can specify the domain, preferred server, and so on, that everyone in a workgroup will use, depending on the network providers used. The entry that defines the network providers for each workgroup has the following format in the [Workgroups] section:

    workgroup_name=mapping1,mapping2,mapping3,...

By default, workgroups can be mapped to both Windows NT domains and NetWare preferred servers. (This is because Windows 95 includes network providers for these two networks.) For example:

    MktMain=MktDom1,master1

This example specifies that the workgroup named MktMain has these two mappings: MktDom1 is the logon domain for the Windows NT network, and Master1 is the preferred server for the NetWare network.

Administrators can specify the 32-bit, protected-mode network providers that can be mapped for a workgroup by setting the Mapping= parameter in the [Options] section of WRKGRP.INI. For example, if the network uses two network providers (MSNP32 for Microsoft networks and NWNP32 for NetWare networks), the following is defined in WRKGRP.INI:

    [options]

    mapping=msnp32,nwnp32

If you use an additional network provider at your site, you can specify it by adding the network provider filename to the comma-separated list of Mapping= values. The Mapping= line specifies which network provider is related to a mapping and the registry key where it is stored, because the locations of domains, preferred servers, and so on, are stored under the network provider's key in the registry. For example, domain names are stored in the following key:

Hkey_Local_Machine\System\CurrentControlSet\Services_\MSNP32\NetworkProvider\AuthenticatingAgent

You can also use the Default= line to specify a default mapping for workgroups that do not have an explicit mapping. This allows you to use an existing WRKGRP.INI created for Windows for Workgroups 3.11, and add one line to take advantage of Windows 95 functionality. For example, add the entry Default=MktDom1,Master1 to use the servers described in the previous example as the default mapping.

If a WRKGRP.INI exists, the Workgroup field in Windows 95 Setup and the Network properties in Control Panel show all the workgroups listed in WRKGRP.INI. Users can choose a workgroup from the list or type one in. If Required=true in WRKGRP.INI, the user must choose from the list.

In WRKGRP.INI, ForceMapping= controls whether mapped values can be changed in the Windows 95 user interface. For example, if ForceMapping=true and the user selects a workgroup that is mapped to a domain, the

value in the Logon Domain box in the Network properties in Control Panel and in the logon dialog box is not available for the user to change. In Control Panel, these parameters are always saved directly in the registry, so canceling the Network properties dialog box does not cancel related settings.

Note

When Windows 95 Setup finds WRKGRP.INI in the Windows 95 source files, it copies the file to the shared Windows directory.

The format of the Windows 95 WRKGRP.INI is described in the following table.

WRKGRP.INI Settings section or entry	Description
[Options] section:	
ANSI=true | false	Specifies whether the workgroups need to be converted from an OEM character set to ANSI. Default is false.
Required=true | false	Specifies whether users can type their own workgroup name or have to choose from those listed.
ForceMapping=true | false	Specifies whether users can change values that are set by a mapping.
Mapping= NP1, NP2, NP3,... (comma-separated list of network providers)	Specifies a comma-separated list of the network providers to which workgroups can be mapped. Also specifies the order in which values will be listed in the [Workgroups] section. Implicitly, this specifies where in the registry to store settings. This parameter is optional. By default, workgroups map to domain, preferred server.
Default=NP1 default,NP2 default, NP3 default,...	Specifies the default mapping for workgroups listed in the [Workgroups] section that dont have a mapping defined. This allows administrators to add a single line to existing Windows for Workgroups WRKGRP.INI files to get minimal mapping functionality. The format is the same as for specifying a mapping in [Workgroups].
[Workgroups] section: workgroup=optional_mapping	Specifies a workgroup that users can choose, and its mappings will automatically be defined in the order specified in Mapping=. There

can be a workgroup= entry in the file for every workgroup that users can choose.

Note Each name of a workgroup must be followed by an equal sign (=) for the workgroup name to be interpreted correctly

Windows 95 on Other Networks: The Basics

Integrated networking support is a key feature of Windows 95. The new architecture that supports multiple network providers means that it's easier to install and manage a single network or multiple networks simultaneously using Windows 95 than in earlier versions of Windows. Windows 95 can support configurations on a single computer of as many 32-bit, protected-mode network clients as you want and one 16-bit, real-mode <u>client</u> using the network provider interface of Windows 95.

Windows 95 includes two protected-mode network clients (Client for Microsoft Networks and Client for NetWare Networks), plus built-in support for several types of 16-bit, real-mode network clients. In most cases, you also need to use supporting software from the network vendors in the following list:

[?]   <u>Artisoft LANtastic version 5.0 and later</u>
[?]   <u>Banyan VINES version 5.52 and later</u>
[?]   <u>Beame and Whiteside NFS</u>
[?]   <u>DEC PATHWORKS version 5.0 and later</u>
[?]   <u>IBM OS/2 LAN Server</u>
[?]   <u>Novell(r) NetWare version 3.11 and later</u>
[?]   <u>SunSoft PC-NFS version 5.0 and later</u>
[?]   <u>TCS_10Net</u>

Installing Support for Other Networks: An Overview

This section describes how to install Windows 95 with network support from another vendor. For installation details related to your specific network, see the section for that network.

Installing Network Support During Windows 95 Setup

If you want to install Windows 95 on a computer that already has networking support from a network vendor other than Microsoft or Novell NetWare, you should be sure the network client from that vendor is installed correctly under MS-DOS, Windows version 3.1, or Windows for Workgroups.

The network software should be running when you start Windows 95 Setup. If Setup detects a network adapter but the computer is not running network software when you install Windows 95, then setup installs Client for Microsoft Networks by default. Although in most cases the Network option in Control Panel provides the same controls for adding and removing networking components after Windows 95 Setup is complete, Microsoft recommends that you install networking support during Windows 95 Setup.

To add a network client while running Windows 95 Setup

1 Make sure that the network client from your vendor is already installed under MS-DOS, Windows 3.1, or Windows for Workgroups. The network software should be running when you start Windows 95 Setup.

2 Start Windows 95 Setup, and choose the Custom setup type.

3 When the Network Configuration screen appears during setup, your network client should appear in this list automatically, because Setup should detect the network you are running. If the list is correct, click OK to continue with Setup.

   If you need to add the network client manually, click the Add button. Then double-click Client in the Select Network Component Type dialog box. In the Select Network Client dialog box, click the appropriate network vendor in the Manufacturers list, and click the name of the client in the Network Clients list. Then click OK.

4 Because the network clients keeps track of the network adapter and protocols, no protocols or adapters should be listed in the Network Configuration dialog box. If you want to install Client for Microsoft Networks in addition to the network client from your vendor, follow the steps in Installing Client for Microsoft Networks with Other Networks. Otherwise, click the Next button and continue with Windows 95 Setup.

5 After Windows 95 is installed, check AUTOEXEC.BAT file to make sure that all commands point to the correct directory for your network software.

On computers running multiple clients, Windows 95 Setup stores all real-mode networking components, including PROTOCOL.INI, in the Windows directory. On computers running a real-mode client as the primary network, the networking components are left in place. The settings in PROTOCOL.INI affect only real-mode NDIS drivers. Changing these values has no effect on protected-mode NDIS drivers. If you need to change settings in PROTOCOL.INI, use the Network option in Control Panel whenever possible.

Installing Client for Microsoft Networks with Other Networks

If you want to install the 32-bit, protected-mode Client for Microsoft Networks in addition to a network client from another vendor, follow these steps.

Note

 Artisoft LANtastic cannot be used with a 32-bit, protected-mode networking client such as Client for Microsoft Networks. This client must be installed as the sole network client on the computer.

To install Client for Microsoft Networks after another network has been installed

1 Start Windows 95 Setup, and then choose Custom as the setup type.

   or

   After Setup, double-click the Network icon in Control Panel.

2 In the Network Configuration dialog box, click the Add button. In the <u>Select</u> Network Component Type dialog box, double-click Client.

3 In the <u>Select</u> Network Client dialog box, click Microsoft in the Manufacturers list, and click Client for Microsoft Networks in the Network Clients list. Click OK.

4 Usually hardware detection detects the correct network adapter and selects the corresponding <u>driver</u>. If you must add a network adapter, click Add and then double-click Adapter. Click the adapter vendor in the Manufacturers list, and then click the name of the adapter in the Network Adapters list. Click OK.

5 In the Network Configuration dialog box, double-click the network adapter in the list of components. Verify the settings in the properties for the network adapter. Then click OK. See also the documentation for your network adapter to verify its software settings.

   Setup automatically installs a protected-mode version of any <u>protocol</u> that the installed network clients are using. If you need to install another <u>protocol</u>, follow the steps in <u>Installing Drivers and Protocols</u>; see also the documentation for your network adapter to verify its software settings.

6 Click Next to continue with Setup.

   or

   If you are adding support after Windows 95 has been installed, you must shut down and restart the computer.

Issues for Windows 95 on Other Networks

Although you can run any number of 32-bit network clients simultaneously, you can only run a single 16-bit, real-mode network client.

The network software should be installed and running on the workstation when you start Windows 95 Setup to install Windows 95, so that Setup can detect the network and install support for it automatically.

If your network vendor does not provide a 32-bit, protected-mode client that is compatible with Windows 95, and if you do not (or cannot) run Client for Microsoft Networks in addition to your other network client, you cannot take advantage of the protected-mode networking features of Windows 95. For example:

[?]   You won't gain the performance advantages of 32-bit, protected-mode network components, including Plug and Play networking support, long filenames, client-side caching, automatic reconnections, and other performance enhancements.

[?]   You cannot use the Windows 95 unified logon and user interface for navigating the network, or use the Windows 95 network management tools.

[?]   You cannot use user profiles for management of desktop configurations.

Specific issues for particular 16-bit network clients including whether support for a particular network includes browsing in Network Neighborhood and whether you can also use a 32-bit, protected-mode client such as Client for Microsoft Networks simultaneously with that network   are presented in the section describing that network.

If support for your networks 16-bit client is not included with Windows 95, contact your network vendor to obtain a Windows 95 INF file.

Support for FTP NFS protocols can be installed by using the Network option in Control Panel. The required components (client, network provider, and so on) must be obtained from FTP.

Artisoft LANtastic

Windows 95 can be installed to run with Artisoft LANtastic version 5.x. or later client software. You must install Artisoft LANtastic by letting Windows 95 Setup detect this client while installing Windows 95. You cannot install support for this client after installation is complete.

LANtastic servers will not appear in Network Neighborhood. You can connect to servers at the command prompt.

Note

   You can only configure Artisoft LANtastic as the Primary Network. Additional 32-bit network providers, such as Client for Microsoft Networks or Client for NetWare Networks, are not possible in this case.

To set up Windows 95 with an Artisoft LANtastic real-mode network client

1 Make sure that the LANtastic <u>server</u> is not running. The LANtastic server cannot be run during Windows 95 Setup.

2 Make sure that the LANtastic client is already installed under MS-DOS, Windows 3.1, or Windows for Workgroups. The network software should be running when you start Windows 95 Setup.

3 Follow the steps in <u>Installing Support for Other Networks: An Overview</u>.

Banyan VINES

Windows 95 can be installed and run with Banyan VINES version 5.52(5) or later. Banyan VINES servers do not show up in Network Neighborhood. You can use the Map Network Drive dialog box in Windows 95 to connect to servers.

Banyan VINES as the primary network

If real-mode support for Banyan is installed using a Banyan LAN <u>driver</u>, Windows 95 can support Banyan as the primary network. Banyan is also providing a 32-bit network client to be available after the release of Windows 95. Contact your vendors sales support representative for information about the availability and features provided with this new client.

Banyan VINES as an additional 16-bit Windows 95 client

If Banyan is installed with an NDIS 2 <u>network adapter</u> driver, then Banyan can be installed as an additional 16-bit network client, and you can also install 32-bit, protected-mode clients such as Client for Microsoft Networks or Client for NetWare Networks.

To set up Windows 95 with Banyan VINES real-mode network client support

 If you are running on an Ethernet network, make sure that the Banyan VINES client is already installed under MS-DOS, Windows 3.1, or Windows for Workgroups. The network should be running when you start Windows 95 Setup. Then follow the steps in <u>Installing Support for Other Networks: An Overview</u>. No other steps are required

-Or-

If you are running on a token-ring network, run Windows 95 Setup and choose the Custom setup type. In the Network Configuration dialog box, add Banyan Token Ring as the network client. Setup cannot detect Banyan as a token-ring network client.

Note

 If you have Banyan VINES version 5.53(6) or 5.52(5), and are having problems with the Banyan pop-up dialog box the first time Windows 95 starts, you can edit the VINES.INI file in your Windows directory so that it contains these entries:

Beame and Whiteside NFS

You can run Windows 95 with Beame and Whiteside version BW-NFS 3.0c, however, BW-NFS servers will not appear in Network Neighborhood. You can connect to servers at the command prompt.

BW-NFS as the primary network

If BW-NFS is installed using a BW-NFS LAN driver, Windows 95 can support BW-NFS as the primary network. BW-NFS uses NDIS packet drivers or ODI network adapter drivers.

BW-NFS as an additional 16-bit Windows 95 client

If BW-NFS is installed with an NDIS 2 network adapter driver, then BW-NFS can be installed as an additional 16-bit network client, and you can install 32-bit, protected-mode clients such as Client for Microsoft Networks or Client for NetWare Networks.

To set up Windows 95 with BW-NFS real-mode network client support

1 Ensure that the Beame and Whiteside BW-NFS network client is already installed under MS-DOS, Windows 3.1, or Windows for Workgroups. The network should be running when you start Windows 95 Setup.

2 Follow the steps in Installing Support for Other Networks: An Overview.

DEC Pathworks

Windows 95 can be installed and run with DEC Pathworks version 5.x. You must install Client for Microsoft Networks plus the DEC Pathworks protocol provided by DEC (there is no DEC Pathworks 5.x client). DEC Pathworks uses NDIS 2 network adapter drivers. Also, the Windows 95 AUTOEXEC.BAT file must contain a **STARTNET.BAT** line to refer to the batch file used to start DEC Pathworks.

After Windows 95 is installed, you can use Network Neighborhood to browse DEC Pathworks servers running version 5.x.

Note

[?]   DEC Pathworks users must install DEC Pathworks support for Windows for Workgroups 3.x before running Windows 95 Setup. This software is available on the DECPCI forum on CompuServe.

To set up Windows 95 with DEC Pathworks 5.x real-mode network support

1 Make sure that DEC Pathworks support is already installed under Windows for Workgroups. The network should be running when you start Windows 95 Setup.
2 Run Windows 95 Setup, and then choose Custom Setup.
3 In the Network Configuration dialog box, click Add, and then double-click Client.
4 Click Microsoft in the Manufacturers list, and then click Client for Microsoft Networks in the Network Clients list. Click OK.
5 In the Network Configuration dialog box, click Add again, and then double-click Protocol.
6 Click DEC in the Manufacturers list, and then click a DEC Pathworks 5.x protocol in the Network Protocols list. Click OK.

   Note   For DEC Pathworks 5.x, you can use a DECnet protocol, or you can use NetBEUI or Microsoft TCP/IP.

7 Click Next to continue with Setup.

Your AUTOEXEC.BAT file must contain the following line to refer to the batch file that is used to start DEC Pathworks:

        startnet.bat

Tip

[?]   Supporting software for the DEC print monitor is available on the Windows 95 compact disc in the ADMIN directory.

IBM OS/2 LAN Server

Windows 95 can be installed and run with these versions of IBM OS/2 LAN Server:

[?] Version 1.3 CSD

[?] Version 1.2, 1.3, 2.0, and 4.0

Note

[?] If OS/2 LAN Server is installed using a OS/2 LAN Server LAN driver, Windows 95 can support OS/2 LAN Server as a primary network only. You cannot install Client for Microsoft Networks as an additional network client.

OS/2 LAN Server servers will appear in Network Neighborhood. Users can also connect to servers using the Map Network Drive dialog box or the command prompt.

To set up Windows 95 with IBM OS/2 LAN Server real-mode network client support

[?] Make sure the OS/2 LAN Server client is already installed under MS-DOS, Windows 3.1, or Windows for Workgroups. The network should be running when you follow the steps in Installing Support for Other Networks: An Overview.

Important Windows 95 does not support installation of IBM DOS LAN Requester. You must remove all references to DOS LAN Requester from your CONFIG.SYS and AUTOEXEC.BAT before starting Windows 95.

To access an IBM LAN Server, install Client for Microsoft Networks. Then all networking operations should be successful with the LAN.

SunSoft PC-NFS

Windows 95 can be installed and run with SunSoft PC-NFS version 5.0. SunSoft servers will not appear in Network Neighborhood. You can use the Map Network Drive dialog box to connect to servers.

SunSoft PC-NFS as the primary network

If SunSoft PC-NFS is installed using a SunSoft PC NFS LAN driver, Windows 95 can support SunSoft PC-NFS as the primary network. Additional 32-bit network providers are not possible in this case.

SunSoft PC-NFS as an additional 16-bit Windows 95 client

If SunSoft PC-NFS is installed with an NDIS 2 network adapter driver or with an ODI driver, then SunSoft PC-NFS can be installed as an additional 16-bit network client, and you can install 32-bit, protected-mode clients such as Client for Microsoft Networks or Client for NetWare Networks.

If you obtain supporting SunSoft PRO NFS components from the network vendor, you can use Microsoft TCP/IP with this client.

To set up Windows 95 with SunSoft PC-NFS real-mode network client support

   Make sure the SunSoft PC-NFS client is already installed under MS-DOS, Windows 3.1, or Windows for Workgroups. The network should be running when you follow the steps in Installing Support for Other Networks: An Overview.

TCS 10-Net

Windows 95 can be installed and run with these versions of TCS 10-Net:

[?]   TCS 10-Net version 4.1x with DCA 1M

[?]   TCS 10-Net version 4.1x

[?]   TCS 10-Net version 4.2 and above

[?]   TCS 10-Net version 5.0

TCS 10-Net servers will appear in <u>Network Neighborhood</u>, so users can browse and connect to resources.

TCS 10-Net as the primary network

If TCS 10-Net is installed using a TCS 10-Net LAN driver, Windows 95 can support TCS 10-Net as the primary network.

TCS 10-Net as an additional 16-bit Windows 95 client.

If TCS 10-Net is installed with an NDIS 2 network adapter driver, then TCS 10-Net can be installed as an additional 16-bit network client, and you can install 32-bit, protected-mode clients such as Client for Microsoft Networks or Client for NetWare Networks.

To set up Windows 95 with TCS 10-NET real-mode network client support

1 Make sure that the TCS 10-Net client is already installed under MS-DOS, Windows 3.1, or Windows for Workgroups. The network should be running when you start Windows 95 Setup.

2 Follow the steps in Installing Support for <u>Other Networks: An Overview</u>.

Windows 95 on NetWare Networks: The Basics

Windows 95 runs on NetWare workstations that use Novell(r) NetWare versions 2.15 and later, 3.x, and 4.x servers. You have several choices for the networking <u>client</u> to use, as described later in this section:

[?]   <u>The New 32-Bit, Protected-Mode Microsoft Client for NetWare Networks</u>

[?]   <u>Novell NetWare 3.x Real-Mode Networking Client (NETX)</u>

[?]   <u>Novell NetWare 4.x Real-Mode Networking Client (VLM)</u>

Note

"NETX" is used to refer to the Novell NetWare workstation shell for NetWare version 3.x; VLM is used to refer to the NetWare workstation shell for version 4.x.

Whichever client you choose, you can use the built-in features and commands in Windows 95 to perform most common network operation and administration tasks. Microsoft Client for NetWare Networks can process logon scripts, and also supports the 16-bit NetWare 3.x and 4.x command-line utilities for both users and administrators, so that you can use these utilities in the same way as with NETX or VLM clients running under MS-DOS or an earlier version of Windows.

Windows 95 provides complete 32-bit, protected-mode software for running on Novell NetWare networks, including a network client (sometimes called the redirector or requestor), an <u>IPX/SPX</u>-compatible <u>protocol</u>, <u>network adapter</u> drivers, and administrative tools. With the Microsoft Client for NetWare Networks in Windows 95, users can access NetWare <u>server</u> services, browse and connect to NetWare servers, and queue print jobs using the Windows 95 network user interface or Novell NetWare utilities.

Setting Up Microsoft Client for NetWare Networks

When using Client for NetWare Networks, you do not need to load any Novell-supplied drivers or components. This client runs with the Microsoft IPX/SPX-compatible protocol and NDIS-compliant, protected-mode drivers, which Windows 95 Setup installs automatically when you select this client.

When Windows 95 is installed with Client for NetWare Networks, Windows 95 Setup automatically moves any relevant NET.CFG settings to the registry. You can configure the related settings by double-clicking the Network icon in Control Panel. You can also configure the network adapter driver and the IPX/SPX-compatible protocol.

If you did not install Client for NetWare Networks during Windows 95 Setup, you can switch to this client any time after Windows 95 is installed on your computer, as described in the following procedure.

Tip

[?]   To quickly display the Network properties sheets without opening Control Panel, use your right mouse button to click the Network Neighborhood icon on the desktop. Then click Properties on the menu that appears.

To use Client for NetWare Networks

1 Double-click the Network icon in Control Panel, and then click the Configuration tab.

2 Select the currently installed NetWare Workstation Shell client, and then click Remove.

3 Click Add, and then double-click Client.

4 In the Manufacturers list, click Microsoft.

5 In the Network Clients list, click Client for NetWare Networks.

6 Click OK, and then click OK in the Network properties sheet. Then shut down and restart the computer.

Note

When you install Client for NetWare Networks, Windows 95 Setup adds the value lastdrive=32 to the parameters for the network client in the registry. This value makes room for entries in a table to store drive information. For Microsoft networking, the last drive would be set to Z (or 26), but NetWare allows six additional entries in its drive table. The extra drives are used only by NetWare-aware programs; these drives are not available to users.

Setting Up Windows 95 with a Novell-Supplied NetWare Client

In most cases, Windows 95 Setup automatically installs the Microsoft Client for NetWare Networks if it detects Novell networking software on the computer. The following sections describe how to install Windows 95 to work with a Novell-supplied <u>client</u>.

For specific information related to your Novell-supplied workstation shell, see:

[?]   <u>NETX Technical Notes</u>
[?]   <u>VLM Technical Notes</u>.

Important

To help you ensure successful installation of Windows 95, make sure that the Novell-supplied NetWare client software is running before you start Windows 95 Setup. To verify that the Novell-supplied software is running, make sure you can successfully connect to and use resources on a NetWare <u>server</u>. Running the Novell-supplied software helps to ensure that Windows 95 can properly detect the network configuration during Setup.

Also, if you currently use IPX.COM, you should upgrade to the latest versions of NetWare client software that use ODI drivers before installing Windows 95.

Installing Windows 95 with a Novell NetWare Client

This section presents the following procedures for installing Windows 95 to run with a Novell-supplied client:

[?]   Installing Novell-supplied NetWare client support during Windows 95 Setup
[?]   Installing Client for Microsoft Networks in addition to a Novell-supplied NetWare client

Note

The method for installing VLM support is different, as described in VLM Technical Notes. Also, if the NetWare client software is not running when Windows 95 is installed, you must manually configure Windows 95 after Setup to work in conjunction with the NetWare client software.

By default, Windows 95 Setup upgrades the network client to Microsoft Client for NetWare Networks if it detects NetWare software. You can select Custom Setup and specify that the Novell-supplied software be retained during Setup.

To select the Novell-supplied NETX client support during Windows 95 Setup

1 Start the computer as usual, making sure that the Novell-supplied network software is running. Then run Windows 95 Setup, and <u>select</u> Custom as the Setup type.

2 When the Network Configuration dialog box appears, click Client for NetWare Networks in the list of components, and then click Remove.

3 Click Add, and then double-click Client.

4 In the Manufacturers list, click Novell.

5 In the Network Clients list, click Workstation Shell 3.X [NETX], and then click OK.

6 In the Network Configuration dialog box, click Next.

   If you want to use only the NETX client, you do not need to specify settings for your <u>network adapter</u> driver or protocols. Setup adds support for the ODI adapter and IPXODI automatically by reading settings from NET.CFG. If you want to also use Client for Microsoft Networks, follow the steps in the next procedure.

7 Continue with Windows 95 Setup.

Note

You cannot install Client for Microsoft Networks as an additional networking client if you are installing Windows 95 to run with an IPX monolithic configuration.

To install Client for Microsoft Networks with a Novell NetWare client

1 Double-click the Network icon in Control Panel, and then click the Configuration tab.

2 Click Add, and then double-click Client.

3 In the Manufacturers list, click Microsoft.

4 In the Network Clients list, click Client for Microsoft Networks, and then click OK.

To determine whether the correct adapter driver is installed

1 Double-click the Network icon in Control Panel, and then click the Configuration tab.

2 Double-click the network adapter.

3 Click the Driver Type tab.

4 Make sure the Real Mode (16-bit) ODI driver is selected, and then click OK.

Switching Back to NETX from Client for NetWare Networks

If you install the protected-mode Client for NetWare Networks and later decide to return to your original Novell NetWare NETX configuration, carry out the following procedure. For details about adding or returning to VLM, see VLM Technical Notes.

To return to NETX after installing Client for NetWare Networks

1 Double-click the Network icon in Control Panel, and then click the Configuration tab.

2 Click the IPX/SPX-compatible protocol, and then click Remove.

3 Click Client for NetWare Networks, and then click Remove. Click Add, and then double-click Client.

4 In the Manufacturers list, click Novell.

5 In the Network Clients list, click Workstation Shell 3.X [NETX], and then click OK. Windows 95 automatically installs IPXODI support.

6 Click the Configuration tab, double-click the network adapter, and then click the Driver Type tab.

7 Select the Real Mode (16-bit) ODI driver, and then click OK.

8 Click OK, and provide a disk or a location for any files that Windows 95 requests to complete the installation. Restart the computer.

Important

You will typically have to reinstall Novell-supplied files at this stage, because Windows 95 Setup previously replaced these files with versions required by Client for NetWare Networks. You must also make sure that NET.CFG is present and contains correct settings, and that the required settings are present in CONFIG.SYS and AUTOEXEC.BAT. For information about these required settings, see your Novell documentation.

See Also

[?]   Netware Client Installation for Windows 95 (NETX)
[?]   Netware Client Installation for Windows 95 (VLM)

NETX Technical Notes

This section discusses specific issues related to using the Novell-supplied NetWare 3.x <u>client</u> software with Windows 95. The following topics are included:

[?]   Using NETX with Client for Microsoft Networks

[?]   Using NETX as the Sole Client

[?]   Specifying the LastDrive= Parameter

[?]   Setting Show Dots and <u>File Access</u> Limits

Using NETX with Client for Microsoft Networks

When running NETX with Windows 95, you keep all the same functionality that you had when running with MS-DOS or Windows 3.x. If you are using NETX as the network client, you might also choose to install the 32-bit, protected-mode Client for Microsoft Networks if you want to connect to other Microsoft network computers, such as computers running Windows 95, Windows for Workgroups 3.x, LAN Manager, or Windows NT.

When you run the NetWare NETX client with Windows 95 in this configuration, you should continue to load the necessary Novell-supplied client components and MS-DOS based TSRs (LSL, ODI driver, IPXODI, and NETX) in <u>AUTOEXEC.BAT </u>or STARTNET.BAT, just as you did with MS-DOS or Windows 3.1. Windows 95 Setup automatically adds the configuration lines if they are not present. For information about required configuration lines, see your Novell documentation.

Note

You cannot install Client for Microsoft Networks as an additional networking client if you are using the IPX monolithic configuration.

Using NETX as the Sole Client

This configuration is for use in either of these cases:

[?]   The IPX monolithic configuration is used.

[?]   You do not need to connect to other computers running Windows 95, Windows for Workgroups 3.x, LAN Manager, or Windows NT.

To use only NETX client support, double-click the Network icon in Control Panel to remove Client for NetWare Networks and Client for Microsoft Networks, if either of these clients is installed. Then add the Novell NetWare (Workstation Shell 3.X [NETX]) client, as described in <u>Setting Up Windows 95 with a Novell NetWare Client</u>.

The following table lists the required and optional settings for <u>CONFIG.SYS</u> and <u>AUTOEXEC.BAT </u>files if you use NETX as the sole network client.

Configuration File Settings for NETX as the Sole Client

Filename	Required settings
CONFIG.SYS	LASTDRIVE=*drive letter*
AUTOEXEC.BAT *	LSL.COM
	ODI driver
	IPXODI.COM
	NETX.EXE
	Q: (that is, LASTDRIVE+LOGIN *)
	C:

* Or this could be the name of a batch file called from AUTOEXEC.BAT.

The following table summarizes the minimum settings that you should see in the Network option in Control Panel if you use NETX as the sole client.

Network Settings for NETX as the Sole Network Client

Network	Options

component

NetWare (Workstation Shell 3.X [NETX])	If logging onto NetWare servers, Novell NetWare (Workstation Shell 3.X [NETX]) should be selected in the Primary Network Logon box. All other settings are configured in NET.CFG.
Network adapter	On the General properties for the adapter, the Real Mode (16-Bit) ODI Driver option should be selected.
Novell IPX ODI	Settings are configured in NET.CFG.

Setting the LastDrive Parameter for NETX

Windows 95 uses the value of the LastDrive= entry in the registry (or CONFIG.SYS) to allocate enough storage space in the internal memory structures to recognize drive letters for devices. For example, a setting of LastDrive=Z tells Windows 95 to recognize drive letters from A through Z.

Windows 95 uses all drive letters up to the letter assigned as the last drive. NetWare servers use all the drive letters. For example, if LastDrive=P is specified, you can assign drive letters D through P for networks other than NetWare (assuming drive C is the only physical hard disk in the system). In this same example, NetWare begins mapping NetWare volumes with Q.

Setting Show Dots and File Access Limits

A NetWare file server does not include the directory entries dot (.) and double dot (..) as MS-DOS and Windows 95 do. However, the NetWare workstation shell version 3.01 or later can emulate these entries when programs attempt to list the files in a directory.

To Turn on the Show Dots Feature

 If you have problems listing files or deleting directories, add the following line to the beginning of NET.CFG:

show dots=on

By default, NetWare client software allows you access to only 40 files at a time. When you are running programs under Windows 95, you can exceed this limit rather quickly. If you do, you might see unexpected error messages.

To Increase the File Access Limit

1 Add the following line to the beginning of NET.CFG:

file handles=60

2 Add the following line to CONFIG.SYS for the local computer:

files=60

See Also

 Netware Client Installation for Windows 95 (NETX)

PROTOCOL.INI: Real-Mode Network Initialization File

For real-mode networking, Windows 95 uses a file named PROTOCOL.INI in the Windows directory to determine the parameters for the protocol and network adapter drivers. Setup uses information in INF files to create and modify PROTOCOL.INI if any real-mode networking components, such as NDIS 2.x adapter drivers, are installed.

If you typically run Client for Microsoft Networks, the PROTOCOL.INI file is used to support starting up in Safe Mode Command Prompt Only with networking.

Important

Do not modify PROTOCOL.INI unless absolutely necessary. Windows 95 relies on the format and configuration information in PROTOCOL.INI to run and to install other network components. Inadvertent errors in PROTOCOL.INI can damage the integrity of the Windows 95 environment.

PROTOCOL.INI also contains network adapter configuration information, such as the I/O address, DMA, and IRQs. The PROTOCOL.INI file contains sections for [network.setup] and [protman], and separate sections for each configured network adapter and network protocol.

Tip for Configuring Adapters with Real-Mode Networking

When multiple hardware adapters are used on a computer, some entries in PROTOCOL.INI, such as interrupt settings and shared memory addresses, may need adjustments to avoid hardware conflicts. Because Windows 95 Setup cannot anticipate every possible conflict, watch for error messages when you start the computer with real-mode networking.

For example, if a network adapter and a video controller adapter both try to use the same memory address, you must adjust one of the adapters to a different address, using either the setup software for the adapter or the switches on the adapter (or both, which is necessary in most cases). The PROTOCOL.INI entries must agree with the jumper setting on each adapter.

[network.setup]

This section provides information from Setup for the network installation.

version=

 Current network software version.

netcard=

 The network adapter driver name for each adapter that is used in the computer.

transport=

 The name of the network transport driver protocol.

lana#=

 Identifies the binding between the network adapter and the network protocol, as configured by Setup.

The [network.setup] entries are shown in the following example:

 [network.setup]

 version= 0x400

 netcard= ms$ee16, 1, MS$EE16

 transport= ms$netbeui, MS$NETBEUI

 lana0= ms$ee16, 1, ms$netbeui

[protman]

This section provides the settings for the Protocol Manager. The following list shows the format for this section.

drivername=

 Defines the driver name for the Protocol Manager.

priority=

Determines the order in which incoming frames are processed. If used, the highest priority is given to the first protocol stack, MS$NETBEUI

The following shows an example of entries in this section for a computer configured with NetBEUI:

    [protman]

    drivername= PROTMAN$

    priority= MS$NETBEUI

[netcard]

This section lists the set of parameters for an NDIS network adapter. A [netcard] section is present for each network adapter configured in the computer, and the specific entries present in this section will vary depending on the network adapter installed. The following shows an example of entries in this section for an Intel EtherExpress 16 or 16TP adapter:

    [ms$ee16]

    drivername= EXP16$

    IOADDRESS=0x300

    IRQ=5

    IOCHRDY=Late

    TRANSCEIVER=Thin Net (BNC/COAX)

[protocol]

This section defines the settings used by a network protocol. A [protocol] section is present for each network transport protocol installed on the computer, and the specific entries present in this section will vary depending on the protocol installed. The following list shows the format for entries common to each configured protocol.

bindings=

    Indicates the network adapter drivers to which each transport protocol binds. The netcard name for the network adapter driver and protocol must appear in the bindings= entry for at least one of the protocol drivers. The bindings= entry may specify one or more [netcard] sections (separated by commas).

lanabase=

    Defines the first LANA number the protocol is to accept. Refer to lana#= in the [network.setup] section.

The following is an example of the entries present in this section for the Microsoft NetBEUI protocol:

    [MS$NETBEUI]

    drivername= NETBEUI$

    sessions= 10

    NCBS= 32

    bindings= MS$EE16

    lanabase= 0

Installing Drivers and Protocols

Windows 95 supports up to four <u>network adapters</u> in a single computer. (Network adapters are also called network interface cards, or <u>NICs</u>.) Windows 95 Setup automatically detects most network adapters, installs the appropriate driver for the adapter, and provides appropriate default settings to configure the adapter.

Adding a Driver or Protocol after Setup

When you install a network adapter in a computer, you can install the appropriate driver by using the Network option in Control Panel. The network adapter driver is automatically bound to all NDIS protocols currently running on the computer. If any protocols are added later, they will also be bound automatically to the network adapter driver. When you choose to add a network adapter, Windows 95 displays a list of supported network adapters.

To add a driver for a network adapter

1 Double-click the Network icon in Control Panel, and then click the Configuration tab.

2 Click Add, and then double-click Adapter.

3 In the Manufacturers list, click a network adapter manufacturer.

4 In the Models list, click the appropriate model, and then click OK.

To add a network protocol provided by Microsoft

1 Double-click the Network icon in Control Panel, and then click the Configuration tab.

2 Click Add, and then double-click <u>Protocol</u>.

3 In the Manufacturers list, click Microsoft.

4 In the Models list, click the protocol you want, and then click OK.

VLM Technical Notes

VLM stands for Virtual Loadable Module, the network <u>client</u> provided with Novell(r) NetWare version 4.x. You should choose to run VLM rather than Client for NetWare Networks in the following cases:

[?]   If you need to run Novell NWAdmin or NetAdmin utilities.

[?]   If you need NetWare Directory Services (NDS) support. When using VLM, you can access NDS using the Novell-supplied NWUSER utility and the WinNet16 dialog boxes.

[?]   If you need to run VLM services such as PNW that are not supported under Client for NetWare Networks.

[?]   If you experience incompatibilities in a NetWare-aware program when running Client for NetWare Networks.

When you use VLM with Windows 95, the behavior of the NetWare workstation shell is the same as it is with MS-DOS or Windows 3.1. You should still load the Novell-supplied client components and TSR programs, and log on from either AUTOEXEC.BAT or STARTNET.BAT. Logon scripts also work the same way they do with MS-DOS and Windows 3.1. After Windows 95 starts, you can use the Windows 95 user interface to make drive and printer connections, or you can run NetWare utilities by running NWUser or by typing commands at the command prompt. However, you cannot use NDS names in Windows 95 dialog boxes.

Note

Installing Windows 95 with the VLM client requires special steps. For information, see the steps below.

This section discusses specific issues related to using the Novell-supplied NetWare 4.x client software with Windows 95. The following topics are included:

[?]   Setting Up Windows 95 with VLM

[?]   Using VLM with Client for Microsoft Networks

[?]   Using VLM as the Sole Client

[?]   Specifying the LastDrive= Parameter for VLM

Setting Up Windows 95 with VLM

If you install Windows 95 into the existing Windows directory on a computer where VLM is already configured to run with an earlier version of Windows, then to install VLM support, follow the steps provided in <u>Setting Up Windows 95 with a Novell NetWare Client</u>.

However, if you are installing Windows 95 into another directory, or if you are installing it on a computer that currently has only the MS-DOS operating system, you must follow special steps to set up the system properly. This is because Windows support for VLM requires software available only through the Novell-supplied VLM installation program. Follow the instructions under the procedure in this section that most closely describes your configuration.

Windows 95 Setup tries to detect VLM by looking for an NLS directory. If NLS is present, it begins installing Windows 95 for VLM. If the NLS directory is not present but you <u>select</u> the VLM client to install in Setup, Windows 95 Setup asks you to first install VLM using the Novell installation program. Then you can continue with Windows 95 Setup.

Important

[?]   Automatic logon from your AUTOEXEC.BAT file needs to be configured before running Windows 95 Setup, or the network will not be available under Windows 95.

If you already run VLM with Windows 3.x and upgrade Windows 95 over Windows 3.x

[?]   Start the computer as usual, and make sure that the Novell software is running. Then run Windows 95 Setup and choose support for Novell NetWare 4.0, as described in <u>Setting Up Windows 95 with a Novell NetWare Client</u>.

Or

1 After Setup has finished, double-click the Network icon in Control Panel, click Client for NetWare Networks (if this has been installed), and then click Remove.

2 Click Add, and then double-click Client.

3 In the Manufacturers list, click Novell.

4 In the Network Clients list, click Novell NetWare (Workstation Shell 4.0 and above [VLM]), and then click OK.

5 If you want to install Client for Microsoft Networks at this time, repeat this procedure from step 2.

If you already run VLM with Windows 3.1 and install Windows 95 in a new directory or if you are running VLM with MS-DOS

1 Start the computer as usual, making sure that the Novell-supplied network software is running. Then run Windows 95 Setup, and select Custom as the Setup type.

2 When the Network Configuration dialog box appears, click Client for NetWare Networks, and then click Remove.

3 Click Add, and then double-click Client.

4 In the Manufacturers list, click Novell.

5 In the Network Clients list, click Novell NetWare (Workstation Shell 4.0 And Above [VLM]), and then click OK.

   Setup will partially configure Windows 95, and then present a message that asks you to run the Novell Workstation Shell Install program after Windows 95 has been installed.

   Caution

         You should run the Novell Workstation Shell Install program when Windows 95 starts for the first time after you run Windows 95 Setupthat is, after the Copying Files phase is complete, when Setup asks you to remove all disks and restart the computer.

6   As soon as the "Starting Windows 95" message appears when the computer is restarted during Setup, press F8, and then choose Command Prompt Only.

7   From the command prompt, run the Novell Workstation Shell Install program to install the Novell-supplied support for Windows.

8   Restart the computer again, and let Windows 95 start normally.

9   Install Novell NetWare, Workstation Shell 4.0 And Above [VLM], as described in the previous procedure, and then install the appropriate network adapter as described in the following procedure.

To install a network adapter

1 Double-click the Network icon in Control Panel, and then click the Configuration tab.

2 Click Add, click Adapter, and then click Add again.

3 In the Manufacturers list, click the appropriate manufacturer.

4 In the Network Adapters list, click the name of the adapter you are using, and then click OK.

The information from NET.CFG is used to automatically configure the other supporting network components with Windows 95.

Using VLM as the Sole Client

This configuration can be used if you do not need to connect to other computers that are running Windows 95, Windows for Workgroups 3.x, LAN Manager, or Windows NT. (Of course, you can connect to a Windows 95 computer running Microsoft File and Printer Sharing for NetWare.)

To get VLM client support, you must add the Novell NetWare (Workstation Shell 4.0 and above [VLM]) client by using the Network option in Control Panel, as described earlier in this section. With this configuration, you will see only VLM listed in Control Panel. No network adapter or protocol will be listed.

The following table lists the required settings for the CONFIG.SYS and AUTOEXEC.BAT files if you use VLM as the sole network client.

Configuration File Settings for VLM as the Sole Client

Filename	Required settings
CONFIG.SYS	LASTDRIVE=drive letter
AUTOEXEC.BAT	STARTNET.BAT
STARTNET.BAT	LSL.COM
	ODI driver

IPXODI.COM

VLM.EXE

F: ; that is, First Network Drive in
NET.CFG

LOGIN

C:

The following table summarizes the minimum settings that you should see in the Network option in Control Panel if you install Windows 95 with VLM as the sole client.

Network Settings for VLM as the Sole Client

Network component	Options
NetWare (Workstation Shell 4.X [VLM])	If logging onto NetWare servers, Novell NetWare (Workstation Shell 4.X [VLM]) should be selected in the Primary Network Logon box. All other settings are configured in NET.CFG.
Network adapter	On the General properties sheet for the adapter, the Real Mode (16- Bit) ODI Driver option should be checked.
Novell IPX ODI	Settings are configured in NET.CFG.

Setting the LastDrive Parameter for VLM

Windows 95 uses the value of the LastDrive= entry in the registry to allocate enough storage space in the internal memory structures to recognize drive letters for devices. For example, a setting of LastDrive=Z tells Windows 95 to recognize drive letters from A through Z.

The Novell-supplied NetWare 4.x redirector handles the LastDrive= entry the same way that Windows 95 does. That is, both the NetWare 4.x redirector and Windows 95 allow drive letters to be used to connect to redirected network drives up through the drive letter specified by the LastDrive= entry. By default, Windows 95 sets the entry to read LastDrive=Z when the NetWare 4.x workstation shell is selected as the additional network.

The NetWare 4.x redirector uses the First Network Drive= entry in the NET.CFG file to identify the first network drive that can be mapped. For more information about this setting, consult your NetWare documentation.

See also Netware Client Installation for Windows 95 (VLM).

CD-ROM Detection Troubleshooter

This troubleshooter helps you identify and resolve where your CD-ROM drive has not been detected. Just click to answer the questions, and then follow the step-by-step instructions to fix the problem. To move back a step, click Back at the top of each Help window.

Click here to continue.

CD-ROM Detection Troubleshooter

First, you need to check if the <u>SCSI</u> or IDE   controller is currently listed in   the Windows 95 Device Manager. Either click here [?] to view Device Manager through Windows 95 on-line help or follow   the procedure below.

To display Device Manager:

1 <u>Open</u> Control Panel.

2 <u>Double-click</u> the System Icon.

3 <u>Select</u> the Device Manager Tab.

4 Expand the branches for the   hard drive controller listing by clicking on its plus ("+") sign

Is the SCSI or IDE Controller to which the CD-ROM is attached listed in Device Manager?

[?]_____<u>Yes</u>

[?]_____<u>No</u>

CD-ROM Detection Troubleshooter

Most of the diagnostics information needed to troubleshoot the CD-ROM is found in the properties for the controller.

To display the controller properties:

1 Click on the controller entry to select it.

2 Click on the Properties button in the lower left corner of Device Manager.

In the General tab,   does the Device Status box show   "This device is working properly"?

[?]_____Yes
[?]_____No

CD-ROM Detection Troubleshooter

If the SCSI or IDE Controller does not appear in the Device Manager List,   you may need to add it the to your Windows 95 configuration..   For more specific information about how to add hardware, refer to the Windows 95 on-line help topic, "Setting up new hardware."

If you are currently viewing this in Windows 95, Click here [?] to display the help topic.

Do you want to return to the beginning of this troubleshooter?

[?]_____Yes

[?]_____No, close the Support Assistant.

CD-ROM Detection Troubleshooter

Is the Device Usage check box at the bottom of the General tab enabled for the current configuration?
(The current configuration is identified as the one with "Current" in parenthesis.)

[?]_____Yes
[?]_____No

CD-ROM Detection Troubleshooter

If it does not indicate the   device is working properly, the Device Status box will display the type of problem and a suggested solution.

You may also see a problem code and a number.   These codes can be helpful finding   a solution to your problem in the Microsoft Knowledge Base or when you calling Microsoft Product Support Services

Do you want to return to the beginning of this troubleshooter?

? _____ Yes

? _____ No, close the Support Assistant.

CD-ROM Detection Troubleshooter

Select the Resources tab in the controller properties.

Does the Conflicting Device List message box at the bottom show "No Conflicts"?

[?]   Yes
[?]   No

CD-ROM Detection Troubleshooter

You should click in the Device Usage checkbox to enable the controller under your current hardware configuration profile. Without the controller enabled, your CD-ROM will not appear in Windows 95.

For more information on activating or deactivating drivers in a hardware profile refer to "Enabling or disabling hardware in a hardware profile".

If you are currently viewing this in Windows 95, Click here [?] to display the help topic.

Do you want to return to the beginning of this troubleshooter?

[?]_____Yes

[?]_____No, close the Support Assistant.

CD-ROM Detection Troubleshooter

Since no conflicts are reported with the controller, it is likely the CD-ROM cannot use protected mode drivers because it must share the controller with other device requiring real mode drivers.   If multiple devices are connected to a SCSI or IDE controller, and any of the SCSI or IDE devices are not supported by Windows 95 with a protected mode driver; then, access to all devices connected to the controller must be provided via manufacturer supplied MS-DOS drivers only.   You should contact the device manufacturer or manufacturers for information on availability of protected mode Windows 95 drivers for these devices.

Do you want to return to the beginning of this troubleshooter?

[?]_____Yes

[?]_____No, close the Support Assistant.

CD-ROM Detection Troubleshooter

The conflicting devices will be displayed in the Conflicting Device   List.   Confirm that the Resource Settings match the actual hardware settings of the controller. You may need to refer to the <u>SCSI</u> or IDE controller documentation that the manufacturer provides.

Do the Resource Settings match the controllers hardware settings?

❓_____<u>Yes</u>

❓_____<u>No</u>

CD-ROM Detection Troubleshooter

The devices shown in   the Conflicting Device List are preventing the drive controller and its attached <u>CD-ROM</u> from being recognized by the system in protected mode.   While sharing of some device resources is possible in real mode, it is too risky to permit   while multitasking in protected mode. If you wish the CD-ROM to be accessible, you will need to either:

[?]   Change the hardware settings of the drive controller

or

[?]   Change the hardware settings of the conflicting device or devices

Do you want to return to the beginning of this troubleshooter?

[?]   Yes

[?]   No, close the Support Assistant.

CD-ROM Detection Troubleshooter

The reason your Resource Settings may not match the hardware setting   could be that the controller may not have been detected correctly.

If the Resource Setting   can be changed, you can adjust them from the Resources tab in the controller properties through the Change Settings button.

If not, try removing the   controller from the Device Manager list by selecting the controller entry and clicking the Remove button. After you close Device Manager and restart the system, follow the procedure to detect and add new hardware to the system as described in the Windows 95 on-line help topic, "Setting up new hardware."

If you are currently viewing this in Windows 95, Click here to display the help topic.

Do you want to return to the beginning of this troubleshooter?

       Yes

       No, close the Support Assistant.

Enhanced IDE (EIDE) Device Detection Troubleshooting Checklist

This troubleshooter helps you identify and resolve EIDE Device Detection issues. Just click to answer the questions, and then follow the step-by-step instructions to fix the problem. To move back a step, click Back at the top of each Help window.

[?]   Troubleshooting 32-bit protected mode support for EIDE devices.

[?]   Windows 95 does not detect the 3rd and 4th device(s) attached to the EIDE controller.

Troubleshooting 32-bit protected mode support for EIDE devices.

The IOS.INI file in the Windows directory has a list of drivers that have been tested for full Protected Mode (protected mode) support.).   To view the contents of the IOS.INI file, <u>open</u> the file with any text editor such as Windows 95s Notepad.

Is the name of the real mode (MS-DOS) device driver for the device present in the IOS.INI file?

[?]_____Yes
[?]_____No

Troubleshooting 32-bit protected mode support for EIDE devices.

The IOS.INI file, located in the Windows directory, contains a list of device drivers that Windows 95 can safely remove from the CONFIG.SYS file and replace with its protected mode IDE device driver (ESDI506.PDR.   If the real mode device driver name is not present in the IOS.INI file, Windows 95 will retain the real mode device driver in the CONFIG.SYS file and the devices attached to the controller will operate in MS-DOS Compatibility Mode.

You may add the name of the real mode device driver for the EIDE controller to the IOS.INI file in an attempt to get Windows 95 to operate the device in protected mode.   However, since the EIDE controller has not been tested by Microsoft for compatibility with the Windows 95 protected mode driver, Microsoft cannot support the configuration.   The possibility exists for data loss or corruption and performance degradation.

Do you want to return to the beginning of this troubleshooter?

[?]_____Yes
[?]_____No, close the Support Assistant.

Troubleshooting 32-bit protected mode support for EIDE devices.

To confirm if the EIDE controller is working correctly and all EIDE devices are available in real mode, you must load the real mode device driver for the device and be able to change to the drive letter that is used by the device.

To load real mode device drivers under Windows 95, using one of the following methods:

[?]   Check Disable all 32-bit protect mode disk drivers box in the Troubleshooting dialog box of Control Panel/System/Performance/File System.

   - or -

[?]   Remove the device from the current configuration in Control Panel/Device Manager and then restart Windows 95.

Does the EIDE controller work correctly? Are all EIDE devices available in real mode?

[?]_____Yes

[?]_____No

Troubleshooting 32-bit protected mode support for EIDE devices.

If the device(s) are not available using the real mode device drivers it is very likely that problem is not caused by a problem with protected mode support.   You may have a device driver configuration problem or a hardware failure or resource conflict.   Your hardware vendor is the best choice for assistance in resolving the problem.

Do you want to return to the beginning of this troubleshooter?

[?]_____Yes

[?]_____No, close the Support Assistant.

Troubleshooting 32-bit protected mode support for EIDE devices.

The Windows 95 protected mode IDE driver needs to use the INT13 hardware interface   to communicate with the IDE controller.   If another device driver is intercepting these calls, the Windows 95 protected mode driver will be unable to communicate directly with the device.   As a result all devices attached to the controller will use MS-DOS Compatibility Mode.

To check if there is a device driver or other program intercepting calls to INT13:

1. Open the IOS.LOG file located in the Windows directory with NOTEPAD or another text editor.   IOS.LOG will only be present if there is a device using MS-DOS Compatibility Mode.

2. Search for the line MBRINT13.

Is there a device driver or other program that is intercepting calls to Interrupt (INT) 13?

❓_____Yes
❓_____No

Troubleshooting 32-bit protected mode support for EIDE devices.

To attempt to isolate the device driver intercepting calls to INT13

1. Boot the and press the F8 function key to display the boot menu

2. Choose Step-by-Step Confirmation to selectly load or not load drivers in determine which driver may be responsible for the problem

Were you   able to locate the driver preventing access?

[?]_____Yes
[?]_____No

Troubleshooting 32-bit protected mode support for EIDE devices.

Congratulations on solving your problem!

Do you want to return to the beginning of this troubleshooter?

[?]   Yes

[?]   No, close the Support Assistant.

Troubleshooting 32-bit protected mode support for EIDE devices.

It is possible that a virus is interferring with protected-mode support. If a virus is present on the system, or in its Master Boot Record   (MBR), Windows 95 will receive incorrect information about the EIDE controller and the device(s) connected to it and will fail to load the   protected mode device driver.

To test for the existence of a virus on the system run a virus detection and removal program on the system.   For information regarding virus detection and removal programs, consult your software retailer.

Is there a virus present on the system, especially the master boot record (MBR)?

❓_____Yes
❓_____No

Troubleshooting 32-bit protected mode support for EIDE devices.

Remove the virus with a virus detection and removal program.

Do you want to return to the beginning of this troubleshooter?
❓_____Yes
❓_____No, close the Support Assistant.

Troubleshooting 32-bit protected mode support for EIDE devices.

It is possible that the manufacturer of the EIDE controller has drivers for 32-bit Disk Access for Windows 3.1x. In some instances a 32-bit Disk Access driver can be used to provide the same protected mode functionality as the Windows 95 protected mode driver.

Does the EIDE controller vendor, or hard disk drive vendor,   have 32-bit Disk Access drivers for the device?

Is there a virus present on the system, especially the master boot record (MBR)?

? _____ Yes

? _____ No

Troubleshooting 32-bit protected mode support for EIDE devices.

Follow the directions provided by the manufacturer of the 32-bit Disk Access driver for installation

Note:

The Windows 95 protected mode driver ESDI506.PDR may need to be disabled for the driver to work correctly.   If you have other IDE device that are currently using protected mode support through ESDI506.PDR, they will no longer have that support.

Do you want to return to the beginning of this troubleshooter?

[?]	Yes

[?]	No, close the Support Assistant.

Troubleshooting 32-bit protected mode support for EIDE devices.

Since all system software and driver issues have been explored, we are left with the configuration of the EIDE controller itself.   It is possible that selecting different modes of operation (i.e. Normal, Fast, Turbo, etc.)   may be successful.

[?]   Change the I/O bus speed of your EIDE controller from Fast to Normal or from Normal to Slow.

[?]   Disable or turn off   logical block addressing if the IDE hard disk drives are smaller than 503 MB.

[?]   Disable any other enhancements to the bus structure of the EIDE chain.

Warning   - Changing settings in this area should be done in consultation with the controller manufacturer and are supported by Microsoft. The following troubleshooting steps involve changes to the system BIOS or the settings of your EIDE controller card.   By changing the parameters of the system BIOS or the settings of your EIDE controller card, you may lose access to your EIDE and IDE devices and risk the possibility of data corruption.

Do you want to return to the beginning of this troubleshooter?

[?]   Yes

[?]   No, close the Support Assistant.

Troubleshooting detection of 3rd and 4th devices attached to the EIDE controller.

Geometry translation and partitioning programs are a common way of permitting large hard drivers to be used by MS-DOS above and beyond the 1024 cylinder limit imposed by the system BIOS.

Is there a geometry translation and partitioning utility being used, such as OnTrack Disk Manager or Microhouse EZDrive, that supports more than 2 IDE or EIDE devices?

❓_____Yes
❓_____No

Troubleshooting detection of 3rd and 4th devices attached to the EIDE controller.

Not all partitioning and geometry translation programs support more than 2 IDE or EIDE devices:

[?]   OnTracks Disk Manager 6.03 or higher does not support more than 2 IDE or EIDE devices on an EIDE controller.

[?]   Versions of   Microhouse EZDrive prior to 7.0 have problems recognizing the 3rd and 4th EIDE or IDE device.   Contact Microhouse for upgrade information.

Note - Using Microhouse EZDrive with more than 2 IDE or EIDE devices will force ALL EIDE or IDE devices into MS-DOS Compatibility Mode.

For specific information on the capabilities of your partitioning tool, contact the manufacturer of the product.

Do you want to return to the beginning of this troubleshooter?

[?]   Yes

[?]   No, close the Support Assistant.

Troubleshooting detection of 3rd and 4th devices attached to the EIDE controller.

Most EIDE controller cards need real mode device drivers loaded in the CONFIG.SYS file to see the 3rd and 4th EIDE or IDE device.

An example is the Promise EIDE2300.SYS driver that requires a "/S" switch to force detection of the 2nd IDE chain devices.

Does the real mode device driver(s)   loading in the CONFIG.SYS require special command line parameters to   support more than 2 IDE or EIDE devices?

[?]_____Yes

[?]_____No

Troubleshooting detection of 3rd and 4th devices attached to the EIDE controller.

Its likely your hardware may need to be examined and its configuration checked by a hardware specialist. Consult your hardware vendor for additional assistance.

Do you want to return to the beginning of this troubleshooter?

[?]   Yes

[?]   No, close the Support Assistant.

Troubleshooting detection of 3rd and 4th devices attached to the EIDE controller.

Consult your hardware documentation for the correct command line parameters.   Your hardware vendor will be the best source for additional information on this issue.

Do you want to return to the beginning of this troubleshooter?

[?]   Yes

[?]   No, close the Support Assistant.

Troubleshooting If Windows 95 Setup Fails

This troubleshooter helps you continue installing if Windows 95 Setup fails. Just click to answer the questions, and then follow the step-by-step instructions to fix the problem. To move back a step, click Back at the top of each Help window.

[?]   Click here to continue.

Troubleshooting If Windows 95 Setup Fails

Did you see any error messages when Setup failed?

❓_____Yes.

❓_____No.

Troubleshooting If Windows 95 Setup Fails

To see a list of Setup-specific errors, look under "Error Messages" in the Setup book in the Help Index. Do you want to return to the beginning of this troubleshooter?

❓ Yes.

❓ No, close the Support Assistant.

Troubleshooting If Windows 95 Setup Fails

Restart Setup, and then choose Smart Recovery when prompted.

Was Windows 95 set up successfully?

[?]_____ Yes.

[?]_____ No.

Troubleshooting If Windows 95 Setup Fails

The problem has been resolved.

Do you want to return to the beginning of this troubleshooter?

[?]   Yes.

[?]   No, close the Support Assistant.

Troubleshooting If Windows 95 Setup Fails

Does Setup fail at exactly the same place each time?

❓_____Yes.

❓_____No.

Troubleshooting If Windows 95 Setup Fails

Try starting your computer with minimal CONFIG.SYS and AUTOEXEC.BAT files by remarking out all lines that are not absolutely necessary (preceding the line by REM or a semicolon). Necessary drivers include, but are not limited to, SCSI drivers for the hard disk, third-party disk compression drivers, and HIMEM.SYS (if you are running Setup from within Windows).

Was Windows 95 set up successfully?

❓_____Yes.

❓_____No.

Troubleshooting If Windows 95 Setup Fails

The problem has been resolved.

Do you want to return to the beginning of this troubleshooter?

[?]   Yes.

[?]   No, close the Support Assistant.

Troubleshooting If Windows 95 Setup Fails

Did you run Setup from within Windows or Windows for Workgroups version 3.1x?

❓_____Yes.

❓_____No.

Troubleshooting If Windows 95 Setup Fails

Try running Windows with minimal .INI files; for example, set display= to VGA, and make sure there are no entries for the Load= and Run= lines of the WIN.INI file.

Was Windows 95 set up successfully?

❓   Yes.
❓   No.

Troubleshooting If Windows 95 Setup Fails

The problem has been resolved.

Do you want to return to the beginning of this troubleshooter?

[?]　　　　Yes.

[?]　　　　No, close the Support Assistant.

Troubleshooting If Windows 95 Setup Fails

Make sure the computer is capable of running Windows 95. See the document: "Windows 95 Hardware Compatibility List." Disable ROM BIOS shadowing, and check the BIOS date.

Do you want to return to the beginning of this troubleshooter?

❓   Yes.

❓   No, close the Support Assistant.

Troubleshooting Safe-Mode Startup

This troubleshooter helps you fix problems when you start your computer in <u>Safe Mode</u>. Just click to answer the questions, and then follow the step-by-step instructions to fix the problem. To move back a step, click Back at the top of each Help window.

<u>?</u>   <u>Click here to continue.</u>

Troubleshooting Safe-Mode Startup

To restart your computer in Safe Mode

1 Print this topic, click the Start menu, and then click Shut Down.

2 Click Restart The Computer, and then click Yes.

3 Press F5 when the "Starting Windows 95" message appears on your screen.

4 Return to the troubleshooter.

Did your computer start in Safe Mode?

[?]_____Yes.
[?]_____No.

Troubleshooting Safe-Mode Startup

After you start your computer in Safe-Mode, you can try some of the following steps to fix the problems that were preventing your computer from working properly:

[?]   In Control Panel, reconfigure system devices and drivers as necessary. If your computer is on a network, check the network configuration.

[?]   Use WIN /D: switches to isolate the problem.

Do you want to return to the beginning of this troubleshooter?

[?]   Yes.

[?]   No, close the Support Assistant.

Troubleshooting Safe-Mode Startup

To bypass your startup files and restart your computer at the command prompt:

1 Click the Start menu, and then click Shut Down.

2 Click Restart The Computer, and then click Yes.

3 Press SHIFT+F5 when the "Starting Windows 95" message appears on your screen.

Did the computer start at the command prompt and display the message "Windows is bypassing your startup files"?

[?]_____Yes.

[?]_____No.

Troubleshooting Safe-Mode Startup

To load your CONFIG.SYS and AUTOEXEC.BAT files one line at a time so you can check how drivers are loading

1 Print this topic, click the Start menu, and then click Shut Down.

2 Click Restart The Computer, and then click Yes.

3 Press SHIFT+F8 when the "Starting Windows 95" message appears on your screen.

4 Review each of your CONFIG.SYS and AUTOEXEC.BAT files as they are loaded.

5 Return to the troubleshooter.

Did you see any error messages?

Yes.

No.

Troubleshooting Safe-Mode Startup

To restart your computer at the command prompt

1 Print this topic, click the Start menu, and then click Shut Down.

2 Click Restart The Computer, and then click Yes.

3 Press CTRL+F5 when the "Starting Windows 95" message appears on your screen.

4 Return to the troubleshooter.

Did the computer start at a command prompt?

[?]_____Yes.

[?]_____No.

Troubleshooting Safe-Mode Startup

You have encountered errors that are specific to your computer.

Try looking under "Error Messages" in the Startup book in the Help Contents.

Troubleshooting Safe-Mode Startup

To use WIN /D switches to isolate the problem

1 Print this topic, click the Start menu, and then click Shut Down.

2 Click Restart The Computer, and then click Yes.

3 Press SHIFT+F5 when the "Starting Windows 95" message appears on your screen.

4 Use WIN /D: switches to isolate the problem or check device configuration by running MSD at the command prompt.

5 Return to the troubleshooter.

Do you want to return to the beginning of this troubleshooter?

❓ _____ Yes.

❓ _____ No, close the Support Assistant.

Troubleshooting Safe-Mode Startup

If you disabled the DoubleSpace or DriveSpace compression <u>driver</u> and your computer started properly, try the
following steps:

- Check your compression driver (DBLSPACE.BIN or DRVSPACE.BIN). If necessary, replace it.
- Verify the existence of a valid DBLSPACE.INI or DRVSPACE.INI file on the host drive.
- <u>Click here for information about replacing the Windows 95 operating system.</u>

Troubleshooting Safe-Mode Startup

To start your computer from a startup disk

[?]   Insert the Windows 95 startup disk or CD, and then restart your computer.

Did your computer start?

[?]   Yes.

[?]   No.

Troubleshooting Safe-Mode Startup

     Click here for information about replacing the Windows 95 operating system.

Troubleshooting Safe-Mode Startup

To resolve some common hardware conflicts, try carrying out the following steps:

[?]   Check the <u>BIOS</u> settings and verify that all boot devices (hard disk, floppy disk) are correctly specified and enabled. For more information, please refer to your manufacturer's documentation.

[?]   Check for UMB address conflicts between ROM options and installed devices. For more information, please refer to your manufacturer's documentation.

Note on entering your computers BIOS

[?]   For Phoenix computers, press CTRL+ALT+S or CTRL+ALT+ESC at startup.

For DELL computers, press CTRL+ALT+ENTER at startup.

For AMI computers, press the DEL key at startup.

Do you want to return to the beginning of this troubleshooter?

[?]   <u>Yes.</u>

[?]   <u>No, close the Support Assistant.</u>

Troubleshooting Booting to the Previous Operating System

This troubleshooter helps you boot to your previous operating system if Windows 95 is not working properly. Just click to answer the questions, and then follow the step-by-step instructions to fix the problem. To move back a step, click Back at the top of each Help window.

[?]_____Click here to continue.

Troubleshooting Booting to the Previous Operating System

1 Print this topic.

2 Shut down and restart Windows. When you see the message "Starting Windows 95," press F8.

3 Choose the Previous Operating System option.

If your previous operating system was MS-DOS 6.2x, do you see the "Starting MS-DOS" prompt?

❓_____ Yes. (If you are using a version of MS-DOS earlier than 6.2x, click this option.)

❓_____ No.

Troubleshooting Booting to the Previous Operating System

Are you using DoubleSpace or DriveSpace?

❓_____Yes.

❓_____No.

Troubleshooting Booting to the Previous Operating System

Try carrying out the following steps, and then restart your computer.

1 Insert a startup disk from your previous version of MS-DOS, and then restart the computer.

2 Check the partition by running FDisk and selecting option 4.

3 Check the system files, and replace them if necessary. To replace the system files, insert your startup disk into the startup drive, change to your startup disk, and then type **sys c:** at the command prompt.

Note

[?]　　　If you use **sys c:** to replace your previous system files, to return to Windows 95 you will need to **sys c:** the drive using the Windows 95 Startup Disk you created during Setup.

Do you want to return to the beginning of this troubleshooter?

[?]　　　Yes.

[?]　　　No, close the Support Assistant.

Troubleshooting Booting to the Previous Operating System

Does the operating system start?

❓_____Yes.

❓_____No.

Troubleshooting Booting to the Previous Operating System

Does the operating system start?

❓   Yes.

❓   No.

Troubleshooting Booting to the Previous Operating System

Do you get a Corrupt CVF error when you startup your computer?

❓ Yes.

❓ No.

Troubleshooting Booting to the Previous Operating System

Do you get an Invalid COMMAND.COM error when you startup your computer?

❓   Yes.

❓   No.

Troubleshooting Booting to the Previous Operating System

Check the following:

[?]   Specifically where in the process is the failure occurring?

[?]   Are there any error messages?

[?]   Are there any visible effects on the screen?

[?]   Are any functional effects discernible?

Do you want to return to the beginning of this troubleshooter?

[?]   Yes.

[?]   No, close the Support Assistant.

Troubleshooting Booting to the Previous Operating System

1 Insert a system disk from your previous version of MS-DOS, and restart the computer.

2 Try running MS-DOS clean boot (press F5) or Step-by-Step Confirmation (press SHIFT+F8) at the "Starting MS-DOS" prompt.

3 Check the partition by running FDisk, and selecting option 4.

4 Check the system files, and replace them if necessary. To replace the system files, insert your startup disk into the startup drive, change to the startup drive, and then type **sys c:** at the command prompt.

Note

[?]   If you use **sys c:** to replace you previous system files, to return to Windows 95 you will need to **sys c:** the drive using the Windows 95 Startup Disk you created during Setup.

Do you want to return to the beginning of this troubleshooter?

[?]   Yes.

[?]   No, close the Support Assistant.

Troubleshooting Booting to the Previous Operating System

Insert a system disk from your previous version of DOS, and restart your computer.

The DBLSPACE <u>CVF</u> is apparently damaged and is preventing the system from booting. Reboot the system from a MS-DOS boot disk NOT containing DBLSPACE.BIN (or press SHIFT-F5 at the "Starting Windows 95" prompt), and then run the SCANDISK utility on the damaged CVF.

Do you want to return to the beginning of this troubleshooter?

[?]   <u>Yes.</u>

[?]   <u>No, close the Support Assistant.</u>

Troubleshooting Booting to the Previous Operating System

Refine the issue:

[?]   Specifically where in the process is it failing?

[?]   Are there any error messages?

[?]   Are there any visible effects on the screen?

[?]   Are there any functional effects discernible?

Do you want to return to the beginning of this troubleshooter?

[?]   Yes.

[?]   No, close the Support Assistant.

Troubleshooting Booting to the Previous Operating System

1 Check the SHELL= line in the CONFIG.SYS file to verify that the path specified is valid.

2 Copy COMMAND.COM from the MS-DOS Setup Disk #1 to the <u>host</u> drive, and then restart your computer.

Do you want to return to the beginning of this troubleshooter?

[?]_____<u>Yes.</u>

[?]_____<u>No, close the Support Assistant.</u>

Troubleshooting Booting to the Previous Operating System

Does this occur when you use press F5 to start your computer in MS-DOS mode?

[?]_____Yes.

[?]_____No.

Troubleshooting Booting to the Previous Operating System

You cannot connect to a node on the network.

Do you want to return to the beginning of this troubleshooter?

[?]   Yes.

[?]   No, close the Support Assistant.

Troubleshooting Booting to the Previous Operating System

Use F8 Interactive Start to check the configuration files.

Using a text editor, edit entries of the CONFIG.SYS and AUTOEXEC.BAT files for the drivers or TSRs which are being loaded, and remark out (by preceding the command with REM or a semicolon) any unnecessary or problematic drivers or TSRs.

Do you want to return to the beginning of this troubleshooter?

❓   Yes.

❓   No, close the Support Assistant.

/b SYS'ing the boot drive

To replace or reinstall the real-mode system files to drive C

[?]   Boot from the startup disk you made during Windows 95 Setup. Run SYS C: from the Startup Disk. This will copy IO.SYS, MSDOS.SYS, and COMMAND.COM to C: (and if you have with MS-DOS 6.2x, DrvSpace.BIN will also be copied), and will rewrite the boot sector.

Note

[?]   If you are using compression (for example, DriveSpace or DoubleSpace) you will need to SYS the <u>host</u> drive, which may not be C.

Do you want to return to the beginning of this troubleshooter?

[?]   <u>Yes.</u>

[?]   <u>No, close the Support Assistant.</u>

Troubleshooting Replacing the Windows 95 Operating System

This troubleshooter helps you replace operating system files if Windows 95 is not working properly. Just click to answer the questions, and then follow the step-by-step instructions to fix the problem. To move back a step, click Back at the top of each Help window.

[?]_____Click here to continue.

Troubleshooting Replacing the Windows 95 Operating System

To replace the real-mode operating-system files

1 Insert your Windows 95 startup disk into your startup drive, and then restart your computer.

2 Change to your startup drive, and then type **sys c:** at the command prompt.

3 Remove the startup disk, and then restart your computer..

Did Windows 95 start properly?

[?]_____Yes.

[?]_____No.

Troubleshooting Replacing the Windows 95 Operating System

The problem has been resolved.

Do you want to return to the beginning of this troubleshooter?

[?]   Yes.

[?]   No, close the Support Assistant.

Troubleshooting Replacing the Windows 95 Operating System

If Windows 95 still won't start, you may need to replace or repair real-mode operating-system files or data structures on the hard disk.

[?]   Open the topic "Replacing the Windows 95 Real-Mode Operating-System Files and Data Structures,"and follow its procedures. If your computer still does not start properly, return to this troubleshooter and click Back until you see this topic, and then continue answering questions.

Does the computer now start up properly?

[?]   Yes.
[?]   No.

Troubleshooting Replacing the Windows 95 Operating System

The problem has been resolved.

Do you want to return to the beginning of this troubleshooter?

[?]   Yes.

[?]   No, close the Support Assistant.

Troubleshooting Replacing the Windows 95 Operating System

If Windows 95 still won't start, try booting to a previous operating system:

      Click here to start the Troubleshooting Booting to a Previous Operating System troubleshooter.

Replacing the Windows 95 Real-Mode Operating-System Files and Data Structures

Windows 95 uses the same names for the real-mode operating-system files as MS-DOS does: IO.SYS, MSDOS.SYS, and COMMAND.COM. To support booting to a previous version of MS-DOS, these files are renamed with a .DOS filename extension when your computer boots to Windows 95.

If the IO.SYS file is missing

If IO.SYS is missing, the computer will lock up before the "Starting Windows 95" message would have appeared on your screen. The following error message is displayed:

> Invalid System Disk

> Replace the disk, and then press any key.

You will need a bootable Windows 95 disk (such as the startup disk you created during Setup) to restart the computer. You will then need to reinstall the real-mode operating-system files to drive C as described below.

If the MSDOS.SYS file is missing

If only MSDOS.SYS is missing, no error message is displayed. Windows 95 will rename the MSDOS.W40 file if it exists. The MSDOS.SYS file is not required by Windows 95 and (other than renaming the .W40) will be ignored if it is missing.

If the COMMAND.COM file is missing

You should replace COMMAND.COM in the root directory of your startup drive (usually drive C). You can copy it from the startup disk you created during Windows 95 Setup, if available.

To copy COMMAND.COM

[?]   Insert the startup disk into drive A, and then at the command prompt type:
copy a:command.com c:

To replace or reinstall the real-mode operating-system files to drive C

1 Shut down your computer.

2 Insert the startup disk made during Windows 95 Setup in your startup disk drive.

3 Change to your startup drive, and then type **sys c:** at the command prompt. This will copy IO.SYS, MSDOS.SYS, and COMMAND.COM to the C drive and will rewrite the boot sector.

Troubleshooting When Windows 95 Does Not Start

This troubleshooter helps you fix problems when Windows 95 does not start. Just click to answer the questions, and then follow the step-by-step instructions to fix the problem. To move back a step, click Back at the top of each Help window.

[?]   Click here to continue.

Troubleshooting When Windows 95 Does Not Start

Do you see the "Starting Windows 95" prompt?

[?]＿＿＿＿＿ Yes.

[?]＿＿＿＿＿ No.

Troubleshooting When Windows 95 Does Not Start

Do you see the Windows 95 startup screen?

❓   Yes.

❓   No.

Troubleshooting When Windows 95 Does Not Start

Do you receive one of the following error messages at startup?

Invalid System Disk

or

NO ROM BASIC - SYSTEM HALTED

[?]_____Yes.

[?]_____No.

Troubleshooting When Windows 95 Does Not Start

When you see the Windows startup screen, press the Escape key (ESC).

Did you see any errors ?

❓   Yes.
❓   No.

Troubleshooting When Windows 95 Does Not Start

 Click here to start the Safe-Mode Startup troubleshooter.

Troubleshooting When Windows 95 Does Not Start

If the IO.SYS file is missing off of a boot disk, or the disk in the boot drive is not a system disk, the computer locks up before the "Starting Windows 95" message appears, and the following message is displayed:

Invalid System Disk

Replace or remove the disk, and then press any key.

A bootable Windows 95 disk (such as the startup disk you created during Setup or by using the SYS command) may be required to start the computer. You would then need to reinstall the real-mode operating system.

Do you want to return to the beginning of this troubleshooter?

[?]　　　Yes.

[?]　　　No, close the Support Assistant.

Troubleshooting When Windows 95 Does Not Start

If you do not have any kind of video I/O (graphics or text on the screen), you are most likely experiencing a video problem. Make sure that your connections are good and that your monitor is turned on.

Do you want to return to the beginning of this troubleshooter?

[?]   Yes.

[?]   No, close the Support Assistant.

Troubleshooting When Windows 95 Does Not Start

You may need to reconfigure system devices or drivers. To load your <u>CONFIG.SYS</u> and <u>AUTOEXEC.BAT</u> one line at a time, use <u>Interactive Start</u>.

To use Interactive Start:

[?] At system startup, press F8. Choose the Step-by-step Configuration option.

If you can start Windows 95 at all, use Control Panel to check that devices and networks are configured properly. You can use WIN /D: switches to isolate the problem. For more information, see <u>WIN.COM Switches</u>.

Do you want to return to the beginning of this troubleshooter?

[?] <u>Yes.</u>

[?] <u>No, close the Support Assistant.</u>

Troubleshooting When Windows 95 System Does Not Start

      Click here to start the Safe-Mode Startup troubleshooter

Network Troubleshooting Steps

This troubleshooter helps you if there is a problem with the network. Just click to answer the questions, and then follow the step-by-step instructions to fix the problem. To move back a step, click Back at the top of each Help window.

[?]   Click here to continue.

Network Troubleshooting Steps

Can you see the computer in the Network Neighborhood?

[?]   Yes.

[?]   No.

Network Troubleshooting Steps

Unless the computer you are attempting to browse is on one of the networks listed below, make sure that <u>shares</u> have been set up for that computer.

Networks not typically listed in the <u>Network Neighborhood</u> include: LANtastic, Banyan VINES, Beame and Whiteside NFS, DEC Pathworks (before version 5), PC-NFS, TCS 10NET, or Mainframe Connectivity. If a 16-bit network provider does not provide a <u>browsing</u> scheme, it will not appear in the Network Neighborhood. For more information on third-party networks, see <u>Windows 95 on Other Networks: The Basics</u>.

Do you want to return to the beginning of this troubleshooter?

[?]_____<u>Yes.</u>

[?]_____<u>No, close the Support Assistant.</u>

Network Troubleshooting Steps

Can you map a drive to the network computer?

❓_____Yes.

❓_____No.

Network Troubleshooting Steps

This is a browsing issue. Things to check include:

[?]   Default protocol

[?]   Workgroup name

To test Browsing in real mode

1 Restart your computer, and press F8 when you see the message "Starting Windows 95."

2 Choose Safe Mode With Network Support.

If browsing still fails, then the Browse Master has probably failed.

Are you trying to browse across a router? This will not work unless there is a Windows NT server as domain controller on each side of the router.

Are you using a Novell(r) NetWare server? NetWare uses SAP to maintain its list of servers. Windows 95 relies on this in maintaining its server lists. This is an issue for NetWare. For more information about SAP, please refer to your Novell NetWare documentation.

If you need to understand browsing better, see Browsing Basics.

Do you want to return to the beginning of this troubleshooter?

[?]   Yes.

[?]   No, close the Support Assistant.

Network Troubleshooting Steps

Can you start Windows in safe mode with network support?

1 Print this topic, and then restart your computer.

2 When you see the message "Starting Windows 95," press F8.

3 Choose Safe Mode With Network Support.

4 Return to the troubleshooter.

Did this work?

[?]_____Yes.

[?]_____No.

Network Troubleshooting Steps

Make sure you have these network items:

[?]   Client for Microsoft Networks

[?]   NetBEUI protocol

[?]   A network adapter

[?]   File and Print Sharing

If you make any changes, restart your computer, and return to this troubleshooter.

Can you see the network now?

[?]   Yes.

[?]   No.

Network Troubleshooting Steps

This appears to be a protocol issue.

To check protocols

1 Click the Start button, <u>point</u> to Settings, and then click Control Panel.

2 Double-click the Network icon.

3 Check the following:

[?]   Click <u>IPX/SPX</u>, click Properties, and then click the Advanced tab. Click Frame Type, and then make sure the value of the frame types is valid.

[?]   Click<u>TCP/IP</u>, click Properties, and then click the <u>IP Address</u> tab. Make sure your IP address is configured correctly.

Do you want to return to the beginning of this troubleshooter?

[?]   <u>Yes.</u>

[?]   <u>No, close the Support Assistant.</u>

Network Troubleshooting Steps

Enable the real-mode driver

1 Click the Start button, <u>point</u> to Settings, and then click Control Panel.

2 Double-click the Network icon.

3 Click your <u>network adapter</u>, and then click Properties.

4 Click the <u>NDIS2</u>-only (real-mode) driver, click OK

5 Click OK, and then   restart your computer.

6 Return to this troubleshooter.

Does it work now?

[?]_____Yes.

[?]_____No.

Network Troubleshooting Steps

This appears to be an issue with the NDIS 3.1 driver. Check with the manufacturer to see if an updated driver is available.

Do you want to return to the beginning of this troubleshooter?

❓   Yes.

❓   No, close the Support Assistant.

Network Troubleshooting Steps

This appears to be an issue with the NIC driver.

Check the driver properties

1 Click the Start button, point to Settings, and then click Control Panel.

2 Double-click the Network icon.

3 Click the NIC driver, click Properties, and make sure its configuration is correct.

4 If you make any changes, restart your computer, and return to this troubleshooter.

Do you want to return to the beginning of this troubleshooter?

❓_____Yes.

❓_____No, close the Support Assistant.

Network Troubleshooting Steps

Can you run Net Diag?

1 Print this <u>topic</u>, and then restart your computer.

2 When you see the message "Starting Windows 95," press F8.

3 Choose Command Prompt Only.

4 At the command prompt, type **net diag**

5 Restart Windows, and return to this troubleshooter.

Did Net Diag run successfully?

[?]_____<u>Yes.</u>
[?]_____<u>No.</u>

Network Troubleshooting Steps

This appears to be an issue with the hardware configuration.

[?]   Check cabling, the network card, and other associated components.

Do you want to return to the beginning of this troubleshooter?

[?]   Yes.

[?]   No, close the Support Assistant.

Network Troubleshooting Steps

This appears to be an issue with the logical components of the network. Possibilities include upper memory conflicts.

Do you want to return to the beginning of this troubleshooter?

[?]   Yes.

[?]   No, close the Support Assistant.

Troubleshooting PPP Internet Connections

This troubleshooter helps you if your computer will not connect to the Internet by using PPP. Just click to answer the questions, and then follow the step-by-step instructions to fix the problem. To move back a step, click Back at the top of each Help window.

[?]_____ Click here to continue.

Troubleshooting PPP Internet Connections

Make sure Microsoft TCP/IP protocol is installed.

1 Click the Start Button, point to Settings, and then click Control Panel.

2 Double-click the Network icon, and look in the list to make sure TCP/IP is installed.

[?]   Yes, TCP/IP is installed.

[?]   No, it is not installed.

Troubleshooting PPP Internet Connections

To add TCP/IP protocol

1 Click Add, and then click Protocol.

2 In the Manufacturers list, click Microsoft, and then in the Protocols list, click TCP/IP. Click OK, and follow the instructions on your screen.

3 Click Dial-Up Adapter, and then click Properties.

4 On the Binding tab, make sure that the box next to TCP/IP is checked.

5 Restart your computer and return to this troubleshooter.

Do you want to return to the beginning of this troubleshooter?

[?]   Yes.

[?]   No, close the Support Assistant.

Troubleshooting PPP Internet Connections

Does your Internet provider support CHAP or PAP authentication protocols?

If you do not know the answer, please contact your provider.

❓ Yes, these protocols are supported.

❓ No, these protocols are not supported.

Troubleshooting PPP Internet Connections

Display the terminal window

1 Click the Start Button, <u>point</u> to Programs, point to Accessories, click HyperTerminal, and then double-click Hypertrm.

2 On the File menu, click Properties, and then click the Settings tab.

Are you now able to connect?

[?]_____Yes. .
[?]_____No.

Troubleshooting PPP Internet Connections

Make sure you are using the correct <u>password</u>. (The password is case-sensitive.)

Are you now able to connect?

[?]   <u>Yes. .</u>
[?]   <u>No.</u>

Troubleshooting PPP Internet Connections

The problem has been resolved.

Do you want to return to the beginning of this troubleshooter?

[?]   Yes.

[?]   No, close the Support Assistant.

Troubleshooting PPP Internet Connections

The problem has been resolved.

Do you want to return to the beginning of this troubleshooter?

[?]   Yes.

[?]   No, close the Support Assistant.

Troubleshooting PPP Internet Connections

Does your Internet provider automatically detect the use of IP header compression ?

If you do not know the answer, please contact your provider.

[?]   Yes, compression is automatically detected.

[?]   No, compression is not automatically detected.

Troubleshooting PPP Internet Connections

Contact your Internet provider.

Do you want to return to the beginning of this troubleshooter?

[?]   Yes.

[?]   No, close the Support Assistant.

Troubleshooting PPP Internet Connections

To turn off IP header compression

1 Click the Start Button, <u>point</u> to Settings, and then click Control Panel

2 Double-click the Network icon.

3 Click Dial-Up Adapter, and then click Properties.

4 Click the Advanced tab. In the property list, click use IP Header Compression, click in the Value box, and then click No.

Are you now able to connect?

[?]_____Yes.

[?]_____No.

Troubleshooting PPP Internet Connections

Contact your Internet provider.

Do you want to return to the beginning of this troubleshooter?

      Yes.

      No.

Troubleshooting PPP Internet Connections

The problem has been resolved.

Do you want to return to the beginning of this troubleshooter?

[?]Yes.

[?]No, close the Support Assistant.

Setting Up Novell(r) NetWare VLM Client in Windows 95

This troubleshooter helps you set up NetWare VLM <u>Client</u>. Just click to answer the questions, and then follow the step-by-step instructions to fix the problem. To move back a step, click Back at the top of each Help window.

Is a NetWare Client (VLM) installed for Windows 95?
[?]   <u>Click here to continue.</u>

Setting Up Novell(r) NetWare VLM Client in Windows 95

Is Windows 95 installed?

❓   <u>Yes.</u>

❓   <u>No.</u>

Setting Up Novell(r) NetWare VLM Client in Windows 95

1 Install Windows 95.

2 Return to this troubleshooter.

Do you want to return to the beginning of this troubleshooter?

❓   Yes.

❓   No, close the Support Assistant.

Setting Up Novell(r) NetWare VLM Client in Windows 95

Are NetWare client services already installed?

[?]_____Yes.

[?]_____No.

Setting Up Novell(r) NetWare VLM Client in Windows 95

To add the NetWare client services

1 Click the Start button, <u>point</u> to Settings, and then click Control Panel.

2 Double-click the Network icon.

3 Click Add, click <u>Client</u>, and then click Add.

4 In the Manufacturers list, click Microsoft.

5 In the Network Clients list, double-click Client for NetWare Networks. Follow the instructions on your screen.

6 Click Client for NetWare Networks, and then click Properties.

7 Specify your preferred login <u>server</u> in the specified space.

The VLM Client is now installed. You will need to restart your computer.

Do you want to return to the beginning of this troubleshooter?

[?]_____<u>Yes.</u>

[?]_____<u>No, close the Support Assistant.</u>

Setting Up Novell(r) NetWare VLM Client in Windows 95

Microsoft <u>client</u> services are already installed.

Do you want to return to the beginning of this troubleshooter?

[?]   <u>Yes.</u>

[?]   <u>No, close the Support Assistant.</u>

Setting Up Novell(r) NetWare NETX Client in Windows 95

This troubleshooter helps you set up NetWare NETX <u>Client</u>. Just click to answer the questions, and then follow the step-by-step instructions to fix the problem. To move back a step, click Back at the top of each Help window.

Is a NetWare Client installed for Windows 95?

<u>Click here to continue.</u>

Setting Up Novell(r) NetWare NETX Client in Windows 95

Was NetWare working correctly at the MS-DOS level before you installed Windows 95?

[?]_____Yes.

[?]_____No.

Setting Up Novell(r) NetWare NETX Client in Windows 95

Contact Novell(r) for support with NetWare installation.

Do you want to return to the beginning of this troubleshooter?

[?]   Yes.

[?]   No, close the Care Package.

Setting Up Novell(r) NetWare NETX Client in Windows 95

Are the LSL, Multiple Link Interface Driver (MLID), IPXODI, and NETX (version 3.26 or higher) supported by Windows 95?

Check your Novell NetWare documentation to see whether your drivers are supported by Windows 95.

❓ Yes, they are supported.

❓ No, they are not supported.

Setting Up Novell(r) NetWare NETX Client in Windows 95

Contact your Novell vendor for updated support files.

Do you want to return to the beginning of this troubleshooter?

[?]   Yes.

[?]   No, close the Care Package.

Setting Up Novell(r) NetWare NETX Client in Windows 95

Did you log on to the NetWare server before you started Windows 95 Setup?

[?]_____Yes.

[?]_____No.

Setting Up Novell(r) NetWare NETX Client in Windows 95

Log on to the NetWare server first, and then begin Windows 95 Setup.

Do you want to return to the beginning of this troubleshooter?

[?]   Yes.

[?]   No, close the Care Package.

Setting Up Novell(r) NetWare NETX Client in Windows 95

Are there multiple NetWare files in the path?

You can find out by checking the PATH statement in your AUTOEXEC.BAT file.

[?]Yes, there are.

[?]No, there are not.

Setting Up Novell(r) NetWare NETX Client in Windows 95

Run MSD

1 Click the Start Button, point to Programs, and then click MS-DOS Prompt.

2 Type **msd** at the command prompt. This determines which NET.CFG file is being used by the LinkSupport Layer (LSL).

3 Delete all NetWare support files not in use.

Do you want to return to the beginning of this troubleshooter?

[?]   Yes.

[?]   No, close the Care Package.

Setting Up Novell(r) NetWare NETX Client in Windows 95

How are you installing Novell-supplied NetWare client services?

[?]   From Control Panel after Setup.

[?]   During Windows 95 Setup.

Setting Up Novell(r) NetWare NETX Client in Windows 95

[?]　　　　Click here to go to the Install a NetWare Client (NETX) in Windows Setup procedure.

Do you want to return to the beginning of this troubleshooter?

[?]　　　　Yes.

[?]　　　　No, close the Care Package.

Installing a NetWare Client (NETX) in Windows Setup

1 Run Windows 95 Setup, and choose the Custom setup option.

2 When you get to the Network setup window, click Add.

3 Click <u>Client</u>, and then click Add.

4 <u>Select</u> Novell in the Manufacturers list and Workstation Shell 3.X in the Network Clients list.

5 Click OK, click Close, and continue with Setup.

Setting Up Novell(r) NetWare NETX Client in Windows 95

[?]   Click here to go to the Install a NetWare Client (NETX) Through Control Panel procedure.

Do you want to return to the beginning of this troubleshooter?

[?]   Yes.

[?]   No, close the Care Package.

Installing a NetWare Client (NETX) through Control Panel

1 Click the Start Button, <u>point</u> to Settings, and then click Control Panel.

2 Double-click the Network icon.

3 Click each installed network <u>client</u> and click Remove.

4 Click Add, click Client, and then click Add.

5 Click Novell in the Manufacturers list, click Workstation Shell 3.X [NETX] in the Network Clients list, and then click OK. Follow the instructions on your screen.

6 Click the <u>network adapter</u>, and then click Properties.

7 Click Real Mode (16-bit) ODI driver, and then click OK.

To install Generic Real-Mode (16-bit) Networking Components in Windows 95

If all other network installation instructions fail, you can follow this procedure to install real-mode networking:

1 Click the Start Button, <u>point</u> to Settings, and then click Control Panel.

2 <u>Double-click</u> the Network <u>icon</u>, and then remove all networking components. Make sure you note which items you are removing.

3 Print this topic, and then restart Windows 95. You can ignore error messages regarding the network.

4 Click the Start Button, point to Settings, and then click Control Panel.

5 Double-click the Network icon, and install all of your previous drivers. Make sure you have each one support real-mode (16-bit) networks.

6 Restart Windows 95. You can now install any protected-mode (32-bit) networking components that you need.

Enhancements and Expansions to Windows 95

There are many services and products offered by Microsoft which can enhance your knowledge and enjoyment of Windows 95.

[?]   Products which enhance Windows 95
[?]   Services which enhance Windows 95

[?]   What's available on-line?

Services which enhance Windows 95

? Microsoft Support Network

? Microsoft Online Institute

? Microsoft CompuServe and GEnieTM and AOL Support

? Microsoft Certified Professional - Training and Exams

? Microsoft Knowledge Base

Products which enhance Windows 95

      Microsoft Plus! for Windows 95
      The Microsoft Network
      Microsoft TechNet CD

The Microsoft Knowledge Base

The Microsoft KnowledgeBase is a primary Microsoft product information source for Microsoft support engineers that is updated daily. This comprehensive database contains some 50,000 detailed articles with technical information about Microsoft products, bug lists, fix lists, documentation errors, and answers to commonly asked technical support questions.

The Microsoft KnowledgeBase is available through CompuServe, GEnieTM, Microsoft OnLine (MSN), the Microsoft TechNet CD-ROM disc, Microsoft Developer Network CD-ROM disc, and now the Internet.   The KnowledgeBase Article Browser is a full-text and field search and retrieval application for the Microsoft KnowledgeBase.

The KnowledgeBase Article Browser lets you:

[?]   Create and save KnowledgeBase queries.
[?]   View, print, and save KnowledgeBase articles.
[?]   Comment on KnowledgeBase articles.

The KnowledgeBase should be your first problem-solving resource.   Check the KnowledgeBase before trying any other resources, such as PSS or the product groups.

All of the press releases that Microsoft Corporate Headquarters sends out are also made into KnowledgeBase articles.

The Microsoft Knowledge Base is accessible from many different products and services:

The TechNet CD comes with the Knowledge Base on-line.   Click here [?] for more information on the TechNet CD.

Our Internet services provide access to the Knowledge Base.   Click here [?] for more information on our Internet services.

Our new online network, The Microsoft Network, has access to the Knowledge Base.   Click here [?] for more information.

Microsoft Support Network

Microsoft has extensive resources available for all your support needs, from answers to basic questions about your operating system to expert help on all the Microsoft applications you might wish to run with it.

Among the support options you can choose from are:

[?]   The Microsoft Knowledge Base
[?]   Microsoft FastTips
[?]   Microsoft Solution Providers
[?]   Microsoft Software Library and Download Service
[?]   Microsoft CompuServe and GEnieTM and AOL Support
[?]   Microsoft Online Institute
[?]   Microsoft Telephone Support

Microsoft Telephone Support

Microsoft has Support Engineers standing by to help you install, configure, troubleshoot, or use your Microsoft products.

Microsoft Sales Information Center	1-800-936-3500
Microsoft Sales Fax Services	1-800-727-3351
Microsoft Personal Operating Systems	(206) 936-7329

Support Options

Premier Support	1-800-936-3100
Priority Comprehensive	1-800-936-5900 / 1-900-555-2100
Priority Development with Desktop	1-800-936-5800 / 1-900-555-2300
Priority Desktop	1-800-936-5700 / 1-900-555-2000
Microsoft Support Consulting Line	1-800-936-1565

       Support for The Microsoft Nework

Support for The Microsoft Network

	Customer Service	Technical Support
U.S. and Canada	1-800-386-5550	(214) 776-2626
French Canadian	1-800-952-1110	(214) 776-2641
Mexico	95-800-215 6987	(214) 776-2640
Other Latin America	813-577-9916	(214) 776-2640

Microsoft Download Service

This library includes binary files, sample code, technical notes, and utilities that users can search by keyword and download locally.

CompuServe	GO MSL
Microsoft Download Service (MSDL)	(206) 936-6735

Microsoft FastTips

The FastTips services provide toll-free access to automated information about key Microsoft products. You can access common question and answers as well as technical articles, via voice, fax, and U.S. Mail. There is an 800 number for each of the Microsoft Support Network product clusters:

FastTips for Desktop Applications   (Word, Excel, Works etc.)   (800) 936-4100

FastTips for Personal Operating Systems   (Windows, DOS, etc.)   (800) 936-4200

FastTips for Development Products   (Visual Basic, C++, etc.)   (800) 936-4300

FastTips for Business Systems   (Windows NT, MS Mail, etc.)   (800) 936-4400

Microsoft Solution Providers

United States and Canada   1-800-**SOL-PROV** (765-7768)

Microsoft CompuServe and GEnie Support

Facilitated by Microsoft, the many forums available on CompuServe provide an interactive dialog with the worldwide community of Microsoft customers.   Microsoft monitors and provides technical support for all Microsoft issues.   MS also provides the KnowledgeBase, open to the public and containing over 50,000 articles written by Microsoft support and development engineers on virtually every aspect of Microsoft products!   Also available is the MS Software Library, in which the latest Microsoft tested and supported printer drivers, video drivers, and network drivers, as well as a variety of Hot Patches and AppNotes, are available for downloading.

CompuServe Sales Information   1-800-848-8199   representative 230

Microsoft provides the KnowledgeBase and the Microsoft Software Library, but no technical support on Genie.

GEnieTM Information Services   1-800-638-9636

America OnLine (**AOL**) is a world wide Bulletin Board service. Microsoft PSS does not provide any support or files on this service.

AOL Customer Service   1-800-827-6364
outside the US   1-703-893-6288

[?]   Microsoft CompuServe Forums

Microsoft CompuServe Forums

The interface most commonly used for CompuServe access, WinCim, is available from CompuServe Sales Information.   It can be installed from the Microsoft TechNet CD, and CompuServe even has a version of WinCim customized for Microsoft!   Microsoft provides the following services on CompuServe:

The Microsoft Knowledge Base

The Microsoft Software Library

End User Services: Networking, MS Windows and MS-DOS Forums

The Microsoft Developer Services Area

Windows Shareware Forums

The Microsoft North American and International Forums

The Microsoft Developer Services Area

This centralized area provides developers with technical information for all Microsoft developer products.

Developer Products

MSDNLIB	MS Developers Network Forum
TECHNET	MS TechNet Forum
MSDEV	MS Developer Relations Forum

Developers Products and Services

MSKB	The MS KnowledgeBase
MSL	MS Software Library
MSDN	MS Developers Network
MSBASIC	MS Basic Programming Language
MSLANG	MS Programming Languages
MSMFC	Microsoft Foundation Classes
FOXFORUM	Foxpro Development
WINSDK	Windows Developers
MSWIN32	32 bit Development
WINTLDEV	International Development
WINEXT	Extensions Development
WINOBJECTS	Objects Development
OLESOLNS	Ole Industry Solutions
PROGMSA	Program Applications
WINMM	Multimedia Development
WINETA	MS Networking

End User Services: Networking, MS Windows and MS-DOS Forums

Technical support is available on more than 40 CompuServe forums that allow an interactive dialog between users as well as remote access to the Microsoft Knowledge Base of product information, which is updated daily. Microsoft support engineers monitor and participate in all forums to ensure complete and accurate information flow.

Desktop Applications

MSEXCEL	Microsoft Excel
MSWORD	Microsoft Word
MSHOME	Microsoft Home Products
MSDESKTOP	Microsoft Desktop Products (including Works)
PROGMSA	Programming Applications (WordBasic, Excel SDK)

Data Base Products

MSACCESS	Microsoft Access
FOXUSER	Microsoft Foxpro Users

Other Office Products

MSWGA	Microsoft Mail
MSOFFICE	Microsoft Office Setup
MSDESKTOP	Microsoft PowerPoint

Personal Operating Systems

MSDOS	MS-DOS
MSDOS622	MS-DOS 6.22 Download Forum
MSWIN	Windows Forum
WINNT	Windows NT Forum
MSWFWG	Windows for Workgroups Forum
WINFF	Windows File Finder

The Microsoft Knowledge Base on CompuServe

This database of technical information on Microsoft products includes bug lists, fix lists, records of documentation errors, and common questions and answers.

MSKB   The MS KnowledgeBase Forum

The Microsoft Software Library on CompuServe

This library includes binary files, sample code, technical notes, and utilities that users can search by keyword and download locally.

MSL   MSL - MS Software Library Forum

The Microsoft North American and International Forums

These unique forums provide support for localized products.

MSUSER   Support for the U.S. and Canada
MSINTL   International Support in many European and Asian Languages

Windows Shareware Forums on CompuServe

The following forums contain Microsoft and other shareware written for the Windows environment and available for download.   The forums are peer-to-peer forums and are not monitored or supported by Microsoft:

WINSHARE   WINAV - sounds, graphics and multimedia files

WINSHARE - system utilities, fonts, tools, database, reference and general Windows applications.

WINFUN - games, screen savers, icons, cursors, maps, travel & vacation and Kids Stuff.

WINBIZ - business utilities

WINREG - shareware registration and upload information

The Internet started with the ARPANET, but now includes such networks as the National Science Foundation Network (NSFNET), the Australian Academic and Research Network (AARNet), the NASA Science Internet (NSI), the Swiss Academic and Research Network (SWITCH), and about 10,000 other large and small, commercial and research, networks.   There are other major wide area networks that are not based on the TCP/IP protocols and are thus often not considered part of the Internet.   However, it is possible to communicate between them and the Internet via electronic mail because of mail gateways that act as "translators" between the different network protocols involved.

Internet - WWW, Gopher, and FTP

The Internet is a collection of thousands of networks linked by a common set of technical protocols which make it possible for users of any one of the networks to communicate with or use the services located on any of the other networks.   These protocols are referred to as TCP/IP or the TCP/IP protocol suite.

Microsoft World Wide Web   http://www.microsoft.com

Requirements: Any user with any computer, access to the Internet and a WWW client.

What's available: Searchable KnowledgeBase, Software Library Files, MSDN library, shareholder information, information on Microsoft Support Network, and sales information.

What's not available: Technical Support, User Interaction

Microsoft Gopher   gopher.microsoft.com

Requirements: Any user with any computer, access to the Internet and a Gopher client.

What's available: Software Library Files, MSDN library, shareholder information, information on Microsoft Support Network.

What's not available: Technical Support, User Interaction

Microsoft FTP ftp.microsoft.com

Requirements: Any user with any computer, access to the Internet and an FTP client.

What's available: Microsoft Software Library files.

Whats not available: Searchable KnowledgeBase.

 Microsoft has two products which can help you access the Internet:

 Click here for information on the Microsoft Network.

Click here for information on Microsoft Plus Pack Internet Jumpstart

Microsoft Online Institute

The Microsoft Online Institute is an on-line interactive training and information resource available to users of the Windows '95 operating system on the Microsoft Network. Using a campus theme, the Microsoft Online Institute will provide online access to Microsoft Certified Professional training, developer articles, user forums, and other resources for Microsoft product and technology information when it ships to the general public in August 1995. Currently, the Microsoft Online Institute is under construction on the Microsoft Network and offers classes to a limited beta student audience.

The Microsoft Online Institute combines the flexibility of self-study with the expertise of a certified instructor online, enabling Certified Professional training to be delivered at a user's desktop. This method of course delivery greatly adds to the convenience and flexibility of Microsoft product training, while reducing associated costs and time.

Microsoft Online Institute students learn from low-cost, electronic self-study course materials that enable them to more conveniently fit their training needs into their schedules. Students enter "virtual classrooms" online to receive instructor guidance, take exams, or to communicate with other students. These virtual classrooms bring the instructor-led classroom model online, via e-mail and bulletin boards, allowing a remote instructor to provide course assignments and individual progress goals and to answer questions.

In addition to online Certified Professional courses, the Microsoft Online Institute will provide users with online access to numerous other resources through it's virtual campus "buildings." Here are some of the resource areas that will be available in each campus building later this year.

Student Union	**Administration Services**
Guidance and Advisory	**Product Expertise**
Virtual "Classrooms"	**Certified Professional Training**
Libraries	**Technical Knowledge**
Bookstore	**Continuing Education**

If you are one of the 400,000 Windows '95 beta customers, access the Microsoft Online Institute by signing on to the Microsoft Network from the desktop. From the Edit menu, choose Go To, select Other Location, and type MOLI. Or, e-mail MOLI from within MSN mail, or moli@microsoft.com from the Internet.

If you are not a Windows '95 beta customer, but would like more information on the Microsoft Online Institute, from the United States and Canada please call (800) 449-9333, or, outside the United States and Canada call the appropriate regional number below. Please address correspondence to: Microsoft Corporation, One Microsoft Way, Redmond, WA 98052.

United Kingdom:	(0800) 96 02 79
Germany:	(0130) 81 02 11
France:	05 90 59 04
The Netherlands:	(06) 022 24 80
Switzerland (French speaking):	155 9491
Switzerland (German speaking):	155 9492
All other European countries:	(31)(10) 258 88 64
Australia, Malaysia, Singapore, New Zealand, Thailand:	(61)(2) 870 2250

What's available On-Line?

Microsoft has a wide variety of services available on what is now being called the Information Superhighway

[?]   Microsoft CompuServe and GEnieTM Support
[?]   Microsoft Internet sites (WWW, Gopher, and FTP)
[?]   Microsoft Online Institute
[?]   Microsoft Download Service
[?]   The Microsoft Network

Microsoft TechNet CD

Microsofts technical information CD subscription product will focus on Windows 95 for its August issue, providing 2600 pages of information valuable to every Windows user!

TechNet is a monthly subscription product designed for technical professionals who administer business applications and networks, coordinate products and platforms, support and train users, or evaluate and decide on new technology directions. The two TechNet CDs contain the most up-to-date support, strategy, training, and software information available from Microsoft.

The following is a partial list of topics that will appear in the August edition:

The Windows 95 Resource Kit

Windows 95 Support for Novell(r)

Windows 95 Training Materials

Windows 95 Remote Administration Features

Windows 95 Tips and Tricks

Windows 95 Troubleshooting Setup Guide

Joe Belfiore: The TechNet Interview

Microsoft TechEd 95 Conference Materials

Besides Windows 95, TechNet contains vital technical information on important product areas such as Microsoft Office, Microsoft BackOffice, and Microsoft Database products.

To order a one year subscription of TechNet and ensure that you receive the Windows 95 Special Issue, contact your authorized reseller or call 1-800-344-2121, dept. 3121 by July 17.

Microsoft Plus!

Plus! for Windows 95 makes your PC look better and work better.   In addition, it is a convenient way to receive the bonus Internet Jumpstart Kit.

Key Points

Plus! System Agent and disk tools work behind the scenes to keep your PC running at peak performance

Plus! adds more style and fun to your PC

Plus! is the easiest way to get onto the Internet

        Plus! System Agent
        Plus! Style and Fun Pack
        Plus! Internet JumpStart

Plus!   System Agent

Plus! System Agent makes it faster and easier to maintain your computer in top shape,
complementing Windows 95s goal of making what you do with your computer faster and easier.   Plus! system
maintenance utilities are part of the regular recommended care and feeding of a computer, but are things many
of us neglect or rely on our IS managers to take care of.   Plus! System Agent and disk tools automate PC
maintenance.

**The Plus! System Agent is a smart assistant that works in the background to keep your system
optimized for top performance.**   While your system is idle, Plus! System Agent compresses data to free up
hard disk space, and cleans up your hard disk, correcting any disk errors and defragmenting the hard disk.   All
of these things keep your computer running at peak performance.

Plus! System Agent and system utilities are flexible.   Customers can choose to have System Agent run
system maintenance tasks at regularly scheduled times or during system idle time.   They can also select
various compression options to best suit their needs.

**Plus! disk tools consist of DriveSpace 3.0, Compression Agent, and System Agent aware versions of
Scandisk and Defrag.**   DriveSpace 3 is an enhanced version of the DriveSpace disk compression which ships
with Windows 95.   DriveSpace 3 supports large compressed volumes (up to 2G) and greater compression ratios.

DriveSpace 3 is Pentium optimized for exceptional performance on Pentium processor-based systems.   The
Compression Agent   is an intelligent offline compression utility for DriveSpace 3 that automatically chooses the
best compression algorithm for each file on your system, and delivers exceptional compression of your data.

Plus! Style and Fun Pack

Plus! includes desktop themes incorporating sounds, fonts, color schemes, wallpaper, screen savers, photo-realistic icons and animated cursors.   Customers can coordinate and switch easily among elements, adding fun and variety to their computing experience.

Plus! includes themes designed for customers with 8-bit or 16-bit color capability.

Plus! desktop themes include Travel, Nature, Mystery, 1960s, Leonardo da Vinci, Science, Dangerous Creatures, Sports, Moderne, Inside Your PC and Windows 95.

Multimedia Pinball takes advantage of Windows 95s built-in multimedia support and looks, sounds and plays like an authentic pinball game.

Plus! offers Full-Window Drag and Font Smoothing.   With Full-Window Drag, <u>windows</u> are dragged as solid blocks, rather than as outlines.   Font smoothing is anti-aliasing and hinting of fonts, making them smoother and easier to read.   Both of these features work to best advantage on systems with accelerated video or fast processors.

Plus! Internet Jumpstart

Plus! Internet Jumpstart provides easy sign-up and one-button access to the Internet. Plus! includes a Set-Up Wizard to assist customers in signing up with an Internet service provider, the Internet Explorer Microsofts Windows 95-based world-wide web browser and an Internet mail reader for the Windows 95 Exchange mail client.   In addition, Plus! customers receive an attractive offer of service credit on the Microsoft Network.

Microsoft Plus! extends the Windows 95 shortcut functionality, so that customers will be able to create shortcuts to favorite Internet locations and then reach these locations with a single mouse click.   The customer will also be logged into the Windows 95 home page on the Internet using one of these shortcuts, created automatically when Microsoft Plus! is installed.

The Microsoft Network

Access to The Microsoft Network is a feature of Windows 95, the newest version of the Microsoft Windows operating system. It is an online service that makes accessing electronic information and communications easy and inexpensive for any user of Windows 95. It removes the primary barriers to online service use - cost and difficult user interface. The Microsoft Network extends the Windows-based desktop to a worldwide community of people, ideas and information. It provides a setting for a worldwide electronic marketplace of products and services from Microsoft and third-party companies.

The Microsoft Network interactive experience revolves around dynamic content communities, each produced to make the most of the interactive medium and the specific topic, product or experience at hand. Content and service providers will discover the opportunity to extend their brands, products and businesses in a graphically robust, interactive manner. For example, content areas cover the following subjects:

Arts and **Entertainment**. **News** and **Weather**. **Business** and **Finance**. **Sports**, **Health** and **Fitness**. **Science** and **Technology**. **Computers** and **Software**. **Community** and **Public Affairs**. **Home** and **Family**.

These communities will be facilitated by a select group of Forum Managers, who bring specialized knowledge to their areas of expertise.

The Microsoft Network Services

With the Microsoft Network, subscribers will have access to the following basic services:

        Rich communications features, including e-mail, bulletin boards and "chat" services.

        Internet access, including e-mail and news groups.

        Information services, including news, sports, stock and weather reports, product and product-support information, and special-interest group information.

        File download libraries

 shareware, graphics and wave files, applets, product support, article archives, and the Microsoft Knowledge Base.

        Microsoft information and support for customer service, product information and technical support.

The Microsoft Network's extended services and products will include both Microsoft-branded and independently branded options available to users. Some will be available for an additional charge, and others will be available at no additional charge.

        Support for The Microsoft Nework

The Microsoft Certified Professional - Training and Exams

If your goal is Microsoft certification, Microsoft's Authorized Technical Education Center's (ATECs) offer online Certified Professional classes to get you there. If your learning style demands both self-study flexibility and hands-on guidance, some ATECs offer packages on the Microsoft Online Institute that include a combination of online learning and lab instruction at the ATECs facilities. If you prefer to use the Microsoft Online Institute's resources as preparation for an instructor-led class delivered at an ATEC facility, the Microsoft Online Institute can refer you to an ATEC facility in your area.

Click here [?] for more information on the Microsoft Online Institute

The Microsoft Education and Certification Roadmap

What is the Roadmap?

The Microsoft Education and Certification Roadmap is an all inclusive, interactive, online information tool for outlining an individuals and/or business organizations path(s) to increase their Microsoft product knowledge with Microsoft-developed courseware, Microsoft Certification and related technical and business information resources.   This product replaces the Certified Professional info kit and the Microsoft Education Services course catalog.

Customers can use the Microsoft Education and Certification Roadmap to quickly map their personal training and certification plan.   This easy-to-use, Microsoft Windows based application guides them through the process of determining their goals and mapping the route that enables them to quickly achieve them.

TechNet:

The Roadmap will be found as the Education & Certification component of the TechNet CD.

Click here [?] for more information on the Microsoft TechNet CD.

SP Authorized Technical Education Centers:
can order from R.R. Donnelly or internationally from PDI,
Part number 098-58352
(800) 457-1766

Certification information can also be accessed from:

CompuServe   GO MSEDCERT   (download E&CMAP.ZIP)

The Roadmap is also available in a floppy-install version at the same location. Download the files RM1of4.ZIP, RM2of4.ZIP, RM3of4.ZIP, RM4of4.ZIP instead of the E&CMAP.ZIP for Roadmap installation from floppy diskettes.

Glossary of Terms

A
B
C
D
E
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Q
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V
W
X
Y
Z

A

ACK

Active Window

Audio Compression Manager (ACM)

ASCII File

Associate

Authentication

AutoPlay

AUTOEXEC.BAT

B

C

D

M

N

O

P

ACK

The abbreviation for acknowlegement. In communications, a signal is sent by the receiving computer to indicate that the data has been received without error, and that it is ready for the next part of the transmission to be sent.

Active Window

The window which is currently selected or the one in which you are working. The active window is distinguished from other open windows by the color difference of its title bar and it is typically at the top of the window order.

ASCII File

A text file that consist of letters, numbers, punctuation symbols and control characters but do not contain any hidden text-formatting commands.

Associate

The process of creating a link between a file and the program that created it which will allow both the file and application to be executed simultaneously when the file is opened.

AUTOEXEC.BAT

A batch file that is run automatically by the MS-DOS operating system whenever the computer is started or restarted. The batch file loads memory-resident programs and basic commands which configures the system to the users preferences.

Batch Program

An ASCII file (unformatted text file) that contains one or more commands which will allow the user to save time and keystrokes. A batch program's filename has a .BAT extension. When you type the filename at the command prompt, the commands are processed from the first to the last command without any user intervention.

Binding

The process of associating a protocol with the netcard adapter (MAC driver) and establishing a communication channel between the two.

BIOS Enumerator

In a Plug and Play system, the bios enumerator is responsible for identifying all hardware devices on the motherboard of the computer. The BIOS then using a common API to query and translate for all Plug and translated through the bios enumerator.

Browsing

A broadcast-based mechanism which allows you to view the <u>network resources</u> available on your LAN. Browsing is helpful, when you are unsure of the exact path, by allowing you to view all the available workstations and then select the desired resource to make the connection.

Buffer

A reserved portion of memory in which recently read data is temporarily held pending an opportunity to complete its transfer to or from a storage device or another location in memory. The buffer helps to reduce the number of times the hard disk gets accessed.

Buffering

The process of using buffers to hold data that is being transferred, particularly to or from I/O devices such as disk drives and serial ports.

Bus Enumerator

The bus enumerator identifies all the devices which physically exist on its bus through the enumeration process. This process involves identifying a device, assigning it a unique ID and adding its entry to a database of hardware.

Compressed Volume File (CVF)

A single file that contains all of the compressed data for a compressed drive created by DriveSpace or DoubleSpace. The CVF has Read-Only, Hidden, and System attributes.

CONFIG.SYS

A text file that is run at startup containing commands which configure your computer's hardware components, such as a CD-ROM drive, sound card, and modem, so that the operating system and your applications can utilize them.

CVF

A Compressed Volume File created by the disk compression utilities, Drivespace or Doublespace.

Disk Space

The amount of storage space on either a hard disk or floppy disk. This space can either be Allocated or Unallocated space. Unallocated space is the free space used for storing software applications and data. Disk space is often confused with memory since both are described in megabytes (MB) but are not related.

EISA

Enhanced Industry Standard Architecture, a bus design specified by an industry consortium for x86-based computers. EISA devices use cards that are upwardly compatible from ISA.

Interactive Start

Enables you to step through startup files line by line, loading only those commands you choose. To initiate the Interactive Start, hit the F8 key when you see the message Starting MS-DOS... either when you start or restart the computer.

IRQ

The Interrupt Request Line is a hardware line which carries a signal from a specific device, such as input/output ports, the keyboard, and disk drives , to the main processor. The Interrupt alerts the processor that an event has taken place that needs its attention. IRQs are built into the computer's internal hardware and are assigned different levels of priority so that the microprocessor can determine the relative importance of incoming service requests.

ISA

Industry Standard Architecture bus design of the IBM PC/AT.

Memory

Also referred to as RAM (random-access memory). Temporary storage for programs and data which is usually in the form of RAM chips. The microprocessor can manipulate data in memory but for long-term storage a hard disk drive or floppy disk is required.

MSN

The Microsoft Network. Microsoft's new on-line service.   Click here for more information on The Microsoft Network.

NDIS2

Network Driver Interface Specification for real-mode drivers (16-bit drivers). NDIS is the interface between the Network Interface Card (NIC) and the transport layers. It is responsible for overseeing the binding of multiple protocols drivers to the netcard drivers.

NDIS3.1

Network Driver Interface Specification for enhanced-mode drivers (32-bit drivers). NDIS 3.1 includes Plug and Play compatibility.

Network Adapter

An expansion board installed in a computer or server to handle the flow of information over a network.   The network adapter works in coordination with the network operating system and the correct cabling configuration (coaxial, twisted pair or fiber optics cable) to connect and handle the transmission/receiving of data over a network. Also referred to as a Network Interface Card, or NIC.

Network Neighborhood

An object (icon) on the Desktop that represents access to objects stored on the network file system.

Point

To position the pointer over a particular object and location.

PPP

Point to Point Protocol. A protocol used with the Windows 95 Dial-Up Networking feature. PPP is set as the default because it provides greater flexibility with other remote access software.

Primary Click

The mouse button that starts or activates an action or program. This button can be either the left or right mouse button (Windows95 defaults to the left mouse button as primary).

Protocol

A set of rules and conventions by which two computers pass messages across a network. Protocols have been described as the language in which the networks use to communicate with each other. Windows 95 includes NetBEUI, TCP/IP, and IPX/SPX protocols.

SCSI

A SCSI (Small Computer Standard Interface) is a multi-device, chained interface used in many devices such as hard disk drives and CD-ROM drives.

Shortcuts

Shortcuts provide easy access to the programs and files you use most often. They are simply pointers to files or objects that are actually stored somewhere else on the computer. Generally identified by a small arrow in the lower left corner of the icon.

System Files

Windows 95 uses the same naming convention for its system files that MS-DOS does (IO.SYS, MSDOS.SYS and COMMAND.COM). However, to support dual-boot, the MS-DOS versions are renamed with the .DOS extension and these files now perform new functions in the Windows 95 environment.

Text File

A file containing only letters, numbers, and symbols. A text file contains no formatting information, except possibly linefeeds and carriage returns. A text file is an ASCII file.

Wizard

A program that guides you through a process (such as Setup, installing a printer, or installing a modem) by asking appropriate questions and carrying out key functions.

AutoPlay

When a music CD-ROM is inserted, this feature allows the CD to be detected automatically and begins playing.

Audio Compression Manager (ACM)

ACM uses CODECs (compression/decompression technology for digital video and stereo audio) to compress and decompress audio data. ACM also acts as a filter for audio data and a mapper for WAVE devices.

Authentication

The process in which a user logging in to a network is validated by a server or   domain (such as Windows NT or Netware).

Backup

A program designed to backup files from a hard drive or network drive to another source (such as floppies, tapes, network drives or another directory) for storage.

BIOS (Basic Input Output System)

A low level system built in to computers that handle the transfer of information between system elements such as memory, disks and the monitor.

Bitmap (BMP)

A sequential collection of bits that represents an image to be displayed on the screen. BMP is the file extension for these files (i.e.   something.bmp).

BNC Connector

A connector type used to connect machines in a linear networking topology. A T-connector is attached to this port and then coaxial cable (also known as RG-58 or thinnet) is attached to these.

Broadcast

A transmission sent by one machine to all other machines on the network.

Boot Partition

The main partition of a hard drive that contains the boot and layout information of the hard drive.

Cache

Memory used to store information that is frequently accessed, this is also called buffering. Information stored in cache, if not used in a set amount of time is usually flushed.

Capture

The act of redirecting a Physical port (LPT1,LPT2) to a virtual port, usually over a network. The virtual port is usually a directory of some type that is then called by whatever program that monitors the directory and outputs the data.

Carrier

An analog signal whose frequency, amplitude, phase or both have been altered to allow it to represent data.

CD-ROM

Compact Disc-Read Only Memory. A 4.75-inch laser-encoded optical memory storage medium (developed by NV Philips and Sony Corporation) with the same constant linear velocity (CLV) spiral format as compact audio discs and some video discs. CD-ROMs can hold hundreds of megabytes of data.

Characters Per Second (CPS)

The number of characters, or bytes, transmitted every second during a data transfer. A measurement of the speed of operation or equipment such as serial printers and terminals.

Checksum

A method of providing information for error detection, usually calculated by summing a set of values.

Class

The manner in which devices and buses are grouped for purposes of installing and managing drivers and allocating resources.

Client

A computer that accesses shared network resources provided by another computer acting as a Server.

Client/Server

A type of network in which all shared resources (printers, files, etc.) are located on a server (machine dedicated only to sharing its resources) and all users must attach to this machine for access to data.

ClipBoard

The area of storage where objects (data) or their references are placed when a cut or copy operation is performed.

Back Button

Returns you to the Help topic you have just viewed. Use this button to backtrack through the topics you have viewed so far. The Back button is in the Help button bar, which is located directly below the menu bar.

base I/O port address

The location within the input/output address space of your computer that is used by a device such as a printer, modem, or network adapter.

Base Level Synthesizer

A synthesizer that can play a minimum of six notes on three melodic instruments and three notes on three percussive instruments simultaneously.

base memory address

The location in computer memory that a device, such as a network adapter, uses to move data into and out of memory. This location is also referred to as the RAM start address and is used for buffering.

Cab files

A file that contains many compressed files that are decompressed by an installation program.

embedded object

Information in a document that is a copy of information created in another application. By choosing an embedded object, you can start the application that was used to create it while remaining in the document you're working in.

encapsulated PostScript file

A file that prints at the highest possible resolution for the printer. An EPS file may print faster than other graphical representations.

environment variable

A string consisting of environment information, such as a drive, path, or filename, associated with a symbolic name that can be used by MS-DOS and Windows. The System option in the control panel or the set command from the command prompt define environment variables.

Expanded Memory

Memory provided by a physical add-in card or through a 386 expanded memory manager. Expanded memory is made available to programs as 16K pages, mapped into a 64K page frame.

Contents Button

Displays the active application's Help Contents, from which you can choose the Help topic you want. The Contents button is in the Help button bar, directly below the menu bar.

Icon

A graphical representation of an element in Windows, such as a disk drive, directory, group, application, or document.

initialization files

Files that provide Windows with information about your system configuration, pointing device, or network client you are using, and about software options, such as how your screen and desktop should look while Windows is running.

I/O Concepts

Read or write actions that your computer performs. Your computer performs a "read" when you type information on your keyboard or when you select and choose items by using your mouse. Also, when you open a file, your computer reads the disk to locate the file and open it. Your computer performs a "write" whenever it stores information on a disk, displays information on your screen, or sends information through a modem or to a printer.

insertion point

The place where text is inserted when you type. The insertion point usually appears as a flashing vertical bar in an application window or in a dialog box.

Control Codes

Codes that specify Terminal commands or formatting instructions (such as linefeeds or carriage returns). Control codes are usually preceded by a caret (^). Control codes are used in programs like WordPad.

Control Menu

A menu that is displayed at the location of a selected object which contains commands that are contextual to the selection(such as a shortcut or the desktop). This menu can be activated by a secondary click on the object.

Conventional Memory

The first 640K of memory in your computer. MS-DOS uses this memory to run applications. Windows 95 is not subject to Real Mode memory limitations.

current directory

The Folder that you are currently working in or that is selected in the folder window.

cutout

In MSPAINT an area of the drawing you select by using the Scissors or Pick tool.

Network Drive

A drive letter that is mapped to a shared directory on another machine across a network.

Network Printer

A printer that has been shared by a machine or dedicated server.

NWRedir

The Windows 95 32-bit protected mode client for NetWare Networks.

Node

NIC

Network Interface Card.   See <u>Network Adapter.</u>

Net Watcher

A Windows 95 tool for creating, controlling and monitoring remote and local shared resources.

NWServer

The Windows 95 32-bit protected-mode File and Printer sharing service for NetWare Networks. A computer configured with File and Printer Sharing for NetWare Networks uses the NCP file-sharing protocol to share resources with MS-DOS-based Novell(r) NetWare computers, computers running Windows NT, and computers that have Client for NetWare Netwokds Installed.

OSI Model

Open Systems Interconnect Reference Model. Describes the flow of data in a network, from the lowest layer (the physical connections) up to the layer containing the users applications. The OSI Reference Model contains seven layers, from bottom - up (Application, Presentation, Session, Transport, Network, Data Link, Physical).

Object

Any piece of information, created by using a Windows-based application using OLE, that can be linked or embedded into another document.

OLE

Object Linking and Embedding - A way to transfer and share information between applications.

Open

To display the contents of a directory, a document, or a data file in a window.

Package

An icon that represents an embedded or linked object. When the package is chosen, the program used to create the object either plays the object (such as a sound file) or opens and displays the object.

Password

A unique string of characters that must be provided before logon or access to a resource or service (network functionality) is gained. In Windows 95, the password can be up to 14 characters and is case-sensitive.

Password List

An encrypted list of the passwords used to connect to shared resources or logon a Windows network. Whenever you connect to a shared resource, Windows 95 unlocks and searches this list. If the password for the connection is found, your connection is re-established without prompting you for the password (otherwise a dialog box appears, prompting you for the password).

Port

A connection or socket used to connect a device, such as a printer, monitor, or modem, to your computer. Information, such as printing instructions, is sent from your computer to the device through a cable.

Print Job

A document sent to the printer.

Printer Driver

A program that controls how computers and printers interact.

Printer Fonts

Fonts that are built into your printer (also known as Printer Reident fonts or resident Fonts). These fonts are usually located in the printer's read-only memory (ROM).

Program File

A file that starts an application or program. A program file has an .EXE, .PIF, .COM, or .BAT filename extension.

Point and Print

A Windows 95 Network client computer's user drags a shared printer to the Printers folder, or drags a document to the icon for a shared printer, the Point and Print process begins. The Point and Print process begins when a user drags a shared printer to the Printers folder, or drags a document to the icon for a shared printer. The Point and Print feature locates and copies all the necessary files automatically.

Recycle Bin

When a file or directory is deleted, it goes to the Recycle Bin. The files will be stored until: 1) the Recycle Bin in emptied, 2) the number of files exceed the size allocated for storage and then the first files in are the first files deleted automatically.

RAM

An acronym for random-access memory, a temporary storage area that can be read from or written to by the computer or other devices. Information stored in RAM is lost when you turn off the computer.

Registry

The database repository for information about a computers configuration. The registry supersedes use of separate INI files for all system components and applications that know how to store values in the registry.

Resource Arbitrator

Allocates resources and resolves conflicts among devices that request identical resource assignments. Windows 95 provides arbitrators for the standard I/O, memory, hardware interrupt and DMA channel resources.

Safe Mode

Troubleshooting mode used to correct problems in Windows 95 that may have caused a failed setup or system crash. Safe mode skips loading the registry and loads on basic drivers.

System Policies

Lets the administrator mandate user specific and computer specific settings.

Screen Fonts

Fonts displayed on your screen. Soft-font manufacturers often provide screen fonts that closely match the soft fonts for your printer. This ensures that your documents look the same on the screen as they do when printed.

Screen Saver

A moving picture or pattern that appears on your screen when you have not moved the mouse or pressed a key for a specified period of time.

Scroll

To move through text or graphics (up, down, left, or right) to see parts of the file that are not displayed on the screen.

Scroll Arrow

An arrow on either end of a scroll bar used to scroll through the contents of a window or list box. Click the scroll arrow to scroll one line at a time, or press and hold down the mouse button while pointing at the scroll arrow to scroll continuously.

Scroll Box

In a scroll bar, a small box that shows the position of information currently visible in the window or list box relative to the contents of the entire file or list.

Scroll Bar

A bar that appears at the right and/or bottom edge of a window or list box when its contents are not completely visible. Each scroll bar contains two scroll arrows and a scroll box that enable you to scroll through the contents of the window or list box.

Search Button

Displays the words you can use to search for related topics. The Search button is located in the Help button bar, directly below the menu bar.

Select

To identify on or more objects upon which an operation can be performed.

Server

For a Local Area Network, a computer running administrative software that controls access to all or part of the network and its resources. A computer acting as server makes resources available to computers acting as workstations on the network.

Server Application

1) On a network, a process or program that runs on a server, typically as a network resource allowing others access. 2) Any Windows application that allows editing of an object when Windows informs the it that the user selected the object in an OLE client application. 3) In a DDE conversation, the application responding to the DDE request made by the client application.

Share

To make resources, such as directories, printers, and ClipBook pages, available to other computers on a network.

Share Name

The name that identifies a shared directory or printer to other computers on a network.

Shared Directory

A directory that is accessible to other computers on a network.

TAPI (Telephony Application Program Interface)

A set of programming calls that allow applications to control modems and telephones, by routing application function calls to the appropriate service provider DLL for a modem.

TDI (Transport Driver Interface)

In Windows networking, the common interface for network components that communicate at the session layer of the OSI model.

TCP/IP (Transmission Control Protocol/Internet Protocol)

The primary Wide Area Network protocol used in Windows 95 to communicate with computers on TCP/IP networks (UNIX-based machines, mainframes, RISC systems, etc.). This is also the primary protocol of the Internet.

Text File

A file containing only letters, numbers, and symbols. A text file contains no formatting information, except possibly linefeeds and carriage returns. A text file is an ASCII file.

Time-out

If a device is not performing a task, the amount of time the computer should wait before detecting it as an error.

TrueType Fonts

Fonts that are scaleable and are sometimes generated as bitmaps or soft fonts, depending on the capabilities of your printer. TrueType® fonts can be sized to any height, and they print exactly as they appear on the screen.

Topic

Information in the Help window. A Help topic usually begins with a title and contains information about a particular task, command, or dialog box.

VCACHE

32-bit protected mode cache driver. VCACHE is responsible for caching information read from or written to a disk drive. It is also responsible for managing the cache pool for the CD-ROM File System (CDFS) and the 32-bit network redirectors.

VFAT (Virtual File Allocation Table)

The 32-bit VFAT driver provides a 32-bit, protected mode code path for manipulating the file system stored on a disk. VFAT is the primary Windows 95 file system and cannot be disabled.

VxD (Virtual Device Driver)

A 32-bit protected-mode driver that manages a system resource, such as a hardware device or installed software. The x represents the type of device, for example, a virtual device driver for a display is VDD and a virtual device driver for a printer is VPD.

VREDIR

The Windows 95 32-bit protected mode client for Microsoft Networks. Allows access to shared resources on other Windows 95 or Windows for Workgroups computers.

VSERVER

The Windows 95 32-bit protected mode SMB server which provides File and Printer sharing for Windows   95 computers.

Virtual Memory

Space on the hard drive that Windows 95 will use as if it is actual physical memory. A swap file is created on the hard drive which is used to swap memory from RAM to the hard disk to free up memory for other applications and system use. The benefits of using virtual memory is that more programs can be run at one time than the computers physical memory would otherwise allow.

VMM32.VXD

Created during setup, this file includes all vxds necessary for system operation. All the vxds install durning setup are combined into VMM32.VXD.   It is much faster at startup to load this one large vxd than all the single ones separately.

Default Button

In some dialog boxes, a command button that Windows 95 automatically selects. The default button has a bold border, indicating that it will be chosen if you press ENTER. You can override a default button by choosing the Cancel button or another command button.

Default logon name

The logon name used when you log on without a logon password. If you use a logon password, the default logon name appears in the Welcome to Windows 95 dialog box. Usually, this name indicates the owner of the computer, or the last person to logon to this unit.

Default printer

The printer that is used if you choose the Print command without first specifying which printer you want to use with an application. You can have only one default printer, and it should be the printer you use most often.

Desktop

The background of your screen, on which windows, icons, and dialog boxes appear. The desktop in Windows 95, unlike that of previous versions, is a directory under the WINDOWS directory on the hard drive. It also holds the Network NeighborHood, My Computer, and the INBOX if so installed.

TaskBar

The taskbar is the bar on your desktop that has the Start button on it. Buttons representing running programs appear on this bar.

Dial Up Networking

With Dial-Up Networking, you can gain access to shared information on another computer, even if your computer is not on a network. The computer you are dialing in to must be set up as a network server for you to use its shared resources.

Disconnect

To detach a drive letter, port, or computer usually from a shared resource.

Network Resource

An item such as a folder, file, or printer that another computer has made available for you to use on the network.

domain

A LAN Manager and Windows NT term used to represent a group of devices, servers, and computers grouped together to simplify network administration and security. Domain names are used to identify each domain.

Double-click

To rapidly press and release a mouse button twice without moving the mouse. Double-clicking carries out an action, such as starting an application.

Documents Folder

You can quickly open a document you've worked on recently by using the Documents command on the Start menu. The recently opened files list can be viewed by clicking on the Documents option from the Start button on the taskbar.

Downloaded fonts

Fonts that you send to your printer either before or during the printing of your documents. When you send a font to your printer, it is stored in printer memory until it is needed for printing.

drag

To move an item on the screen by clicking the item and then, before releasing the mouse button, moving the mouse. For example, you can move a window to another location on the screen by dragging its title bar.

Drive Icon

An icon in the Explorer, My Computer,   or NetWork Neighborhood that represents a disk drive on your system. Different icons depict floppy disk drives, hard disk drives, network drives, RAM drives, and CD-ROM drives.

Driver

A program that enables a specific piece of software, such as network software, or hardware to communicate with Windows 95. A driver in Windows 95 may be in the format .PDR, .VxD, .386, .SYS, .DRV,or .MPD.

Event

An event is an action performed by you or a program that your computer can notify you about. For example, sometimes your computer beeps when you press an incorrect key. If you have a sound card, you can choose to play a sound other than a beep when this event occurs.

MS-DOS Mode

Specifies that when you run this program, it controls all system resources. Before the program runs, the system closes all other active Windows-based and MS-DOSbased programs. When you quit the program, Windows restarts automatically.

Exclusive Mode

Please See   MSDOS Mode for more information.

Exchange

In the Microsoft Exchange, you can send and receive electronic mail or fax messages. You send messages from and store all messages in Microsoft Exchange.

Explorer

Use Windows Explorer to see all the folders and files on your computer.   The right side of the Explorer Window displays the contents of the item you click on the left. In Windows Explorer, you can see both the hierarchy of folders on your computer and all the files and folders in each selected folder. This is especially useful for copying and moving files. You can open the folder that contains the file you want to move or copy, and then drag it to the folder you want to put it in.

wallpaper

A picture or drawing stored as a bitmap file (a file that has a .BMP extension) that you can select for the background of your desktop. Bitmaps can be simple drawings or elaborate scanned photographs.

wildcard

A character that represents any character or group of characters that might match the same position in other filenames. The question mark (?) wildcard can be used to represent any single character, and the asterisk (*) wildcard can be used to represent more than one character. For example, *.EXE represents all files that end with the .EXE filename extension.   You cannot use wildCards in machine or WorkGroup names.

window

A rectangular area on your screen in which you view an application or document. You can open, close, and move windows, and change the size of most windows. You can open several windows at a time, and you can often reduce a window to an icon or enlarge it to fill the entire desktop.   By using you secondary mouse button on the Task Bar you can tile all windows either horizontally or vertically

Windows-based application

An 16 or 32 bit application designed to run with Windows and does not run without Windows. All Windows-based applications follow similar conventions for arrangement of menus, style of dialog boxes, and use of the keyboard and mouse.

workgroup

A collection of computers that belong to a common group. Each workgroup is identified by a unique name. Computers in the same or different workgroups can share printers, and   directories. In the connect dialog boxes, computers are listed by workgroup name.

Word Wrap

Formatting a document to fit in 80 character fashion, used in WordPad and in Notepad.

WordPad

WordPad is a text editor for short documents. You can format documents in WordPad with various font and paragraph styles. It can also handle most formats supported by Microsoft Word for Windows 6.0. including RTF, DOC and TXT.

File

A collection of information that has been given a name and is stored on a disk. This information can be a document or an application.

file access

The way files are read from and written to disks. You have a choice of 32-bit or 16-bit file access on hard disk drives through Windows 95 depending on the file system drivers used.

Font

Files that enable Windows graphic device interface to create characters in different type styles and sizes on your monitor and printer.

Full screen mode

An MS-DOS-based application that is displayed on the entire screen, rather than in a window, when running in a DOS Virtual Machine.

Floppy Disks

5 ¼ or 3 ½ in diameter, Floppies provide temporary or even short term backup media for mobile files, or for transfer to a non networked machine.

linked object

A representation or placeholder for an object that is inserted into a destination document. The object still exists in the source file and, when it is changed, the linked object is updated to reflect these changes.

list box

A dialog box element that helps the user make one choice from a list of possible alternatives. List boxes are often used to select a file or document name.

Local Resource

A resource, such as a printer, directory, or ClipBook page, that is physically connected to or located on your computer rather than connected via a network.

local printer

A printer that is directly connected to one of the ports on your computer.

logon name

The name you supply when you log in to Windows,   This name is used to identify you to other people on the network.

login script

A batch file written by a network administrator that performs a set of tasks when you log on to a LAN Manager domain or a computer running Windows NT or Novell(r) NetWare. Each person who uses your computer can have their own logon script with their own set of tasks.

Gateway

A computer connected to multiple physical networks acting as a translator for network communication.

handle

The doubled arrow pointer that controls moving, sizing, reshaping, or other functions pertaining to a window.

hardware branch

The hardware archive root key in the Registry, which is a superset of the memory-resident hardware tree. The name of this key is Hkey_Local_Machine\Hardware.

Hardware tree

A record in RAM of the current system configuration, based on the configuration information for all devices in the hardware branch of the Registry. The hardware tree is created each time the computer is started or whenever a dynamic change occurs to the system configuration.

HKey_Classes_Root

A predefined Registry handle that defines the OLE and file-class association data. This key is a symbolic link to a subkey of Hkey_Local_Machine\Software.

Hkey_Current_User

A predefined Registry handle that defines the current users preferences, including environment variables, personal program groups, desktop settings, network connections, printers, and application preferences. This key maps to a subkey of Hkey_Users.

Hkey_Local_Machine

A predefined Registry handle that defines the hardware and operating system characteristics such as bus type, system memory, installed device drives, and boot control data.

Hkey_Users

A predefined Registry handle that defines the default user configuration for users on the local computer and configuration data from user profiles stored on the local computer.

home directory

A directory that is accessible to the user and contains files and programs for that user. A home directory can be assigned to an individual user or can be shared by many users. *See also* machine directory

host

Any device that is attached to the internetwork and uses TCP/IP

host table

The HOSTS or LMHOST file that contains lists of known IP addresses mapped to host names or NetBIOS computer names. These are used to connect to computer running TCP/IP with Windows networks.

HPFS

File system primarily used with the OS/2 operating system version 1.2 or later. It supports long filenames but does not provide security

Interrupt

A signal to the processor generated by a device under its control that interrupts normal processing. Such as a sound card playing .a WAV file.

I/O device

An input/output device, which is a piece of hardware used for providing information to and receiving information from the computer   for example, a disk drive, which transfers information in one of two directions, depending on the situation. Some input devices, such as keyboards, can be used only for input; some output devices (such as a printer or a monitor) can be used only for output. Most of these devices require installation of device drivers

IP address

Used to identify a node on a network and to specify routing information on an internetwork. Each node on the internetwork must be assigned a unique IP address, which is made up of the network ID, plus a unique host ID assigned by the network administrator. In Windows 95, the IP address can be configured statically on the computer or configured dynamically through DHCP

IP router

A computer connected to multiple physical TCP/IP networks that can route or deliver IP packets between the networks. *See also* gateway

IPX / SPX

Transport protocols used in Novell® NetWare® and other networks. For Windows 95, the NWLINK.VXD module is used to implement the IPX/SPX-compatible protocol

LMHOSTS file

A local text file that maps IP addresses to the NetBIOS computer names of Microsoft networking computers outside the local subnet. In Windows 95, this file is stored in the Windows directory

localization

The process of adapting software for different countries, languages, or cultures.

logical drive

A subpartition of an extended partition on a hard disk.

MAC

Media access control. A layer in the network architecture.

MAC Address

The address for a device as it is identified at the Media Access Control layer in the network architecture.

machine directory

For shared installations, the directory that contains the required configuration files for a particular computer. The machine directory contains WIN.COM, the Registry, and startup configuration files.

map

To translate one value into another.

MAPI

See messaging application program interface.

Messaging Application Program Interface (MAPI)

A set of calls used to add mail-enabled features to other Windows-based applications.

MS-DOS based application

A program that is designed to run with MS-DOS, and, therefore, may not be able to take full advantage of all Windows 95 features.

Kernel

The portion of Windows 95 that manages the processor.

kernel driver

A driver that accesses hardware.

FAT File system

A file system based on a file allocation table, maintained by the operating system, to keep track of the status of various segments of disk space used for file storage. The 32-bit implementation in Windows 95 is called the Virtual File Allocation Table (VFAT).

file sharing

The ability of a Microsoft network computer to share parts (or all) of its local file systems with remote computers. You can share resources if File and Printer Sharing services are enabled on the computer.

File Transfer Protocol (FTP)

A service that supports file transfers between local and remote computers. FTP supports several commands that allow bidirectional transfer of binary and ASCII files between computers. The FTP client is installed with the TCP/IP connectivity utilities.

focus

The area of a dialog box which receives input. To find the focus, look for highlighted text (for example, in a list box) or a button enclosed in dotted lines.

folder

A type of container of objects (typically files).   Typically a "Directory" in previous versions of Windows.

friendly name

A name, typically identifying a network user or a device, intended to be familiar, meaningful, and easily identifiable. A friendly name for a printer might indicate the printer's physical location (for example, "Sales Department Printer").

Launching SETUPLOG.TXT

You are about to view SETUPLOG.TXT using NOTEPAD.EXE. If SETUPLOG.TXT is not in the root directory of your C drive, you will receive the following error message:

Cannot find the C:\SETUPLOG.TXT file.

Do you want to create a new file?

Display SETUPLOG.TXT

Cancel

Launching CONFIG.SYS

You are about to view CONFIG.SYS using NOTEPAD.EXE. If CONFIG.SYS is not in the root directory of your C drive, you will receive the following error message:

Cannot find the C:\CONFIG.SYS file.

Do you want to create a new file?

Display CONFIG.SYS

Cancel

Launching DETLOG.TXT

You are about to view DETLOG.TXT using NOTEPAD.EXE. If DETLOG.TXT is not in the root directory of your C drive, you will receive the following error message:

Cannot find the C:\CONFIG.SYS file.

Do you want to create a new file?

Display DETLOG.TXT

Cancel

Launching DETLOG.TXT

You are about to view DETLOG.TXT using NOTEPAD.EXE. If DETLOG.TXT is not in the root directory of your C drive, you will receive the following error message:

Cannot find the C:\CONFIG.SYS file.

Do you want to create a new file?

Display DETLOG.TXT

Cancel

Launching System Device Manager

You are about to launch the Device Manager. If you attempt this and you are not running Windows 95, you will receive the following error message:

Routine not found.

 Launch the Device Manager

 Cancel

Launching Microsoft Diagnostics

You are about to launch Microsoft Diagnostics. If you attempt this and MSD.COM or MSD.EXE is not in your path, you will receive the following error message:

Cannot find or run program "MSD". (under Windows 95)

Unable to run the specified file. (under Windows 3.x)

❓ Launch Microsoft Diagnostics

❓ Cancel

Launching Microsoft System Information

You are about to launch Microsoft System Information. If you attempt this and MSINFO.EXE is not in your path, you will receive the following error message:

Cannot find or run program "MSINFO.EXE". (under Windows 95)

Unable to run the specified file. (under Windows 3.x)

 Launch Microsoft System Information

 Cancel

Launching System Device Manager

You are about to launch the Device Manager. If you attempt this and you are not running Windows 95, you will receive the following error message:

Routine not found.

? Launch the Device Manager

? Cancel

Launching BOOTLOG.TXT

You are about to view BOOTLOG.TXT using Notepad. If BOOTLOG.TXT is not in the root directory of your C drive, you will receive the following error message:

Cannot find the C:BOOTLOG.TXT file.

Do you want to create a new file?

Display BOOTLOG.TXT

Cancel

Viewing/Editing SYSTEM.DAT

You are about to view SYSTEM.DAT using RegEdit. If you are running Windows 3.1, you will be loading REG.DAT, the Windows 3.1 OLE registry database. If you are running Windows 95, you will be accessing the full system registry for Windows 95.

It is not recommended that you edit the registry unless you are specifically directed to do so by Microsoft Product Support Services. This should be attempted only by advanced users. You should back up SYSTEM.DAT and USER.DAT before attempting to edit the registry.

[?]   Display SYSTEM.DAT
[?]   Cancel

Viewing/Editing MSDOS.SYS

You are about to view MSDOS.SYS using Notepad. Do not perform this operation except from within Windows 95. If you edit MSDOS.SYS in an earlier version of MS-DOS or Windows, you may unable to restart your computer.

In case you encounter a problem, you should have a system boot disk available and make a copy of the current MSDOS.SYS file before proceeding with this operation.

[?]   Display MSDOS.SYS

[?]   Cancel

Windows Startup Troubleshooter

This troubleshooter from Windows 95 on-line help assists you to identify issues with Windows Startup.   This troubleshoot will only work if you are running Windows 95.   If you attempt to launch it under Windows 3.x, you will receive the error, "Help Topic not found."

[?]   Begin Troubleshooter

Memory Troubleshooter

This troubleshooter from Windows 95 on-line help assists you to identify memory issues running programs.   This troubleshoot will only work if you are running Windows 95.   If you attempt to launch it under Windows 3.x, you will receive the error, "Help Topic not found."

 _____ Begin Troubleshooter

Print Troubleshooter

This troubleshooter from Windows 95 on-line help assists you to identify printing issues.   This troubleshoot will only work if you are running Windows 95.   If you attempt to launch it under Windows 3.x, you will receive the error, "Help Topic not found."

[?]   Begin Troubleshooter

Troubleshooting MS-DOS Programs

This troubleshooter from Windows 95 on-line help assists you to identify issues with MS-DOS programs.   This troubleshoot will only work if you are running Windows 95.   If you attempt to launch it under Windows 3.x, you will receive the error, "Help Topic not found."

[?]_____ Begin Troubleshooter

Disk Space Troubleshooter

This troubleshooter from Windows 95 on-line help assists you to identify disk space issues.   This troubleshoot will only work if you are running Windows 95.   If you attempt to launch it under Windows 3.x, you will receive the error, "Help Topic not found."

Begin Troubleshooter

Troubleshooting Modem Problems

This troubleshooter from Windows 95 on-line help assists you to identify modem issues.   This troubleshoot will only work if you are running Windows 95.   If you attempt to launch it under Windows 3.x, you will receive the error, "Help Topic not found."

 Begin Troubleshooter

Troubleshooting Dial-Up Networking Problems

This troubleshooter from Windows 95 on-line help assists you to identify Dial-Up Networking issues.   This troubleshoot will only work if you are running Windows 95.   If you attempt to launch it under Windows 3.x, you will receive the error, "Help Topic not found."

[?]   Begin Troubleshooter

Troubleshooting Direct Cable Connection Problems

This troubleshooter from Windows 95 on-line help assists you to identify Direct Cable Connection issues.   This troubleshoot will only work if you are running Windows 95.   If you attempt to launch it under Windows 3.x, you will receive the error, "Help Topic not found."

     Begin Troubleshooter

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If You Have Floppy Disk Problems During Setup

Symptoms

The following floppy disk problems may occur when you are running Windows 95:

 You cannot access your floppy disk drive.

 When you choose a floppy disk drive, it attempts to read the wrong drive.

 Your floppy disk drive does not appear or appears incorrectly.

Cause

If the CMOS settings of your computer do not indicate that a floppy disk drive is installed, Windows 95 may not be able to display your floppy disk information correctly. MS-DOS, or the real-mode portion of Windows 95, may allow you to access the floppy disk drive.

Resolution

Refer to your computer documentation, or consult with your hardware vendor regarding how to access and update your CMOS settings.

Windows 95 Hangs at Logo Screen or Missing Device Message

Symptoms

When you try to start Windows 95, one of the following problems occurs:

[?]   Windows 95 stops responding (hangs) at the logo screen.

   or

[?]   Windows 95 reports the following error message where <device name> is a device such as HIMEM.SYS:

     Missing <device name>.

     Make sure that the file is in your Windows directory and

     that its location is correctly specified in your CONFIG.SYS file.

Cause

These problems can occur if you have added the NOAUTO parameter to the DOS= statement in the CONFIG.SYS file. For example:

     DOS=HIGH,UMB,NOAUTO

Resolution

[?]   Remove the NOAUTO parameter from the DOS= statement in the CONFIG.SYS file.

   or

[?]   Insert the required DEVICE= statements in the CONFIG.SYS file so that the necessary devices are loaded during startup.

More Information

The NOAUTO parameter prevents Windows 95 from loading devices such as HIMEM.SYS and IFSHLP.SYS automatically while booting. If you use this parameter, you must specify the devices that need to be loaded by adding them to the CONFIG.SYS file.

Data Loss and Non-Windows 95-Aware Hard-Disk Utilities

Most hard-disk utility programs released before Windows 95 require updating to work correctly with Windows 95. If you use a non-Windows 95-aware hard-disk utility, you may lose long filenames and you are at risk of losing data.

Examples of such programs include the following:

[?] Norton Utilities by Symantec

[?] PC-Tools by Central Point

[?] Defragmenter by Microsoft Corporation

If you using the Microsoft Defragmenter utility (Defrag) from MS-DOS version 6.0, 6.2, 6.21, or 6.22, you will lose long filenames. For more information about the problems caused by third-party hard-disk utilities, contact the manufacturer.

More Information

If you need to use an earlier version of a hard-disk utility, carry out the following procedure:

1 Run LFNBK.EXE, which is a long filename (LFN) backup utility currently available in the Section 8 Library of the WINBTU forum on CompuServe (LFNBK.ZIP).

   (LFNBK.EXE removes your long filenames and saves them to a data file. For more information, read the LFNBK.TXT file.)

2 Restart your computer, and then use the appropriate step below:

   If you need to run an MS-DOSbased utility, press the F8 key when you see the "Starting Windows 95" message. Choose Yes in response to all the questions until you are prompted to load Windows 95, then choose No.

   or

   If you need to run a Windows-based utility, allow Windows 95 to start normally.

3 After you run the utility, restart your computer,   and then run LFNBK.EXE to restore your long filenames.

The products included here are manufactured by vendors independent of Microsoft; we make no warranty, implied or otherwise, regarding these products' performance or reliability.

Installed Items at Setup

This topic lists the items that are installed by default when you select the Typical, Portable, or Compact Windows 95 Setup option. If an item that you want is not installed when you use one of the predefined Setup options, you can choose Custom Setup and select the items you want. You can also choose to add or remove programs after Windows 95 is installed.

To add or remove programs:

1 Click the Start Button, point to Settings, and then click Control Panel.

2 Double-click the Add Or Remove Programs icon.

3 Click the Windows Setrup tab.

More Information

Note Items that are included only on CD-ROM must be selected manually by using the Custom Setup option.

Component	Typi-cal	Porta-ble	Com-pact	CD-ROM only
Accessories				
Accessibility Options	no	no	no	yes
Calculator	yes	no	no	no
Character Map	no	no	no	yes
Clipboard Viewer	no	no	no	yes
Desktop Wallpaper				
Autumn Leaves	no	no	no	yes
Windows Logo	no	no	no	yes
Document Templates	yes	no	no	no
Extra Cursors	no	no	no	yes
Games				
FreeCell	no	no	no	yes
Hearts	no	no	no	yes
Minesweeper	no	no	no	yes
Solitaire	no	no	no	yes
NetWatcher	no	no	no	yes
Object Packager	yes	no	no	no
Online User's Guide	no	no	no	yes
Paint	yes	no	no	no
Quick View				

AMI, AMI Pro	yes	yes	no	no
ASCII	yes	yes	no	no
Configuration Files	yes	yes	no	no
Corel Draw 4 and 5	yes	yes	no	no
Dynamic Link Libraries	yes	yes	no	no
Encapsulated PostScript	yes	yes	no	no
Excel Chart	yes	yes	no	no
Excel Spreadsheet	yes	yes	no	no
Executable Files	yes	yes	no	no
Lotus 1-2-3	yes	yes	no	no
MS Works Database	yes	yes	no	no
MS Works Documents	yes	yes	no	no
MS Works Spreadsheet	yes	yes	no	no
Quattro Pro for MS-DOS	yes	yes	no	no
Quattro Pro for Windows	yes	yes	no	no
Registration Entries	yes	yes	no	no
Rich Text Format	yes	yes	no	no
Setup Files	yes	yes	no	no
Text	yes	yes	no	no
Windows 3.x Write	yes	yes	no	no
Windows Bitmap (DIB)	yes	yes	no	no
Windows Bitmap Graphics	yes	yes	no	no
Quick View, Extra				
Compuserve GIF	no	no	no	yes
Freelance for Windows	no	no	no	yes
Micrographix	no	no	no	yes

Draw				
Multiplan	no	no	no	yes
PowerPoint	no	no	no	yes
TIFF	no	no	no	yes
Windows Metafile	no	no	no	yes
WordPerfect Demo	no	no	no	yes
Screen Savers				
Blank Screen	yes	no	no	no
Curves and Colors	no	no	no	yes
Flying Through Space	no	no	no	yes
Mystify Your Mind	no	no	no	yes
Scrolling Marquee	yes	no	no	no
System Monitor	no	no	no	yes
Windows 95 Tour	no	no	no	yes
WordPad	yes	no	no	no
Communica-tions				
Dial-Up Networking	no	yes	no	no
Direct Cable Connect	no	yes	no	no
Hyper Terminal	yes	no	no	no
Phone Dialer	yes	yes	no	no
Disk Tools				
Backup	yes	no	no	no
Disk Defragmenter	yes	yes	yes	no
Disk Compression Tools	no	yes	yes	no
Microsoft Exchange	no	no	no	no
CompuServe Mail Services	no	no	no	no
Internet Mail	no	no	no	yes

Services

Microsoft Fax	no	no	no	no
Microsoft Network	yes	yes	no	no
Multi-Language Support	no	no	no	yes

MultiMedia

Audio Compression	yes	yes	no	no
CD Player	yes	yes	no	no
Media Player	yes	no	no	no
Musica Sound Scheme	no	no	no	yes
Nature Sound Scheme	no	no	no	yes
Robotz Sound Scheme	no	no	no	yes
Sound and Video Clips	no	no	no	yes
Sound Recorder	yes	no	no	no
Utopia Sound Scheme	no	no	no	yes
Video Compression	yes	yes	no	yes
Volume Control	yes	no	no	yes

Display Problems

This article describes switches that correct some display problems that can occur in Microsoft Windows 95.

More Information

For any Windows 95 version of a display driver, the [boot] section of the SYSTEM.INI file should contain the following line:

display.drv=pnpdrvr.drv

The actual video driver (such as VGA.DRV or S3.DRV) is loaded from the registry. This allows support for dockable personal computers that have different adapters for the laptop versus the docking station.

Setting the monitor type in the Display properties does not affect your display adapter's refresh rate. To change this, you must run a utility supplied by your display adapter manufacturer or computer manufacturer. Some display utilities must be run in the AUTOEXEC.BAT file; however, on other computers display type is set in BIOS configuration programs.

Examples of display utilities from adapter manufacturers include the following:

ATI	INSTALL.EXE
Cirrus	MONTYPE.EXE,

Logic	CLMODE.EXE
Diamond Stealth	STLMODE.EXE
Tseng Labs	VMODE.EXE
Western Digital	VGAMODE.EXE

The sections below describe different video cards and the requirements for these drivers to work correctly in Windows 95.

ATI Mach 8/32/64

To use high-resolution modes properly, this adapter must be configured correctly using the ATI INSTALL.EXE program for Windows 95. Configuring your monitor type is especially important because high-resolution modes may not be available for selection, or the computer may fail when attempting to switch to that mode.

Compaq QVision 2000

These adapters use the Matrox MGA controller.

Matrox MGA

These adapters are not currently supported with Window 95 drivers. The VGA driver is installed by Setup. However, early versions of a Windows 95 MGA driver are available on the Windows 95 CD-ROM in the DRIVERS directory.

This driver is also available on CompuServe in the WINBTU library. The filename is MATROX.ZIP.

Diamond Viper

If you run Setup from within Windows 3, Setup preserves Microsoft Windows 3.1 drivers for this adapter. If you run Setup from MS-DOS, the Windows 95 VGA driver is installed. If this occurs, use the Diamond Viper setup program to install the Windows 3.1 drivers into Windows 95. Copy the latest Viper files from the DRIVERS directory on the Windows 95 CD, or download them from the WINBTU library on CompuServe.

IBM ThinkPad

This laptop computer uses Western Digital controllers. Versions of these laptops require the IBM VESA driver to be loaded from the AUTOEXEC.BAT file for 256-color and high-resolution modes to be supported by the Windows 95 Western Digital display driver.

S3-Based Video Adapters

The S3 driver has a number of switches that can be used to work around the problems mentioned below. These lines can be added to the [display] section of the SYSTEM.INI file.

 The Refresh_Rate= switch corrects monitor-synchronization and refresh-rate problems (where <number> is 56, 60, 72, or 75).

   Refresh_Rate=<number>

 The SWCursor= switch corrects problems with the mouse pointer by disabling the hardware cursor.
SWCursor=1

 The HighColor= switch corrects problems with incorrect color at 16 bits per pixel using a 555 format.
HighColor=15

 The MMIO= switch corrects problems with miscellaneous crashes on some adapters by disabling memory-mapped I/O.
MMIO=0

More Information

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Starting Programs at the MS-DOS Prompt

In Microsoft Windows 95, you can start a Windows-based or MS-DOSbased program from the command prompt in an MS-DOS window. To do so, you type the program's executable filename (or **start** plus the program's executable filename) at the MS-DOS command prompt.

For example, to start ScanDisk for Windows, you can type **scandskw** or **start scandskw** at the MS-DOS command prompt.

More Information

If you type only the program's executable filename, Windows 95 searches the <u>current directory</u> and then the directories on the path statement for the executable file. If the file is not found, you receive the following error message:

   Bad command or filename

If you type **start** before the program's executable filename, Windows 95 searches the current directory, the directories on the path statement, and the <u>registry</u>. If the file is not found, you receive the following error message:

   Cannot find file '<filename>' (or one of its components).

   Check to ensure the path and filename are correct and that

   all required libraries are available.