



McAfee Nuts & Bolts 98 User's Guide

Version 2.0

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Preface

About This Manual

Thank you for purchasing Nuts & Bolts, a suite of very powerful yet easy to use Windows software utilities. Nuts & Bolts helps you keep your PC working at optimum efficiency and speed. You can diagnose and repair your system and application software; create a recovery disk and image snapshots of critical sectors of your hard drives; avoid lost data during application crashes; run virus scans to find and remove computer viruses; automatically or interactively create backup sets; back up to a protected volume file which makes your data recoverable when it otherwise would not be; and ensure that your PC meets Year 2000 hardware compliancy. Safe & Sound also places a wealth of information about your PC system at your fingertips with DiscoverPro.

From the moment you install Nuts & Bolts, it begins protecting your PC. First, by guiding you to create a recovery disk that you can use later if problems arise. Second, by activating Bomb Shelter, which immediately protects you against losing unsaved information in the event that an application crashes. Next you'll want to use Retake to create a backup set of your drives' valuable data that you can restore in case any unrecoverable problems arise.

After repairing and protecting your system, you're ready to use other Nuts & Bolts utilities to clean and optimize, prevent and protect, and secure and manage its information.

What you're about to learn:

- What utility programs are included with Nuts & Bolts and what you can do with each one.
- What you need before starting.
- How to install Nuts & Bolts software (see *Nuts & Bolts Quick Install on page xix*).
- How to start the Nuts & Bolts utilities.

Nuts & Bolts Overview

Nuts & Bolts is made up of these suites of utility programs:

Repair and Recover

- **Disk Minder** (*Windows 3.1x/95/98*) safely, easily, and quickly diagnoses and repairs existing or potential disk problems.
- **McAfee Image** (*Windows 3.1x/95/98*) saves an “image” copy of critical disk information in a file, and restores the image later if your disk is corrupted.
- **Rescue Disk** (*Windows 3.1x/95/98*) creates a custom rescue disk that you can use to boot up the PC and begin recovery if you can’t start from the system hard drive.
- **PC Checkup** (*Windows 95/98*) thoroughly analyzes the state of your PC’s hardware and software. It can repair many software and configuration problems for you. When PC Checkup finishes its diagnosis, it produces a full report of any problems. You can let PC Checkup fix them, or perform repairs yourself.
- **Discover Pro** (*Windows 3.1x/95/98*) shows a wealth of information about your hardware and software. It also lets you run diagnostics and benchmark tests.
- **Undelete** (*Windows 95*) lets you undelete files that you have deleted.

Clean and Optimize

- **Cleanup Wizard** (*Windows 3.1x/95/98*) finds duplicate, old or unused files that you can delete, compress or move on a drive.
- **Disk Tune** (*Windows 95/98*) improves your PC’s performance by *defragmenting*, or rearranging, files or consolidating free disk space on the hard disk for maximum efficiency.
- **Registry Wizard** (*Windows 95/98*) guides you through easily maintaining, troubleshooting or repairing the Registry database.
- **Registry Pro** (*Windows 95/98*) lets you manually troubleshoot, edit, and repair the Registry database.
- **Shortcut Wizard** (*Windows 95/98*) locates any orphaned shortcuts on your system that point to deleted or moved files so you can repair or delete them.
- **Launch Rocket** (*Windows 95/98*) dramatically reduces application launch times by directing your system to read parts of applications from the hard disk in the most efficient manner. It also copies and compresses start-up parts of applications, storing them in a single file that it reads, rather than reading multiple files across the hard drive.

Prevent and Protect

- **Bomb Shelter** (*Windows 3.1x/95/98*) protects various critical parts of your Windows system from being overwritten by other programs.
- **WinGauge** (*Windows 3.1x/95/98*) graphically tracks system memory, resources, drives, and performance in real time, providing advance alerts and warnings.
- **McAfee VirusScan** lets you scan your computer for viruses. For complete instructions, see the online VirusScan manual PDF file provided on the CD disc in the Manuals folder.
- **Year 2000 Checker** (*Windows 3.1x/95/98*) lets you test your system hardware for Year 2000 compliancy. If it is not, Year 2000 Checker installs Y2Kfixer.com to make your PC compliant so it handles dates accurately starting on 01-01-2000.
- **Trash Guard** (*Windows 95/98*) protects all the files you delete, even files deleted in DOS or in 16-bit Windows applications, by sending them to the Recycle Bin.
- **Retake** (*Windows 95/98*) lets you create automatic or interactive backups of selected drives, directories, files or file types. You can back up to a protected volume file (a separate area on the drive). A protected volume file contains information about each file in every sector to ensure that files can be recovered even if the hard drive's directories and data are severely damaged or lost. You can also create mirror backups that instantly back up data as you save it, make backups after a time delay when the PC is idle, or create manual backups.

Secure and Manage

- **EZ Setup** (*Windows 95/98*) lets you customize the Windows desktop, startup programs, icons, startup and close screens, and so on.
- **Launch Pad** (*Windows 3.1x/95/98*) lets you create custom Launch Pads, keeping program, document or folder icons handy so you can open them fast.
- **McAfee Fortress** (*Windows 3.1x/95/98*) encrypts sensitive files so unauthorized people cannot access them.
- **McAfee Shredder** (*Windows 3.1x/95/98*) permanently deletes files so they cannot be restored or rebuilt, and "security wipes" free disk space.
- **McAfee Zip Manager** (*Windows 3.1x/95/98*) easily creates compressed ZIP files, or unzips existing ZIP files.
- **Quick Copy** (*Windows 3.1x/95/98*) lets you select files and folders (or directories) and quickly copy them from one location to another.

What This Package Contains

Your Nuts & Bolts software package should include:

- One Nuts & Bolts CD-ROM disc

If your PC does not have a CD-ROM drive, you can obtain a set of 3.5-inch disks from our Customer Service department.

- This *McAfee Nuts & Bolts User's Guide*
- A Registration card

Please fill out and return your Registration card to receive technical support and receive new product and product upgrade information.

What You Need Before Starting

To use Nuts & Bolts, you need:

- Nuts & Bolts software (on CD-ROM disc)
- A PC with a 386 SX or above CPU (central processing unit)
- DOS version 3.1x or later (DOS 3.3 for PS/2 models)

NOTE: Microsoft DOS version 7.0 or later is included as part of Microsoft Windows 95/98.

- Microsoft Windows 3.1x, Windows 95 or Windows 98
- At least 20 MB (megabytes) of RAM (random access memory)
- One 3.5-inch disk drive
- 18 MB of available hard drive space
- A 16-color VGA monitor that supports 640 x 480 pixels (or better)
- A CD-ROM drive

- ✦ **TIP:** This guide assumes you know the basics of using Microsoft Windows. You should know how to point, click, double-click, and drag. You should also know how to choose commands from menus, select options in dialog boxes, and enter, select, and edit text. See your *Microsoft Windows User's Guide* for details
-

Getting Started

This section offers Quick Install and Quick Start procedures to help you install and start McAfee Nuts & Bolts. You'll also find information about getting online Help.

Nuts & Bolts Quick Install

To install Nuts & Bolts:

1. Insert the McAfee Nuts & Bolts CD into the CD-ROM drive.
The Nuts & Bolts Installer should autoplay (go to step 3), but if it doesn't go to step 2.
2. Do one of the following:
 - For Windows 95/98:
Double-click the My Computer icon, the Nuts & Bolts icon and the Setup.exe or Setup icon.
 - For Windows 3.1x:
Choose the Run command from the File menu.
Type `e:\setup.exe` (where "e" is the drive letter for your CD-ROM drive) or `a:\setup.exe` (where "a" is the drive letter for your 3.5-inch drive) and click OK.
3. Follow the on-screen instructions to supply the requested information.
Setup requires you to enter information for registering the software.

Nuts & Bolts Quick Start

You can start any of the Nuts & Bolts utilities from Nuts & Bolts Central.

To start Nuts & Bolts Central in Windows 95/98:



1. Click the Start button on the taskbar.
2. Choose the Nuts & Bolts command directly from the Start menu, or from the Start > Programs > Nuts & Bolts menu.

The Nuts & Bolts Central window appears.

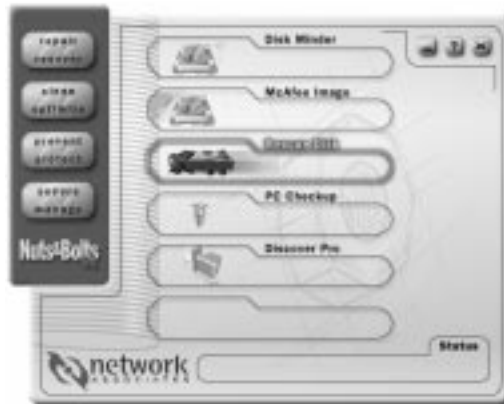


Figure 4–1. The Nuts & Bolts Central window gives you access to all Nuts & Bolts utilities

To start Nuts & Bolts Central in Windows 3.1x:

1. Double-click the McAfee Nuts & Bolts program group in the Program Manager window.
2. Double-click the Nuts & Bolts Central program icon.

The Nuts & Bolts Central window appears.

Graphic Interface Tips and Techniques

Nuts & Bolts supports advanced Windows graphics interface techniques that allow you to:

- Create desktop icons for individual Nuts & Bolts utilities. You can disable this feature by starting a utility, clicking the Properties button, and deselecting its Show Icon on Desktop check box.

- Drag and drop icons, files, or folders from Program Manager in Windows 3.1x or from Windows Explorer or My Computer in Windows 95/98 onto the icons of Nuts & Bolts utilities.
- Right-clicking (pressing the Right mouse button) the WinGauge or Launch Pad windows to display a pop-up menu of commands. All the Nuts & Bolts utilities provide a Right-click pop-up menu when you point to their icons in the Windows Explorer or in My Computer. You can include some of the Nuts & Bolts utilities as commands in the Send To menu.

For details about showing or hiding icons on the desktop, dragging and dropping, and displaying pop-up menus by Right-clicking, see the respective Nuts & Bolts utilities' sections in this guide.

Getting Help

Nuts & Bolts provides online Help to give you detailed information about the windows, dialog boxes, and options available in each of the Nuts & Bolts utilities. It also offers procedures for all the tasks you can perform. There are a few basic ways to access Nuts & Bolts' online Help:

- In Windows 95/98, choose the Programs > Nuts & Bolts > Nuts & Bolts Help File command from the Start menu or click the ? button in Nuts & Bolts Central.
- In WinGauge or Launch Pad, Right-click and choose the Help command.
- In Bomb Shelter, PC Checkup, Retake, Year 2000 Checker, McAfee Image, Rescue Disk, Cleanup Wizard, DiscoverPro, Disk Tune, DiskMinder, EZ Setup, Registry Wizard, Stronghold, Shredder, Shortcut Wizard, and Zip Manager Wizard, click the Help button.
- In Registry Pro and Zip Manager Advanced window, choose the Help Topics, What's This?, or About command from the Help menu.

Technical Support

Technical Support is available from 6 a.m. to 6 p.m. Pacific time, weekdays. You can contact Technical Support via telephone and the World Wide Web home page. Outside of support hours, you may leave a voice message. Technical Assistance Centers are located in California and the Netherlands.

If you purchased your product from one of our International Distributors, you must contact that distributor for support assistance. Refer to

<http://www.nai.com> on the World Wide Web for information on contacting our International Distributors.

Table i describes the various ways to access Technical Support.

Table i. Contacting the Technical Support Department

**North American and International, 0600–1800 (PST),
Monday–Friday**

Telephone Number (North America only)	+1-408-988-3832
Telephone Number (other International)	+1-650-473-2090

Europe, 0730–1730 (GMT), Monday–Friday

Telephone Number	+31 (0) 20 586 6100
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Worldwide

World Wide Web (Internet) information	http://www.nai.com
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World Wide Web

You can obtain additional information about Network Associates and its products and services from the World Wide Web at <http://www.nai.com>.

Training

Network Associates offers a comprehensive set of training courses focused on hands-on network analysis, monitoring, and troubleshooting using products from Network Associates. Courses can be conducted at your site, at central locations throughout the globe, or at training centers in Menlo Park and Anaheim, California; Chicago, Illinois; and Atlanta, Georgia. For more information about these courses, contact your sales representative or call Network Associates.

Over time as you use your computer, the information stored on the hard drives changes. This happens when you save, modify or move documents as well as when you install, update or uninstall application programs. As the information changes, there is a slim chance that critical information, such as the master boot record used to start your PC, can accidentally become damaged.

In a perfect world, all application programs would coexist peacefully, store their data exactly where they should, and always play by the rules. In the real world, this doesn't always happen. The result can be missing files; orphaned shortcuts, fonts or registry entries; inefficient Windows settings; or even corrupted data that can prevent you from starting Windows, or worse yet, from starting your PC at all.

In a perfect world, the electric power coming into your computer would always flow like a clear, placid, spring-fed stream, with no power spikes or surges to inadvertently change the state of a critical bit of data, or worse. In computing, as in the real world, there may be perfect moments or a perfect day at a stream, but a perfect lifetime is exceedingly rare.

If you've encountered a problem with your computer, we understand your frustration. While you're trying to get good work done quickly—who these days has the luxury of doing work at a leisurely pace?—your PC stops in its tracks. Such problems force you to focus on the tool rather than on the work itself.

Our advice? First, remain calm. Second, take a deep breath. Third, read this chapter, which describes Nuts & Bolts 98's Repair and Recover utilities designed to help you resolve problems with your PC's system software and data.

- **Disk Minder**—which lets you diagnose and repair existing or potential problems with your data and the surface of recordable disk drives (any drive that lets you save, or write, data to it).
- **McAfee Image**—which lets you save an “image” copy of critical disk information in a special file, and restore that image file later if you need to repair or recover the disk's information.

- **Rescue Disk**—which lets you make a Rescue disk for your computer that you can use to boot up the PC—if you can't start from the system hard drive—and begin recovery of your system. If you are an advanced user, you can add your choice of files to the Rescue disk that you might want to have at hand if you need to recover a hard drive later.
- **PC Checkup** thoroughly analyzes the state of your PC's hardware and software. It can repair many software and configuration problems for you. When PC Checkup finishes its diagnosis, it produces a full report of any problems. You can let PC Checkup fix them, or perform repairs yourself.
- **Discover Pro** shows a wealth of information about your hardware and software. It also lets you run diagnostics and benchmark tests.
- **Undelete** lets you recover files that you've deleted even after you've emptied the Recycle Bin.

After you finish testing your system, and repairing it if necessary, you can use Retake to create backup copies of your PC's data. At any point along the way, you can use Discover Pro to obtain more information about your system.

Disk Minder



Disk Minder lets you safely, easily, and quickly diagnose and repair existing or potential problems with the disk drives where you save your valuable application programs and data. Disk Minder verifies, and can correct automatically or interactively, problems with the partition tables, File Allocation Tables (FATs), boot sector, extended boot sector, compression structure, directory structures, file dates and times, filenames, and clusters. A *cluster*, the smallest measurement unit of disk storage space, is typically four or more sectors on a disk. Disk Minder also checks for non-ANSI and duplicate filenames, and can verify the integrity of the sectors on a disk by performing read/write tests of the entire recordable surface area of the disk.

Why should you use Disk Minder instead of ScanDisk, when ScanDisk comes with DOS and Windows?

- ScanDisk cannot correct the most serious errors, such as those with the hard drive's partition table or boot sectors.
- ScanDisk corrects the second most serious problems—cross-linked files, and size errors—improperly, never actually fixing the error.
- ScanDisk misses many minor problems that can interfere with Windows operations, such as duplicate files or non-ANSI files.

- Disk Minder can scan your disk in less than half the time it takes ScanDisk, making Disk Minder more convenient to use frequently.

When should you use Disk Minder? *Immediately* after a system crash or whenever you receive a message telling you a file cannot be accessed for any reason, you should use Disk Minder to verify the integrity of the disk containing that file. The earlier you fix a disk problem, the less chance there is of it causing a more serious problem down the road.

-
- ✦ **TIP:** When you use Disk Minder, always **create an Undo file**. Then if the repairs cause any unexpected or undesirable results, you can revert to the Undo file so the disk returns to its state before you ran Disk Minder.
-

You can use Disk Minder in three main ways:

- **Fix Errors Automatically Using Default Values**—If you are just getting started using your PC, if you are uncertain about what errors you might want to fix, or if you simply don't have extra time to oversee the disk repair, you can let Disk Minder fix any errors it finds for you. You can select either the Fix Errors Automatically Using Default Values option in the Disk Minder window, or the Auto Fix Errors option in the Disk Minder Properties sheet. Both options make Disk Minder automatically fix errors. During the repair, Disk Minder verifies data on the selected disks, and fixes any problems it finds without asking your advice. If you decide to use this option, you can start Disk Minder and leave it running while you're away from your PC, such as before you leave the office at night.
- **Report Errors Only**—If you are a more advanced PC user, you may want to see a report showing any errors on a disk before you decide what to do to resolve these errors. You can easily get a detailed report about the state of a disk using the Report Errors Only option in the Disk Minder Properties sheet. When you select this option and click Start, Disk Minder verifies the information on your disk, and produces a summary and detail report. It does not make any changes to the disk. You can print the detail report of the test results on your printer or save it as a text file. This gives you the facts you need to decide whether and how to fix disk problems.

- **Fix Errors Interactively**—If you deselect the Fix Errors Automatically Using Default Values check box in the Disk Minder window, Disk Minder runs an interactive disk repair process by displaying a message about any errors it finds. Disk Minder lets you decide whether to fix each error or not, and how to fix the error. Each message describes the error situation and offers a suggested solution (the default choices in the message).

NOTE: Nuts & Bolts 98 provides a DOS, Windows 3.1x and Windows 95/98 version of Disk Minder. If you suspect there is a problem with a disk's information, run Disk Minder in Windows. If the disk problems prevent you from starting Windows, or if your system has recently crashed, use Disk Minder in DOS first. Once you can run Windows again, use Disk Minder in Windows to complete any repairs.

No matter which disk repair method you use, you can specify Disk Minder properties to specify the kinds of data it checks, whether Disk Minder performs read/write tests to verify the integrity of the disk surface, and if so, how many times it repeats the read/write tests.

Creating and Reverting to an Undo File

If Disk Minder finds a problem, it asks if you want to create an Undo file before making any changes to the disk.

To create an Undo file, click Yes and pick a destination for the Undo file.

To revert to an Undo file, click Undo in the Disk Minder window. Select the drive with an Undo file you want to use. Then click OK.

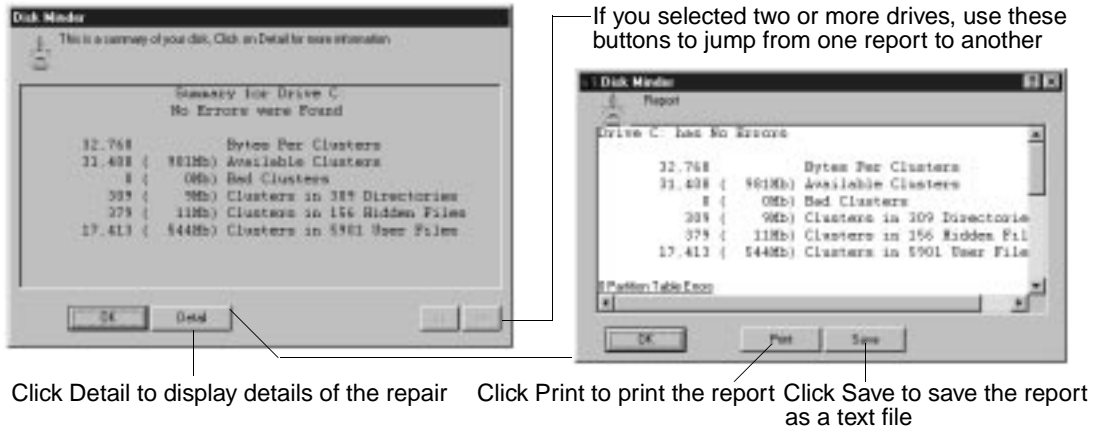
Using Disk Minder to Auto Fix Errors

Using Disk Minder for Windows to automatically fix errors is very easy. Just start Disk Minder, select the disk drives to check, select whether you want to check the disk surface for read errors, select the Fix Errors Automatically Using Default Values check box, and click the Start button. Until the process is complete, you can walk away from your PC because no further interaction from you is required.

Using Disk Minder to Report Errors Only

Before interactively fixing errors, you can run Disk Minder with the Report Errors Only option selected to examine or print reports describing a disk's problems.

To use Disk Minder to report errors only, start Disk Minder, click Properties, select the Report Errors Only check box and click OK. Then select the disks to check, whether to scan the disk surface and click Start. Disk Minder checks the disk and displays the Summary report.



Disk Minder Summary Report

The Summary report tells you how many errors were found on the scanned drive. It also gives you complete information about the status of clusters (the smallest storage units of information on a PC drive) on the drive. You can click the Detail button to examine, save, or print a Detail report about your disk and any errors found and corrected.

Disk Minder Detail Report

The Detail report tells you exactly what Disk Minder found when testing your drive. You can click the Print button to print the Detail report. Or click the Save button to save this report as a text file for later review.

The Detail report describes the following kinds of information: the total number of errors found on the drive, if any; the cluster status information (bytes per cluster, available clusters, bad clusters, and the number of clusters in the total number of directories, hidden files, and user files); Partition Table errors; File Allocation Table errors; Boot Sector errors;

Extended Boot Sector errors; compression structure errors; directory errors; and file errors.

Interactively Fixing Errors

Disk Minder defaults to informing you when it finds an error and letting you interactively decide whether or not you want to fix the problem. When Disk Minder finds a problem while checking a drive interactively, it displays a message that asks you what to do to resolve it. The suggested response is indicated by the default settings, including which button is the *default* (in the illustration, the Fix button is the default, which means that pressing ENTER, is like clicking the Fix button).



Customizing Disk Minder Properties

You can set Disk Minder properties that determine whether it will only report errors or fix them, whether it fixes errors automatically or interactively, and what kinds of information it will verify. You may also decide whether to test the drive’s recordable surface media and how many repetitions of this surface scan you want Disk Minder to perform.



Select Properties options and click OK

Your Disk Minder options are:

- **Report Errors Only**—causes Disk Minder to only report errors in the Summary and Detail reports.
- **Auto Fix Errors**—fixes any data or disk errors automatically. This is the same as selecting the Fix Errors Automatically Using Default Values check box in the Disk Minder window. If you deselect this check box, Disk Minder lets you fix errors interactively.

- **Check Partition Tables**—verifies partition tables, that define the partitions subdividing a physical drive into more than one logical drive. Partitions are created using FDISK or other programs, often before storing data on the disk. All drives have partition tables.
- **Check File Dates + Times**—verifies that dates and times associated with files are valid. In Windows 95, Disk Minder verifies the Created, Modified, and Accessed date and time stamps. In Windows 3.1x, only the last modified date and time are saved with each file.
- **Check Host Drive First**—checks the physical drive where DriveSpace or DoubleSpace compressed volume files are stored. Then it checks the compressed volume files, or logical disks.
- **Check for Valid File Names**—verifies that filenames use acceptable characters. Valid characters for filenames are numbers 0-9, letters A-Z, and basic symbols excluding the backslash (\), greater than (>), less than (<), colon (:), double quotations ("), and bar or pipe (|). Disk Minder for Windows 95 also checks long filenames as well as short filenames that follow the 8.3 filename convention.
- **Check for Non-ANSI File Names**—finds any non-ANSI filenames. All characters are uniquely numbered from 0 through 255. Two standards exist for numbering characters: ANSI and IBM ASCII. Windows uses ANSI, and characters that appear on both numbering systems are automatically translated by Windows to their ASCII equivalents for use in filenames, which must be stored in ASCII. Some ASCII characters do not have ANSI equivalents, in which case, Windows is unable to display or access the filename properly. Disk Minder can detect and fix this problem.
- **Check for Duplicate File Names**—checks for duplicate filenames—files with the same name in the same directory.
- **Test Drive Surface**—performs read/write tests of a disk's recordable surface media. This may take some time because the entire disk is read and then rewritten. If a sector is damaged, Disk Minder saves the data elsewhere so you can try to recover it later. Disk Minder maps out the bad sector so it won't be used in the future.
- **Surface Scan Repetitions**—becomes active if you select the Test Drive Surface check box. Enter a number between 1 and 10, for the number of times you want to perform a complete read/write test on the drive's surface. The more repetitions, the longer the process takes, but the more confirmation you have that the media can accurately store data. If you decide to run several repetitions, you may also want to use the Auto Fix Errors option and let Disk Minder perform the tests while you are away from your PC.

Using Disk Minder in DOS

Disk Minder lets you repair disks even if you cannot start Windows.

To use Disk Minder in DOS:

1. Do one of the following at the DOS prompt, and press **ENTER**:

If you are using Windows 3.1x, type: `C:\NUTSBOLT\DMDOS`

If you are using Windows 95, type: `C:\WINDOWS\DMDOS`

Disk Minder searches your PC for drives and then asks you to select the drives you want to check from the Drives list.

2. Press the **TAB** key to change the drives that are currently selected to be scanned. Selected drives have an **x** beside them in the list.
3. Press the **UP ARROW** and **DOWN ARROW** keys to highlight a drive and press **ENTER** to select it.
4. Press the **RIGHT ARROW** key to move the cursor back to the buttons.

You can select Disk Minder options if you like. Your Disk Minder options are: Fix Errors Automatically, Test Drive Surface, Check DxSpace Host Drive First, Check for Valid File Names, Check for Duplicate File Names, Check Reserved Attribute Bits, and Display Summary for Each Drive. For details, see [Customizing Disk Minder Properties on page 6](#).

5. Select Start and press **ENTER** to start checking the drives.

Disk Minder displays a screen showing the kind of data it is checking and the options in effect. If the Display Summary for Each Drive option is set, Disk Minder displays a summary message showing the total number of errors found on each drive, if any. It also shows information about the clusters on the drive.

McAfee Image



Although it happens rarely, data stored on a hard drive can become damaged in several ways. For example, the electric company may be working down the street and accidentally send a spike, or power surge, to your PC. Even if you use a surge protector and connect all the computer's power cords and the modem's phone line to a surge protector (instead of connecting them directly to wall connectors), power surges can still reach your PC and cause lost or corrupted data.

An important step in preventing disaster is using Nuts & Bolts 98's Image to make a "snapshot" of the most critical areas on your hard drives. Since

even a recent backup copy is still not as good as recovering your current data, you'll want to try to recover the latest data first if anything goes wrong. If you use Image to make a snapshot of the most crucial information on your drives, then if a drive becomes corrupted, you can use Restore to restore the most current version of your data.

Rescue Disk saves information that you'll need if your hard disk ever fails, including the boot record, partition tables and FAT information. It's a good idea to run Rescue Disk daily, as well as whenever you've reorganized a disk's files using a defragmenter. This ensures that you can use Image's Restore option to restore the latest states of your files and folders (or directories). Image stores its information in a file on your hard drive. This file is stored using a special, patent-pending method that allows the file to be recovered even if the hardware is severely damaged.

NOTE: Set the Image Properties sheet option to run Image automatically each time you start Windows. Image will examine your system and update the image only if needed. Doing this ensures you always have the latest data saved for your disks.

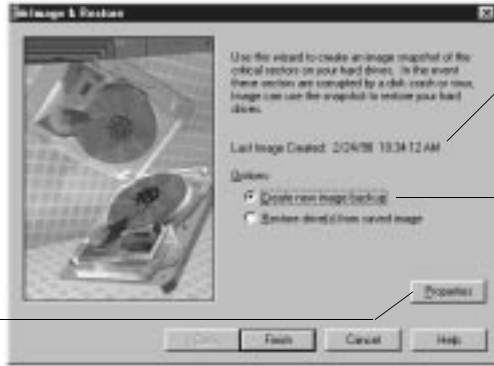
Creating an Image of Your Disks

Creating an image copy of your hard disks as a file (`nbimage.dat`) only takes a moment. You should create a new image file any time you've rearranged files or added many new files to your hard drive.

To create an image of your hard drives, select the Create a New Image Backup option and click Finish. Image saves the `nbimage.dat` file on your system hard drive, and displays a message letting you know the process is complete. Click OK.

Be sure to create a Rescue disk using Nuts & Bolts 98's Rescue Disk. Rescue Disk places some Image information on your 3.5-inch disk.

Click Properties to set whether Image will save FAT information and to turn on Image's auto-save option, which updates the image each time you start Windows



The first time you run Image, it records the date and time; thereafter, Image shows you when the last Image file was created

Select whether to create an image file or restore an image file; then click Finish

Setting Image Properties

You can set Image Properties to specify whether Image saves the *File Allocation Tables* (FAT), which is a roadmap or index to where all the pieces of files on a disk drive are located. Most likely, you'll want to keep this check box selected. You can also have Image create a new image copy of your hard disks each time you start Windows (recommended).

Restoring Drives From an Image File

When all else fails, you can restore the critical information on one or more drives from an image file. Restoring an image file *does NOT* recover deleted files. If you have deleted data files that you need, you can restore a copy of them from your last backup set (protected volume file or directory) created with Retake.

NOTE: Do not restore an image, except as a last resort. The Image file does not contain your data files, those are located in your Retake backup set.

To restore one or more drives from an image file:

1. Start Image, select the Restore Drive(s) From Saved Image radio button, and click Next >.



Select an image file from the list and click Next > to begin restoring your hard disks

Click Scan >> to locate image files stored on any disk drive on your PC; you can restore image files from any drive, even damaged hard drives

2. Do one of the following and click the Next > button:
 - Select an image file to use for restoring your drives from the list of those found on your system hard drive.
 - Click the Scan >> button to look for additional image files if you don't see the one you want to use. Image scans your hard drives for image files. Select one of them and click Next >.
3. Select the hard drives you want to restore and click Next >.
4. Select the kinds of information you want to restore.

Image defaults to restoring the master boot sector, partitions and the File Allocation Tables. In most cases, you should use the Image default settings. If you are an advanced user, you may want to only restore one or two of the options:

- **Master boot sector**—Select this option if you cannot start the PC from your system hard drive. The master boot sector is the sector on your system hard disk that contains boot information with instructions for starting up your PC.
- **Partitions**—Select this option if you cannot find a logical drive on your PC. *Partitions* subdivide a physical drive into multiple logical drives. Each partition has its own drive letter.
- **File allocation tables**—Select this option if your files are corrupted and you have been unable to repair them using Disk Minder. Often much or all of your data may be intact on the disk, but the file allocation tables (FATs) may be damaged. By restoring the most current copy of a disk's FAT, you can often recover files that would otherwise be lost.

5. Click Finish to restore the drives with the specified kinds of data.

NOTE: If your Image file is more than a day or two old, or if you have optimized your hard disk and have not run Image, try using Disk Minder to repair the hard drive first.

Rescue Disk



Rescue Disk lets you create an emergency boot disk that you can use to boot up your PC if you encounter a problem that prevents you from starting the computer from the system hard drive. The *system hard drive* is the hard drive that contains your Windows directory or folder.

You can use the Rescue disk that is created by default. Or if you are an advanced user, you can customize your Rescue disk to add the most important files that you may want to use when recovering a failed hard drive. For example, you might want to add your CD drive's driver software so you can also access that drive during the recovery process.

To create a Rescue Disk:

1. Click the Next > button in the Rescue Disk Wizard.
2. Do one of the following:
 - Go to [Step 3](#) if you want to use the default Rescue disk.
 - Click Advanced if you are an advanced user and want to add additional files to (or remove them from) the Rescue disk.
3. Click Next >. Then click Finish.
4. Insert a disk into drive A and click OK.

Rescue Disk formats the disk and copies critical startup files to it, as well as any files you added. When the process is complete, Rescue Disk exits and returns to the desktop.

Using a Rescue Disk

Insert your Rescue disk into drive A, reboot your computer (or turn on the power). If your system doesn't boot, access CMOS and make sure the Booting From Floppy option is enabled. Then follow the instructions on the screen.

Disk Minder in DOS

Disk Minder in DOS lets you repair disks even if you cannot start Windows. It resolves most disk-related problems such as missing drives, inability to access drives, or errors accessing drives.

To use Disk Minder in DOS:

1. Type the following:
C:\WINDOWS\DMDOS
and press **ENTER**.
Disk Minder searches your PC for drives and then asks you to select the drives you want to check from the Drives list.
2. Press the **TAB** key to change the drives that are currently selected to be scanned. Selected drives have an x beside them in the list.
3. Press the **UP ARROW** and **DOWN ARROW** keys to highlight a drive and press **ENTER** to select it.
4. Press the **RIGHT ARROW** key to move the cursor back to the buttons.

You can select Disk Minder options if you like. Your options are:

- **Fix Errors Automatically**—fixes any data or disk errors automatically. This is the same as selecting the Fix Errors Automatically Using Default Values check box in the Disk Minder window. If you deselect this check box, Disk Minder will let you fix errors interactively.
- **Test Drive Surface**—performs read/write tests of the recordable surface media on a disk. This process may take some time because the entire disk is read and then rewritten. If a sector is damaged, Disk Minder relocates the information, saving it elsewhere on the disk so you can try to recover the information later. Then it maps out the bad sector so it won't be used for storing data in the future.
- **Check DxSpace Host Drive First**—checks the physical drive where DriveSpace or DoubleSpace compressed volume files are stored. Then it checks compressed volume files, or logical disks.
- **Check for Valid File Names**—verifies that filenames use acceptable characters. Valid characters for filenames are numbers 0-9, letters A-Z, and basic symbols excluding the backslash (\), greater than (>), less than (<), colon (:), double quotations ("), and bar or pipe (|). Disk Minder also checks long filenames as well as short filenames that follow the 8.3 filename convention.

- **Check for Duplicate File Names**—checks the selected drives for duplicate filenames (files with the same name in the same directory).
 - **Check Reserved Attribute Bits**—flags files that have any of the unused (by Windows/DOS) file attribute bits set. These bits may be set on a drive that is shared by OS/2, but otherwise you should most likely leave this option deselected.
 - **Display Summary for Each Drive**—The Summary report tells you how many errors were found on the scanned drive. It also gives you complete information about the status of clusters (the smallest storage units of information on a PC drive) on the drive.
5. Select Start and press **ENTER** to start checking the drives.

Disk Minder displays a screen showing the kind of data it is checking and the options in effect. If the Display Summary for Each Drive option is set, Disk Minder displays a summary message showing the total number of errors found on each drive, if any. It also shows information about the clusters on the drive.

Image/Restore in DOS

Image/Restore can recover from drives that have been accidentally formatted or completely erased, if Image was recently run.

SysRecover

SysRecover can restore several of the Windows 95/98 startup files, such as SYSTEM.INI and the Windows Registry. You should choose this option only if Disk Minder finds no problems on your drives and you cannot start Windows even in Safe mode.

Recover Backup

Recover Backup can restore files from Retake protected volumes file backup sets on drives that have been damaged, erased or accidentally formatted.

Unformat

Unformat can restore entire drives that have been recently formatted.

Undelete

Undelete is a DOS program like the Windows counterpart that lets you undelete files even after you have deleted them from your hard drive using the DOS delete command. For more information about the Undelete program, see [Undelete on page 23](#).

PC Checkup

Nuts & Bolts' PC Checkup can help you diagnose, repair and recover information on your system. It provides exhaustive testing of your PC's system and configuration settings.

Performing a Standard Diagnosis and Repair

You should start with a standard diagnosis and repair. Then you can perform an advanced diagnosis and repair if necessary. PC Checkup lets you know which repairs you make can be undone later.

To use PC Checkup to diagnose and repair PC problems:

1. Click the Start button and do one of the following:
 - Choose the Nuts & Bolts command from the Start menu and click the Checkup button.
 - Choose the Programs > Nuts & Bolts > PC Checkup command.
The PC Checkup Wizard appears.
2. Click Next > to perform a standard diagnosis first.

NOTE: Clicking Advanced lets you perform advanced diagnostics. This option lets you run a more detailed analysis of your PC. You should use this option after performing a standard diagnosis as described in this procedure. Clicking Undo lets you undo repairs made using PC Checkup. For more details about performing an advanced diagnosis and repair, see the [Nuts & Bolts 98 online Help](#).

3. Select the items you want analyzed (by default all the options are selected).
When you select some of these options, the Properties button becomes active, indicating that there are options you can select to fine tune the diagnosis of this part of your system. The items you can diagnose are described in the [Nuts & Bolts 98 online Help](#).

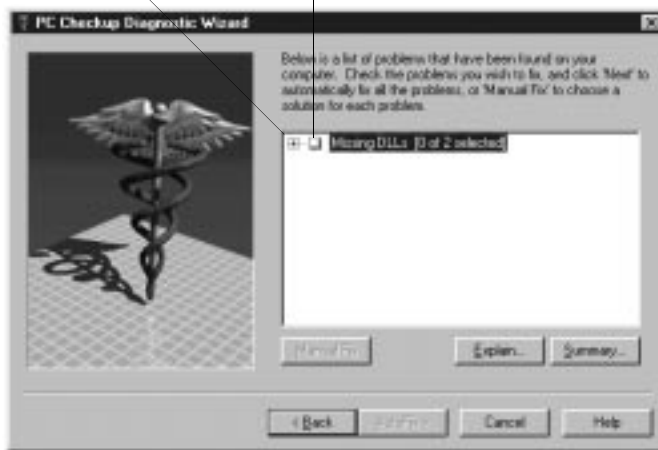
4. Click Next >.

PC Checkup begins diagnosing your PC. You can click Skip to skip any item, or click Stop to halt the diagnosis. Depending on the number of items selected and the speed of your PC, the time it takes to diagnose your PC varies.

When the diagnosis is complete, PC Checkup makes a Summary list available along with options for repairing any problems it encountered during testing.

Click the + button to view individual problems

Place a check mark beside items or problems to fix

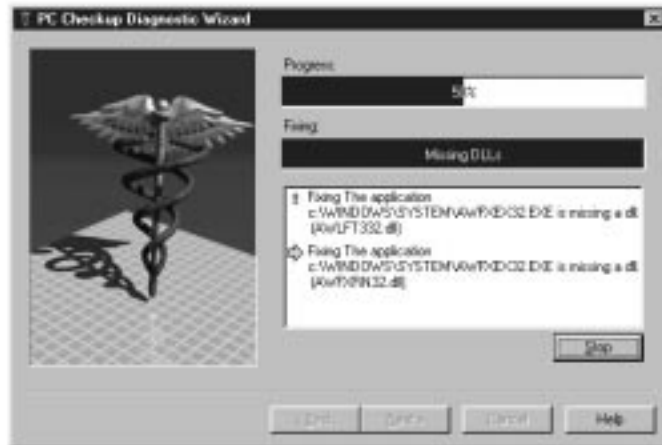


5. Do any of the following:

- Click the Plus (+) button to view individual problems.
- Click a check box to select a problem or all problems for an item that you want to fix.
- Select an item or problem in the list and click Explain to get information about it.
- Click the Summary button to view or print a list of the problems found on your PC.
- Click the AutoFix > button to let PC Checkup fix all the problems that it can for you.
- Click the Manual Fix button to select from a list of solutions for each item. It steps you through each item, giving you an opportunity to automatically fix the problems, manually fix them yourself, ignore them for now, and other solutions appropriate for those problems.



When you do a manual repair, PC Checkup lets you select a solution for each item with problems. After you select one of the solutions, the Explain button becomes active so you can view an explanation of what that solution will do. Once you finish reading the explanation, simply click elsewhere to dismiss the pop-up help message. Also, each solution that can be undone later is marked with an asterisk.



PC Checkup lets you know how the repair is progressing and describes the problem being fixed

You can fix any problems not solved with AutoFix manually. Press < Back, select the problems to fix, and click the Manual Fix button.

Discover Pro

This chapter shows you how to use Discover Pro, a unique utility that lets you view a wealth of system information, as well as perform benchmark and diagnostic tests. Discover Pro is your complete system analysis tool. It can help you understand PC hardware and software configurations, and is designed to help you use, analyze, and configure your PC. It provides all the information you need to make optimum use of all available memory.

Unlike other system information tools, Discover Pro doesn't simply display information that it obtained from Windows. Discover actually tests and measures the hardware and software in your system.

NOTE: You should have general knowledge of DOS and Windows memory architectures and terminology. See [Understanding Windows Memory](#) in the *Nuts & Bolts 98 online Help*.

What you're about to learn:

- About the Discover Pro window
- About the Discover Pro window's tabs of information
- How to view detailed information for each tab

The Discover Pro Window



Discover Pro is easy to use and most windows are self-explanatory. Click the Help button for context-sensitive help from any window.



Discover Pro lets you view information about your hardware and software. Each tab in the Discover Pro window covers a specific aspect of your PC, ranging from a general overview of your system configuration through software to benchmark and diagnostic tests. You can click the Advanced button at any time to obtain a far more detailed analysis of the current tab's topic.

- **System tab**—shows information about the most critical hardware components of your system, including your CPU, RAM, video, hard drives, BIOS ROM and PCI Bus. You can confirm that your CPU conforms to the manufacturer's specifications; check your physical, used and free RAM; and confirm your video board type, resolution and installed video memory.
- **Memory tab**—gives you information on Windows's usage of your PC's memory, via easy-to-understand charts and tables. You can identify RAM and resource usage for each application and task; view your physical RAM, User and GDI Resources free; and so on. Note that Discover reports on the actual physical memory (RAM) used by programs.
- **Software tab**—provides you with information about the software you are currently running, and the software components of Windows, such as the numbers of virtual machines, threads, tasks, virtual device drivers and modules. The Software tab also gives details on your DOS program segments and bytes used.

- **Drives tab**—gives you a complete summary of any drive installed on your system and of all the directories, folders and files on that drive. You can immediately see the total size of each drive, the amount of free space, fragmentation levels and the size of your drive’s free slack. An easy-to-understand chart gives you a visual overview of your drive, its contents and free space.
- **I/O Devices tab**—shows information on the secondary and optional hardware devices installed on your PC, such as sound devices, serial and parallel ports, printers (including fax/modems) and network data including network type, driver, specification, version and user name.
- **Benchmarks tab**—an easy-to-use method to benchmark the performance of your CPU and compare it to average benchmarks for three other “commonly configured” PCs.
- **Diagnostics tab**—a diagnostics center that lets you run diagnostic tests on various aspects of your PC, including serial, parallel, hard drive, RAM and DMA tests.

Working With Advanced Information

You can view detailed information about any of the tabs in the Discover Pro window.

To work with advanced information:

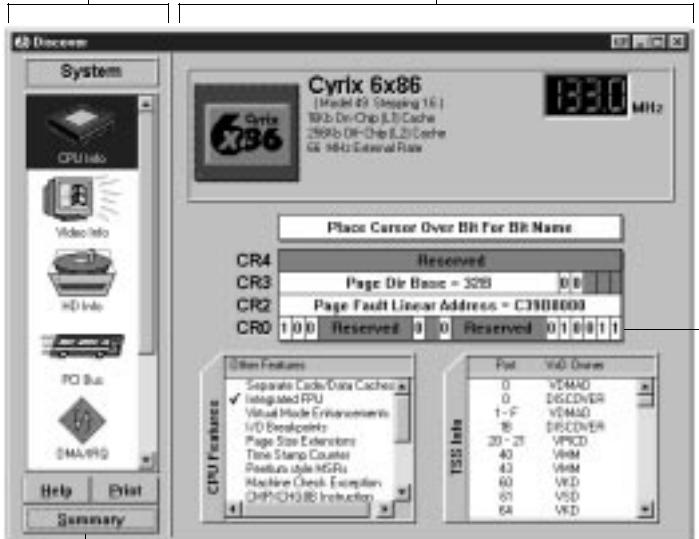
1. Click a tab to bring it to the front.
2. Click the Advanced button.

Discover Pro displays the Advanced window for the active tab. All the Advanced windows have these elements in common:

- **Icon Panel**—Click any of the icons in the panel at the left to view that type of information in the panel at the right.
- **Detail Information Panel**—The detail information shown in the panel at the right is for the category indicated by the currently selected icon. The detail information is mostly self-explanatory with scrolling lists and buttons you can click to obtain additional information or perform related tasks, such as running or stopping benchmark tests.

- ▶ **TIP:** In several of the detail information panels, you'll see legends with small color boxes showing the kind of information that is graphically represented in that color. If you click a color box, the Color Change dialog box appears where you can select a different color to use for that legend item.

Click an icon here and Discover Pro changes the panel here.



Click Summary to go back to the Discover Pro window

Point to a bit (bits are ones or zeros) to see its name

Figure 1. Example of the Advanced System window – CPU panel

Specifying Discover Pro Settings

Discover Pro lets you specify options (after clicking the Settings button) that determine the appearance of the Discover Pro window itself, whether you can view one or more category windows at a time, and whether Discover Pro should remember the positions of windows.

- Display Style**—lets you pick the Discover Pro display style that you are most comfortable using. Each display style provides a differently designed Discover Pro window. When you select one of the radio buttons, Discover Pro displays a preview of that display style, which graphically describes that window design.



Discover Professional Preview



Discover-Small Size preview



Discover preview

The *Discover* display style is the default. It offers a straightforward, single-window display of the Discover Pro window. When you click tabs or buttons, the contents of the window changes rather than a new window opening. The Discover display style is shown in the screen examples earlier in this chapter. Most likely, this display style will work very well for you.

If you are an advanced user, you may prefer using one of the multi-window views: *Discover Professional* or *Discover - Small Size*. For details about these two display styles, see [Using the Multi-Window Views on page 22](#).

- **Save Window Positions**—lets you save the locations of your Discover Pro windows so the next time you start Discover Pro, they appear exactly where you last positioned them.
- **Only One Window at a Time**—lets you display only one window at a time when using the Discover Professional or Discover - Small Size display styles. While this check box is selected, Discover Pro changes the contents of a single window. When this check box is deselected, Discover Pro opens multiple, tiered windows.

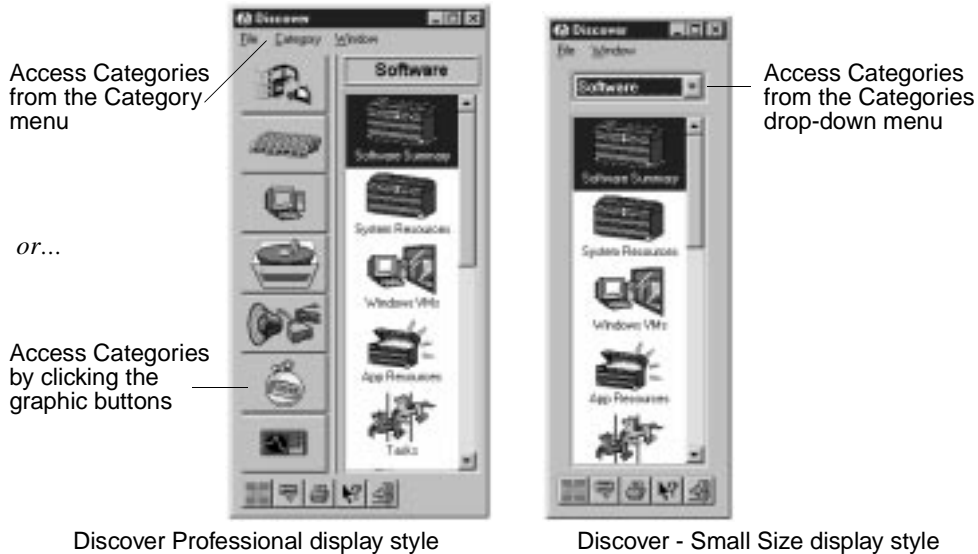
Using the Multi-Window Views

Discover Pro provides two multi-window views: Discover Professional and Discover - Small Size. You can change the view by selecting a different Display Style in the Options dialog box that appears after you click the Settings button (or choose the Settings command from the File menu in one of the multi-window views).

Either one of the multi-window views are a good choice if you want the flexibility of displaying multiple Discover Pro windows that you can resize and move around on the desktop.

The *Discover Professional* display style, shown on [page 23](#), is the larger of the two windows. It contains large buttons for each category, making them very easy to select, so if you have a large monitor, you may like using this multi-window view best.

The *Discover - Small Size* display style is a good choice if you want the flexibility of a multi-window view, but you have a smaller monitor and need to conserve desktop “real estate.” This window displays the categories in a drop-down list box rather than graphically as large buttons.



Discover Professional display style

Discover - Small Size display style

Undelete

Nuts & Bolts 98 Undelete lets you recover files that you’ve deleted even after you’ve emptied the Recycle Bin. Your best chances of successfully undeleting a file is immediately after you perform the deletion. Once you save additional files after deleting one you’d like to undelete, parts of it may have been written over.

The Undelete program displays a Windows Explorer-like view at the top and a list of the files you can currently undelete at the bottom. It shows the probability of recovery for each file that it can undelete. To undelete a file, select it in the list at the bottom and click the Undelete button.

Nuts & Bolts 98 provides both a Windows and DOS version of the Undelete program. The DOS version of Undelete is also included on the Nuts & Bolts 98 Rescue disk when you create it.

This chapter tells you how to use Nuts & Bolts to optimize and maintain your PC to ensure you always get the maximum performance. The Nuts & Bolts' Clean and Optimize suite consists of six utilities:

- Cleanup Wizard
- Disk Tune
- Registry Wizard
- Registry Pro
- Shortcut Wizard
- Launch Rocket

Cleanup Wizard

Sooner or later, you are going to start running out of storage space on your hard disk. And as you fill up the hard disk, the system will slow down. If the disk gets very full, your system may even crash. So how can you reclaim space?

The first step in cleaning and optimizing your system is to examine all the files stored on your hard disk to decide which files you need and which you don't. There are probably many files on your hard disk that you don't use, such as sound files, old data files, and programs you rarely run. Many programs use the same files (such as the file that plays video clips, or clip art libraries).

Also, when you remove programs from your computer, some parts are occasionally left behind. These files don't do anything. They just take up space. What you need is something to tell you which files you don't need, which files you don't use, which files don't do anything and which files you have multiple copies of. What you need is something that lets you decide whether to delete these files completely, move them, or compress them so they take up less space. What you need is Cleanup Wizard.

Disk Tune

After you clean up your files, remove or zip those you don't need, and free up space on your hard disk, you need to optimize how and where your files are stored on the hard disk.

As you save, change and delete information on the hard disk, and as you add and remove programs, this information gets *fragmented*. That is, the

information that makes up a file is not stored in one place, but is scattered in pieces across the disk. The storage space that is available for saving new data also get broken up and scattered, so that when you save new data, this, too gets scattered.

As the disk gets more and more fragmented, it takes longer and longer for your computer to find all the pieces that make up the files you need. This slows down your system's performance.

Disk Tune reorganizes your hard disk. It makes sure that individual files are stored in one contiguous location and are not broken up, so you can access them quickly. It groups the free storage space separate from your files, so that your computer can write new data to the disk quickly and efficiently. It puts the files you use most frequently at the beginning of the disk, so you can access them more quickly.

The Registry

Now that your hard disk has been optimized, you need to look at other aspects of your system that affect its performance. For Windows 95 users, one area where considerable improvements in performance can be made, is in the Windows 95/98 Registry. The *Registry* is a repository for all the information about your hardware, software and network settings, configuration settings (such as desktop colors), plug-and-play data, program initialization settings, and so on.

Each time you add or remove programs or hardware, or even if you change your desktop and customization settings, the Registry is updated. These changes can affect the Registry in a number of ways. Some settings no longer do anything (especially if you have removed a program). Others are no longer in the optimal place. New settings may adversely affect older settings, even to the point of rendering applications or hardware devices inoperable. And, as the Registry changes, just like the hard disk, it becomes fragmented. The more fragmented it becomes, the slower your system runs.

Registry Wizard and Registry Pro allow you to troubleshoot and maintain the Registry, ensuring that it is optimized for the maximum performance of your system.

Shortcuts

In Windows 95/98, a *shortcut* is a small file, or iconic roadmap, that points to another file (an original file). Most often, a shortcut points to an application or document file. However, a shortcut can also point to a folder, computer, printer, disk drive, or control panel icon. A shortcut is like a remote control device that gives you convenient access to the

original file it points to, even when the shortcut is kept in a different location than the original. You can put shortcuts almost anywhere on the desktop and on the Start menu.

As you configure and customize your Windows 95/98 system, you create shortcuts. When you move original files to a different folder or drive, or delete them, any shortcuts that point to them are left pointing to the wrong place. These invalid shortcuts are also called *orphaned shortcuts* because their “parent” is missing. The Nuts & Bolts Shortcut Wizard locates all the orphaned shortcuts on your system. It can also search for orphaned shortcuts on remote drives (such as shared network drives). Then you can decide whether you want it to repair them all for you, repair selected shortcuts yourself, or delete selected ones.

Launch Rocket

When you start an application, Windows copies start-up parts of the application file and its component files from the hard drive into memory. This process can take a few seconds or a few minutes, depending on the application’s size, the number of component files, and the location of all these files on your hard drive. Launch Rocket streamlines this process using your choice of Normal or Super Acceleration.

If you select Normal Acceleration, Launch Rocket tracks the order in which the parts of the application load. Thereafter, it instructs the system to read these files from the hard drive in the most efficient manner.

If you select Super Acceleration, Launch Rocket monitors how an application loads into memory. It copies and compresses the start-up parts of the application in the correct order into a single file on the hard drive. Thereafter, when you start the application, the system reads this single file rather than multiple files spread across the hard drive.

Cleanup Wizard



Eventually, your hard disk will start filling up with information. As it does, your system performance deteriorates. It will take longer for your computer to access the information you need and, in extreme circumstances, your computer may crash when it tries to write to an (almost) full disk.

Cleanup Wizard lets you reclaim space on the hard disk by helping you identify which files you no longer use, which files you don’t need, which files you have duplicates of, and which files just aren’t useful any longer. Once you identify these files, you can delete them, move them (perhaps to

another drive) or compress them so you can save space but can still decompress and use these files in the future.

You should use Cleanup Wizard fairly often, once a week if you use your computer regularly or if you create and delete many files. Perhaps once or twice a month if you use your PC less often. Regular use of Cleanup Wizard improves your system's overall performance. You can use Cleanup Wizard to perform Express Mode or Custom Mode cleanups.

Express Mode checks file categories that it can delete based on the safety level you select (the default choice is the safest level of cleanup). You can select Express Mode properties to select the safety level you want before running the Express Mode cleanup. For details, see [Performing an Express Mode Cleanup on page 28](#).

Custom Mode allows you to customize your cleanup, and select the types of files you want to locate. You can custom search for duplicate files, orphaned files, large files, old files, or all files. For details, see [Performing a Custom Mode Cleanup on page 29](#).

NOTE: Cleanup Wizard is not an uninstaller. It lets you cleanup files on your hard drives on a broader scale. For instance, by deleting all temporary files that are no longer in use, but that were not deleted by the application which created them.

Performing an Express Mode Cleanup

The Express Mode cleanup scans your disk for files it can delete based on the selected safety level. The safety levels determine which file categories should be deleted, such as temporary files and files in the Recycle Bin (these could be deleted when the safest level is selected).

After Cleanup Wizard has produced a list of files that meet the Cleanup safety level, you can view them before you decide what to with all these files.

The golden rule for cleaning up your drives is Zip. Move. Recycle. Don't delete (or shred) your files unless you are 100 percent certain that you do not need them. If you compress the files, you will reclaim disk space and still be able to decompress and use them in the future.

To perform an Express Mode cleanup:

1. Select the Express Mode Cleanup radio button.
The default safety level should work fine.
If, on rare occasions, you want to change the safety level, click the Properties button and go to [Step 2](#).
If you are using Cleanup Wizard's safety level, go to [Step 3](#).
2. Select the safety level for the Express Cleanup and click OK.
3. Click Next > to proceed to the Drives Selection window.
4. Select one or more drives and click Next > to begin the search.
Cleanup Wizard searches the selected drives for files, and displays a list of the files it finds.
5. Click Next > when you have finished examining the files.
6. Select whether you want to Zip, Move, Recycle, Delete or Shred all the files in the list.
7. Follow the on-screen instructions for the action you selected.

Performing a Custom Mode Cleanup

Cleanup Wizard allows you to perform a *Custom cleanup*, which lets you select the categories of files that you want to locate. Custom Mode cleanup lets you find categories including temporary files, files in the Recycle Bin, screen saver files, TrueType fonts, multimedia files (including sound files), backup files (with BAK or OLD file types), and ZIP archive files.

To perform a Custom Mode cleanup:

1. Select the Custom Mode Cleanup radio button and click the Next > button.
2. Select one or more drives to clean up and click Next >.
3. Select which categories of files you want to search for and click Next >.
4. Specify the view options to use.
You can also opt to have the results of your search grouped in File Type folders, by selecting the Group Files Under File Type Folders check box. This is useful if you want to look at files of a similar type (such as .MPG files) to determine whether these could be compressed, moved, or deleted to reclaim disk space.
5. Click the Next > button after you finish specifying criteria to begin the search.

Cleanup Wizard displays the files that match your search criteria in tabular form in Name, Type, Size, Date, Time, and Count columns.

If you selected the Group Files Under File Type Folders check box, Cleanup Wizard collects these files into folders according to the type of file.

You can click a folder to open it and examine its contents. To get more information about a file, right-click the file. Depending upon the file type, you will be able to open it, run, it, view it, and so on. You can also compare two apparently identical files to confirm whether they are, in fact, exactly the same.

You can sort the files inside folders by clicking the column title you want to sort by. You can also rearrange the columns by dragging a column title left or right to a new location.

6. Select all the files that you want to do something with by clicking each file's check box.

At this stage, you don't need to decide which files you want to delete, compress, and so on.

7. Click Next > when you have finished selecting files.

Now you can decide which files you want to Zip, Move, Recycle, Delete, or Shred.

8. Select all the files that you want to Zip by clicking each file's check box. Then select the Zip Files radio button and click the Zip button. Follow the on-screen instructions to save the selected files in a Zip archive file.
9. Repeat the general process described in [Step 8](#) to select another group of files that you want to, for example, move to a different location. Then click the corresponding File Destination radio button (in this case, the Move Files button), and so on.

Once you finish disposing of all the files (or when you click OK), Cleanup Wizard closes, returning you to the desktop.

Disk Tune



Disk Tune optimizes your hard disk and improves your computer's performance by rearranging files on your hard disk for maximum efficiency.

As you modify files, or add them to or delete them from your hard disk, they become fragmented. That is, they are not stored in one contiguous place, but are scattered across the disk. Similarly, as you add and delete information, the free space on your disk also becomes fragmented, further causing your computer to save data in a fragmented pattern. Because of

this fragmentation, it takes your computer longer to find all of the segments that make up the file, and this slows down your computer's performance.

Disk Tune also defragments your Windows Swap File—the file used by Windows to store information temporarily so that memory can be freed for other applications. A fragmented Swap File also affects the performance of your system.

You should run Disk Tune whenever your drive becomes fragmented by more than 2 or 3 percent. When you start Disk Tune, it reviews your drive and recommends the type of defragmentation and optimization process that you should use.

✦ **TIP:** You can monitor the fragmentation levels of your hard disk using WinGauge's Disk Fragmentation gauge.

If you are using Windows 98, Disk Tune lets you use the application log file that Windows 98 creates to determine how applications and their related files will be optimally stored on your drive.

Using Disk Tune to Defragment or Consolidate a Disk

After you specify one or more drives to tune and click Next >, Disk Tune analyzes the drive to determine the most suitable levels of optimization. Once the analysis is complete, depending upon the degree of fragmentation, Disk Tune recommends one of four methods:

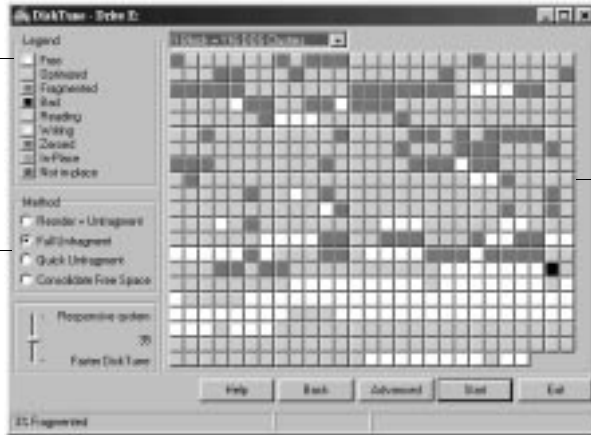
- **Reorder and Unfragment**—defragments your files and arranges them on the hard disk according to all the criteria specified in the Advanced options.
- **Full Unfragment**—defragments your files and writes them to the hard disk so that all free space is grouped separately from used space, without regard to the File Placement criteria specified in the Defragmentation Options dialog box (click the Advanced button).
- **Quick Unfragment**—defragments your fragmented files and rewrites these to the disk without rearranging other files, and without regard to the File Placement criteria. Free space remains fragmented.
- **Consolidate Free Space**—moves files and file segments to the beginning of the disk without regard to the File Placement criteria, so that all free space appears at the end. Files remain fragmented.

Disk Tune displays a map of your hard drive with blocks that are color coded by status. You can watch the map change as Disk Tune analyzes the

disk, and you can customize the colors codes and click a block in the hard drive map to identify its contents. See *The Hard Disk Map on page 34*.

Click a Legend Color box to display the Color dialog box where you can select a different color for that item

After analyzing your drive, Disk Tune recommends an optimization method; you can select a different method if you prefer



Click a block in the Hard Disk Map to identify its contents

Figure 2–1. Disk Tune analyzes your hard drive, displaying a color-coded map of its clusters of information

Reorder and Unfragment

As its name suggests, Reorder and Unfragment optimizes a disk drive at the highest possible levels. By running Reorder and Unfragment, either because Disk Tune recommends it, or because you select Reorder and Unfragment instead of Disk Tune’s suggestion, your files will be defragmented *and reorganized* on the disk in the most effective and efficient way, according to their levels of usage. Reorder and Unfragment generally takes somewhat longer than Disk Tune’s other defragmentation options, but results in a better configuration.

If you are using Windows 98, you can select the Advanced option to use the application log file that Windows 98 creates with a Reorder and Unfragment to determine how applications and their related files are stored on your drive.

Reorder and Unfragment arranges information and available space on your hard disk in the most logical way. In its default mode, unlike other disk fragmentation utilities, Reorder and Unfragment determines which programs you use most frequently and which you use least frequently. The programs you use most frequently are placed at the beginning of the disk, where the access times are the fastest. In its default settings, Reorder and Unfragment rearranges your hard disk in the following order:

- Windows components

- Recently accessed programs
- Other programs and files
- Free space

However, if you are a more advanced user, Disk Tune allows you to specify and customize a wide range of parameters, such as the placement of files by category across your disk, the placement of your free space, and so on. For full information on customizing the disk tune process, see [Setting Advanced Options on page 34](#).

Full Unfragment

Full Unfragment lets you defragment the disk and rearrange the files so all free space is kept separate from your files. Full Unfragment ensures that there is no free space in between clusters where data is stored, and that the files are stored in contiguous sectors to minimize access time. The major difference between Full Unfragment and Reorder and Unfragment is that Full Unfragment does not consider the *importance* or *usage* of a file before storing it on disk. Instead, Full Unfragment strives to defragment your disk as quickly as possible.

Quick Unfragment

Quick Unfragment defragments files and rewrites them to the most optimal available space on the drive. It does not move files around unless it is necessary for defragmenting the file. Neither does it consolidate all of your free disk space. Quick Unfragment is a fast and convenient way of defragmenting your data without spending the time that more detailed defragmentation processes require.

Consolidate Free Space

Consolidate Free Space moves files and file segments to the beginning of the disk, so that all free space appears at the end. Consolidate Free Space does not defragment your files. Indeed, in some cases the fragmentation may worsen as a large file stored in a contiguous location, may be broken into several new locations as Disk Tune works to remove all free space between files. Consolidate Free Space is useful if you quickly need to physically group your free space.

The Hard Disk Map

Disk Tune displays a map of the hard disk with blocks—each block consists of a variable number of clusters, depending on the disk’s size—color coded to indicate their status, as illustrated on [page 32](#).

As Disk Tune tunes your disk, the position and status of the blocks changes, giving you a real-time image of the disk, and of the techniques Disk Tune adopts to optimize the disk to improve your system’s performance. To customize the Legend colors, simply click a Color box and select a basic color or create your own custom color.

You can also identify the contents of a block in the hard drive map by clicking it. This is useful if you want an indication of which files make up a block, whether these particular files are fragmented, or held (designated as unmovable), and so on. The file list offers information on the Cluster Number, Contents, Condition, Type, and Attributes of all the files in the block. You can also click a column title to sort files by that column.

Setting Advanced Options

You can access Disk Tune’s advanced options by clicking the Advanced button. The Defragmentation Options dialog box appears, which provides three tabs of options: Functions, File Placement and Directory Sort.

The Functions Tab

The Functions tab allows you to select the functions, safety level and write verification levels.

- **Zero Free Space**—zeros out the free clusters after you finish tuning the disk. This wipes out any leftover data from deleted files, and prevents recovery using an undelete program.
- **Show Final Organization**—shows the final map of your disk once you have completed defragmentation and optimization.
- **Single Sector I/O**—reads and writes data on a “single sector by single sector” basis. This method is very slow but may be necessary for some types of disk drive controllers.
- **Remove Deleted Directory Entries**—removes deleted entries from directories and consolidates active entries to optimize directories.
- **Optimize the Swap File**—optimizes the Windows Swap File to improve the performance of your system.

- **Safe Mode and Exclusive Lock**—increases the safety of your data during optimization. Safe Mode takes extra steps to ensure that you will not lose any drive data even in the event of a power failure. Exclusive Lock prevents any other application from accessing your disk during the tune-up which would slow down the tuning process.
- Disk Tune provides three verification levels: **Verify** (slow—ensures data written to a new cluster can be read), **Compare** (slowest—compares a relocated file’s contents against the original to ensure it is exactly the same), and **None** (fastest).
- **Ordering by Task**—(*Windows 98 only*) Windows 98 tracks how often each of your programs are used and maintains this information in an application log file. If you select the Ordering by Task option, Disk Tune uses this log file to place the most often used programs at the front of your drive, so the programs you use most often start as fast as possible. Windows 98 also tracks the loading sequence of the application modules, so when Disktune reorganizes based on the program’s load sequence, the disk looks fragmented when using a program to look at the drive’s fragmentation level.

NOTE: When the hard drive is organized using the Ordering by Task option, other defragmenters might see the drive as highly fragmented.

The File Placement Tab

-
- **TIP:** The options you specify in the File Placement tab only apply when you run a Reorder and Unfragment.
-

Disk Tune classifies your disk into five regions: Top, High, Middle, Low, and Bottom. You can group your files into five categories: Windows Components, Recently accessed programs, Recently modified files, User specified files, and All Other Files. There are two additional categories: Free Space and Unmovable files.

The File Placement tab lets you decide where the five file categories (such as Windows Components) should be located in the regions of the disk. Normally, you should put the programs and files you use most often at the front of the disk (where access times are the quickest).

Select a Category item in the Placement Strategy panel and click the Up or Down Arrow buttons to move it up or down in the list



Select a Category check box to add it to the Placement Strategy panel at the right

Click Specify to set file characteristics for the corresponding Category as described in [Specifying File Categories](#)

Selecting a file category's check box puts that file category in the Placement Strategy panel. You can highlight a category in the panel at the right, and move it up or down in the five disk regions. For example, if you want to place recently modified files in the middle region of your disk, click the Recently Modified Files check box, highlight this category in the Placement Strategy panel, and move it to the Middle (light blue) band by clicking the Up or Down Arrow buttons.

Most defragmentation utilities put your files at the front of the disk, and your available free space at the end. Disk Tune lets you move the free space area to any position on the drive, so that it is relocated above or below any of the five regions. For example, if you move the free space to the front of the disk, then the five regions (Top through Bottom) where your files are stored, occupy the remainder of the disk.

Disk Tune decides which of your files are Unmovable. You cannot move the Unmovable files and, since they are unmovable, they do not appear in the Placement Strategy panel. If you select the Unmovable Files check box, you can classify additional files as unmovable.

Directory Sort Tab

Disk Tune places files into drive regions in the order they appear in your folders, or directories. The Directory Sort tab lets you change the order files are placed in the region, as well as the order in which they appear in the folder or directory.

Global Settings Tab

The Global Settings tab lets you customize the appearance of the Hard Drive map by selecting the shape of the cluster and sector blocks and the minimum size of these blocks. You can also enable or disable the Nuts &

Bolts Property sheet for supported drives and enable or disable Disk Tune in the Context menu for supported drives.



Specifying File Categories

The File Placement tab in Disk Tune's Defragmentation Options dialog box lets you specify file characteristics for three types of file categories:

- Recently modified files
- User specified 1
- User specified 2

In advanced file placement configurations, you can decide where on the disk various file groups will be located. Disk Tune divides the disk into five regions: Top, High, Middle, Low, and Bottom, and it lets you specify in which of these regions the various file categories are placed. In addition to the default file categories, Disk Tune lets you create two categories of your own file types, such as help files, graphic images, and so on. You can also group recently modified files and allocate specific areas of the disk to hold them. The dialog boxes where you specify file characteristics of any of these customizes file groups are identical, allowing you to create file groups for your own exact requirements.

Initially, you need to identify the file types to include in your group in the File Specifications text box, using the adjacent Add, Remove, or Clear All buttons. After you click Add, you can find individual files to add to your list. Disk Tune lets you use wildcards in the Add dialog box to locate all files of a certain type. For example, entering `*.HLP` locates all the help files. You can find all files on your drive, or limit your search for all files in a directory (including or excluding subdirectories). Clicking the `msoffice` directory and entering the filename `*.HLP` creates a file specification of `\msoffice*.HLP`, which locates all the help files in the

Microsoft Office directory. You can also include or exclude files that are greater than, or less than, a specific size range.

Your other options include:

Using the operators **And** and **Or**, so you can group all files you have selected in the File Specifications text box. **And** or **Or** files must meet the criteria you specify in the other check boxes, such as:

- The condition of your files (Fragmented, Optimized or Straddled).
- The attributes of your files, (such as Archive, Read-only, or Hidden).
- The date range of your files, where you can specify a date range (in dd/mm/yyyy format) when the files were last modified, last accessed and/or created.

In most cases, the defaults provided by Disk Tune should work fine. Occasionally, you may need to customize the positions of file categories on your disk. In general, files you do not modify, but access frequently, should be placed as high (near the beginning) on the disk as possible to improve access times. Files that you frequently modify should be placed as close to the free space as possible, to decrease the amount of work your system has to do.

Registry Wizard



Registry Wizard (*for Windows 95/98 only*) makes maintenance, troubleshooting, and repair of the Windows Registry database a quick and easy process. The *Windows Registry* is a database that replaces many functions of Windows 3.x's AUTOEXEC.BAT, CONFIG.SYS, and *.INI files. This Registry contains all the information about the hardware, system, programs, and network user settings on your PC.

Each time you add new hardware or software, the Registry is updated. Some of these changes can occasionally leave other components inoperable, or create problems with other aspects of your system.

Registry Wizard lets you troubleshoot and maintain the Windows Registry, ensuring that it is optimized for the maximum performance of your system.

The golden rule for using Registry Wizard is: Clean, Repair, Tune-up.

Your overall objectives are to remove unnecessary items, ensure that all items point to actual files, sort the Registry so that associated items are grouped together, and reduce the size of your Registry so it can be

accessed more quickly. In fact, there are many similarities between optimizing your hard disk, and optimizing your Registry.

First, you should clean up the Registry. That is, locate items that you can safely delete from the Registry, such as your Recent Doc list, the Tip of The Day, your Run List, and so on.

Second, you should repair the Registry. That is, identify all of the Registry items that point to files that have moved or to nonexistent items, and repair or delete them.

Third, after you remove unneeded items and repair the rest, you need to tune up your Registry. That is, close the gaps and group associated items together. Registry Wizard will walk you through, and perform, all these tasks for you.



Clean lets you remove unnecessary Registry items, such as your Recent Documents list

Repair lists invalid Registry items; you can automatically or manually fix them

Tune-up creates a clean new version of your Registry

Select the task you want Registry Wizard to perform and click the Next > button. Then go to the corresponding procedure:

- Click Clean and go to [Cleaning the Registry on page 39](#).
- Click Repair and go to [Repairing the Registry on page 40](#).
- Click Tune-up and go to [Tuning Up the Registry on page 42](#).

Cleaning the Registry

The Registry Wizard - Clean dialog box appears after you select the Clean option and click Next > in the Registry Wizard.

Select the items to clean up and click Finish.

Registry Wizard removes selected items from the Registry and exits.

Repairing the Registry



After you select the Repair option and click Next > in the Registry Wizard, it scans the Registry and displays the Registry Wizard - Repair dialog box, which lists all invalid entries in the Registry.

Most likely, you'll start by clicking the Repair All button to let Registry Wizard repair all the entries that it can. After you do this, Registry Wizard displays the Registry Wizard - Repair Report dialog box.

This Repair Report lists the Registry key entries that Registry Wizard can fix along with a description of the file (and its location) that will be used to repair each Registry key entry.

Select any key entries that you want to fix or not fix, then click the Fix or Don't Fix button, respectively. The selected key entries are fixed or not fixed as you specified, and the Repair Report dialog box closes. The Registry Wizard - Repair dialog box reappears, displaying the remaining key entries that still need to be fixed. You can select a key entry and click the Repair button to manually change the value for that key. Or if you are an advanced user, you may want to click the Advanced button to go to Registry Pro and edit the orphan entries using that Nuts & Bolts utility instead of Registry Wizard.

Tuning Up the Registry

Registry Wizard's Tune Up process rebuilds your Registry files in optimal order. The Tune Up process does not remove any information. Rather, it sorts and compacts the Registry, removing "holes" left by Registry entries that have been deleted in the past.

When you rebuild the Registry using the Registry Wizard Tune Up option, the current Registry files are saved in your Windows directory as `system.hlx` and `user.hlx`. In the unlikely event that you encounter any problems in Windows after a tune up, you can restore your original Registry by pressing **F5** when you see the Starting Windows message when you boot, and by then typing `REGUNDO` at the `C:>` prompt.

After you select Tune-up and click the Next > button in the Registry Wizard, it displays the Registry Wizard - Optimize dialog box asking you to exit all currently running programs before you continue.

To tune up the Registry:

1. Exit all programs that are running. Be sure you check the taskbar and close any programs that you've minimized as well.
2. Click Next >.
Registry Wizard displays a message explaining that a new copy of your Registry has been created, and you need to restart Windows to apply the new Registry.
3. Click Finish.
4. Click the Start button and choose the Shut Down command.
5. Select the Restart the Computer option. Then click Yes to restart Windows and apply the new Registry.

Registry Pro



Registry Pro (*for Windows 95/98 only*) lets you perform advanced editing of the value entries for key handles (the top level folders) and their subordinate child keys in the Windows 95/98 Registry database. With Registry Pro, you can troubleshoot and repair start-up files defined as entries in the Registry. You can import and export registry files, find entries containing specified text, or find *orphans* (entries for programs that have moved or no longer exist).

- ✦ **TIP:** Choose Key Info from the Help menu to get information on any selected key.
-

Finding a Registry Entry

Choose the Find command from the Search menu (or press **CTRL-F3**). Then enter the value to search for, select where to search, what to display, and other search options. Then click Find.

Finding Orphans

An *orphan* is an entry for a program that has moved or no longer exists.

Choose the Find Orphans command from the Search menu.

Registry Pro displays a list of all the orphans it finds in the database in the Orphans tab. You can select an orphan key entry and Registry Pro selects it for you in the Registry database in the top two panels of the window. You can double-click an orphan entry in the top right panel to change its value data. See the illustration in [Repairing the Registry on page 40](#).

Editing a Registry Entry

Double-click a database entry in the top right panel of the Registry Pro window as illustrated in [Repairing the Registry on page 40](#).

Importing a Registry File

The Registry file in use on your PC is located in your Windows folder on the system hard drive. You can import a Registry file that has been created elsewhere, or one exported earlier, into Registry Pro so you can examine it or edit its contents. When you export a Registry file, you can save it with a unique filename in any location you like. This lets you create and use different Registry databases for particular purposes.

To import a registry file:

1. Choose the Import Registry File command from the File menu.
2. Locate a Registry file (with a file type of **.REG**) and click Open.
Registry Pro opens the Registry file you selected, displaying its key handles, child keys, along with key values of a key you select.

Exporting a Registry File

You can export the open Registry file, saving it with a unique filename and a .REG file extension. You might do this to keep Registry files for different purposes, or to share a Registry file with someone else.

Choose the Export Registry File command from the File menu.

Refreshing the Registry Database

You can refresh the Registry so it displays the latest data stored in the active Registry file in your Windows folder on the system hard drive.

Choose Refresh from the View menu. Registry Pro updates the Registry.

Shortcut Wizard

A *shortcut* is an iconic roadmap to an application or document file. You can double-click a shortcut icon in one location on your desktop to open the original file that it points to, which is most likely in another location. You can use shortcuts to have convenient access to files that are stored in less convenient places, such as inside a folder that is inside a folder that is inside a folder...

When you or an application create a shortcut, Windows 95/98 makes a direct link in the shortcut to the original file. This link includes the file's path and creation date and time (precise to less than a second). It saves this information to help it find a shortcut's original file when you double-click the shortcut. There are some cases when Windows 95/98 cannot find a shortcut's original file, which makes the shortcut an *orphan* (and no longer useful):

- If you delete the original file.
- If you move the original file to a different volume or drive (say you move the file from drive C to drive D).
- If the original file is stored on a drive whose drive letter changes (such as a mapped network drive).

The following illustration shows an example of the Shortcut Wizard's own icon and a shortcut icon for the Shortcut Wizard. The filenames and icons need not be the same. Windows 95/98 lets you change them.



Fixlnk.exe

Shortcut Wizard's icon
(the original file)

Shortcut to
Fixlnk.exe

Shortcut Wizard's shortcut icon
(an iconic roadmap to the original file)

Windows 95/98 searches for a shortcut's original file if the location has changed. If you move the original file to a different folder on the same drive, Windows can find it based on the creation date and time (which is unlikely to be identical to another file because the time is recorded to fractions of a second). It also gives you the chance to Browse and locate the original file yourself. If Windows 95/98 cannot find the original file, it displays a Problem With Shortcut message listing any nearest matching file it finds. You can update the shortcut to point to this nearest matching file.

Over time as you work with files, your system may accumulate orphaned shortcuts that point to files you've moved or deleted entirely. These invalid shortcuts take up extra storage space and clutter your desktop. Nuts & Bolts' Shortcut Wizard lets you fix or delete these orphaned shortcuts quickly and easily. It can locate any orphaned shortcuts on your PC. Once you have a list of them, you can decide to:

- Let Shortcut Wizard repair any orphaned shortcuts possible.
- Repair a selected shortcut yourself.
- Delete one or more shortcuts that you select.

To repair or delete orphaned shortcuts:

1. Click the Next > button.

Shortcut Wizard displays a message indicating it is searching for shortcuts. Then it displays a list of any orphaned shortcuts.

2. Decide how to handle the orphaned shortcuts. Your options are:

- **Repair All**—Click the Repair All button to let Shortcut Wizard attempt to repair the orphaned shortcuts. You may want to let Shortcut Wizard attempt repairs first, and then either repair or delete the remaining items yourself manually.

- After you click Repair All, the Repair Report dialog box appears, showing a list of all the items Shortcut Wizard can repair. Select items and click Fix to let Shortcut Wizard repair them. Or click Don't Fix if you want to fix them yourself, delete them manually, or leave them intact. The Shortcut Wizard - Orphaned Shortcuts dialog box reappears.
 - **Repair**—Select an orphaned shortcut and click Repair to fix the path that links it to its original file manually. The Repair Entry dialog box appears, which shows the shortcut path and the invalid path. Enter the new path or click Browse to find the original file. Click Save to repair the shortcut.
 - **Delete Item**—Select one or more shortcuts and click the Delete button to remove these orphans from your system.
3. Click Finish when you are done repairing or deleting the orphaned shortcuts in the list.

The Shortcuts dialog box reappears, with the remaining entries.

Launch Rocket

The time it takes to launch applications in Windows can vary from a few seconds to a few minutes, depending on the size of the application, the number of component files that make up the application, and the location of these files on your hard drive.

Nuts & Bolts 98's Launch Rocket Wizard dramatically reduces application launch times. It does this in two ways:

- **Normal Acceleration**—Nuts & Bolts 98 keeps track of the order in which various parts of an application load. Thereafter, whenever you launch that application, Nuts & Bolts 98 directs your system to read those files from the hard disk in the most efficient manner.
- **Super Acceleration**—Nuts & Bolts 98 monitors how an application loads in your system. It copies and compresses the start-up parts of that application in the correct order in a single file on the hard disk. Thereafter, when you launch that application, the system reads a single file, rather than multiple files across the hard drive.

If you move, remove, update or otherwise change the locations of the various component files of an application (such as during a disk defragmentation), Nuts & Bolts 98 recognizes the change and reconfigures the Launch Rocket for the type of acceleration you've selected (Normal or Super Acceleration). However, on rare occasions, you may need to re-Super Accelerate.

The Launch Rocket Wizard lets you enable the utility and configure its settings. With the Wizard, you can:

- Select which applications benefit from Normal Acceleration, which benefit from Super Acceleration, and which are excluded from launch acceleration. The Wizard displays a list of all applications you have run since installing Nuts & Bolts 98. You can right-click a listed application to specify its degree of launch acceleration.
- Specify the drive where the acceleration files are stored. Estimated disk space for these files is also shown.

Sooner or later, everyone using Windows will encounter error messages, most often caused by misbehaved programs. What you must do to resume your work depends upon an error's cause and degree of seriousness. Normally, errors force a program to close. So if an error is minor, you may be able to recover and continue working just by closing and restarting the program. Very rarely, these errors can be serious enough to prevent you from restarting the program, or even worse, from restarting the PC. The Nuts & Bolts' Prevent and Protect suite of utilities take you step-by-step through the process of protecting your system against such eventualities before they happen:

- **Bomb Shelter**—provides crash protection and recovery.
- **WinGauge**—monitors your use of Windows and your programs.
- **McAfee VirusScan**—checks your software for computer viruses. For complete instructions, see the online [McAfee VirusScan](#) manual which is stored as an Adobe Acrobat PDF file on the Nuts & Bolts 98 CD disc in the Manuals folder.
- **Year 2000 Checker**—lets you test your system hardware for Year 2000 compliancy. If it is not, Year 2000 Checker installs Y2Kfixer.com to make your PC compliant so it handles dates accurately starting on 01-01-2000.
- **Trash Guard**—provides delete protection of all the files you delete. It even protects files deleted in DOS or 16-bit Windows programs
- **Retake**—lets you create automatic or interactive backups of selected drives, directories, files or file types. You can back up to a protected volume file (a separate area on the drive). A protected volume file contains information about each file in every sector to ensure that files can be recovered even if the hard drive's directories and data are severely damaged or lost. You can also create mirror backups that instantly back up data as you save it, make backups after a time delay when the PC is idle, or create manual backups.

What you're about to learn:

- How to set up crash protection and recovery to safeguard your PC against application errors.
- How to enable and disable Trash Guard's delete protection, specify any files to exclude from protection, and show or hide Nuts & Bolts 98's Delete Protection tab in the Recycle Bin's Properties sheet.

- How to monitor your use of Windows and programs, so you get early warning of potential problems before they become serious.
- How to constantly back-up your data automatically and in real time so that, if worst comes to worst, you have copies of all your files and data safe and secure.

Bomb Shelter

Bomb Shelter is a Nuts & Bolts 98 “crash protection and recovery” utility that prevents critical regions of your system’s RAM from accidentally being overwritten by misbehaving application programs. Bomb Shelter also lets you restart a *crashed application* (an application that has completely failed or stopped responding) in order to recover your data.

✦ **TIP:** We recommend that you activate Bomb Shelter so it always runs when you run Windows. See [Starting Bomb Shelter on page 51](#). By running Bomb Shelter, you ensure that application errors and faults do not cause you to lose data, and more importantly, that such problems do not cause any damage to your system.

If an application tries to overwrite any critical system RAM regions, Bomb Shelter will produce a fault, an error condition, and display a dialog box, allowing you to selectively close the faulty application or reenter it so you can save your information before closing.

For a variety of reasons, PC users will, sooner or later, encounter faults and error conditions—usually caused by an errant application. In most circumstances, the application has to be closed, with a corresponding loss of any unsaved data. However on occasions, the problem can be more serious, requiring a complete system reboot.

In even rarer cases, the error can cause critical areas of your PC’s files to be overwritten or otherwise corrupted. To repair the damage created by such an error requires lengthy and complex diagnostics and repairs using other Nuts & Bolts 98’ utilities. Bomb Shelter is designed to reduce the severity of application errors, and to almost completely eliminate the most serious errors.

Bomb Shelter can coexist on the same PC with other protection programs. However, you won’t need to use another protection program because Bomb Shelter provides the most complete protection. It not only protects your system against high-level errors that other protection programs miss, but it also protects your system against more serious low-level errors.

Since Bomb Shelter operates at a lower system level than other crash protection programs, it will see errors only if any other protection program you use misses the error. So if you have Bomb Shelter loaded with another crash protection program, the other program will intercept some errors. This does not mean that the other program is superior—in fact, quite the reverse. Bomb Shelter catches errors at all levels, so though you can use other crash protection programs, you really don't need to.

Starting Bomb Shelter

When you start Bomb Shelter, it automatically activates so it can begin protecting your system's critical areas from being overwritten by applications and allow you to recover from crashes. Once loaded, Bomb Shelter remains active until you deactivate it.

To start Bomb Shelter:

1. Start Bomb Shelter by doing one of the following:
 - Click the Start button and choose the Program > Nuts & Bolts > Bomb Shelter command in Windows 95/98.
 - Open the Nuts & Bolts folder and double-click the Bomb Shelter icon from the Windows Explorer or My Computer window.
 - Open the Nuts & Bolts program group and double-click the Bomb Shelter icon in Windows 3.1x.

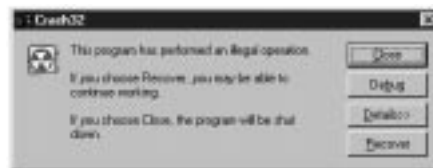


2. Click OK.

Bomb Shelter remains active, and automatically places itself in the StartUp folder or group so that it loads the next time you start Windows.

Recovering from an Application Error

Bomb Shelter continuously monitors your system to detect when an application tries to perform an invalid operation or damage any critical part of your system. When such a "Fault" condition occurs, Bomb Shelter suspends the application and displays the following dialog box.



When you see this dialog box, the application has caused an error which usually means it has gone astray. Therefore *your data may already be lost or damaged*. This dialog box lets you choose what to do with the faulty program. The following options are available:

- **Close**—closes the application that caused the error and allows you to continue working.
- **Recover**—reactivates the faulty program at a point that should let you save your data. *This procedure has some inherent risks* and you should follow the steps in the procedure below when trying to Recover a crashed program.

To attempt to recover your work:

1. Use Explorer to make a backup copy of the open document you were working with in the application.
2. Click the Recover button in the Bomb Shelter dialog box.
3. Attempt to save your work in the application.
4. Exit the application immediately and restart Windows.

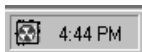
Recovering a Crashed, Locked-Up or Hung Application

Sometimes application errors cause programs to stop responding to the keyboard or mouse. In Windows 95/98, Bomb Shelter can “unlock” programs and allow you to try to recover any previously unsaved information in documents you had open in the application when it stopped responding.

To unlock a locked program:

1. Hold down the **CTRL** and **ALT** Keys and simultaneously press the **DELETE** key (sometimes labeled **DEL**).
Bomb Shelter displays the Close Program dialog box.
2. Select the application that has stopped responding.
Bomb Shelter tries to recognize the program and pre-select it for you.
3. Click **Close** to have Bomb Shelter close the program, or click **Recover** to have bomb shelter try to reactivate the program.

- **Write protect System**– Activates Bomb Shelter’s write protection option that protects various critical parts of your system RAM from being overwritten. If these areas become overwritten or corrupted, your system may lock up or worse.
- **Automatic Error recovery**–Activates Bomb Shelter’s Program Fault dialog box that lets you re-activate crashed programs to try to save the data in them. If you disable this option, Bomb Shelter does not intercept application errors, and you get the regular Windows dialog box for these errors. The Windows dialog box does not have a recover option.
- **Use Ctrl-Alt-Del to unfreeze**–Activates Bomb Shelter’s Close Program dialog box, which lets you re-activate programs that have stopped responding to attempt to save the data in them. If you disable this option, Bomb Shelter will not intercept the **CTRL-ALT-DELETE** key combination, and you will get the regular Windows Close Programs dialog box when you press **CTRL-ALT-DEL**. The Windows dialog box does not have a recover option.
- **Show icon in tray**– Tells Bomb Shelter to display the Bomb Shelter icon in the Windows 95/98 taskbar tray. Double-clicking the tray icon activates the Bomb Shelter Wizard.



The Statistics Tab gives you an up-to-the-minute report on Bomb Shelter activity. The information contained in this tab is really only of interest to advanced users.

3. Click the Apply button when you finish selecting options for a tab so you can continue selecting options for another tab.
4. If you are an advanced user, or if you are working under the direction of Network Associates’ Technical Support Engineers, you can click the Advanced button to specify advanced properties for Bomb Shelter.

NOTE: *It is strongly recommended that you do not make Advanced selections unless you have a very clear understanding of error conditions, faults and Windows.*

The Bomb Shelter Advanced Properties dialog box appears. Select the options you want and click OK.

✦ **TIP:** Bomb Shelter supports blue screen crashes which you can enable or disable in the Advanced Properties dialog box.

5. Click OK when you finish selecting properties and the Bomb Shelter Wizard dialog box reappears.

Testing Bomb Shelter

The Bomb Shelter Wizard dialog box offers a testing option that lets you activate the Crash-Me test program. This test program lets you simulate common application error conditions to check how Bomb Shelter is working and verify that your system is protected.

NOTE: The Crash-Me test program is provided for advanced users or for use by Network Associates' Technical Support Engineers. Avoid using the Crash-Me test program unless you suspect that Bomb Shelter is not working properly. **Bomb Shelter must be active when you perform tests.** Otherwise, your system will have no protection when you simulate error conditions and you may have to restart your PC.

Network Associates' engineers have made every effort to ensure that Crash-Me crashes gracefully, particularly with any crash protectors other than Bomb Shelter, but *prior to running any crash tests*, ensure that you have saved all your work and have closed all other programs.

To simulate error conditions:

1. Click the Test button in the Bomb Shelter Wizard dialog box.
Bomb Shelter starts the Crash Me program, which displays a dialog box where you can choose the type of error to simulate.
The 11 fault types simulate different error conditions and faults that can be produced by higher-level applications (such as the General Protection Fault) or by low-level programs (such as the Stack Fault or Null Stack Pointer).
2. Select the test you want to perform and click the Test button to simulate the selected error or fault condition.
Bomb Shelter creates the desired fault/error conditions and displays the Bomb Shelter recovery dialog box.
3. Click the Close button to close the test program, or click the Recover button continue using the test program.

Deactivating Bomb Shelter

You can deactivate Bomb Shelter whenever you like without restarting Windows.

To deactivate Bomb Shelter:

1. Start the Bomb Shelter Wizard either by running Bomb Shelter from the Nuts & Bolts program group or by double-clicking the Bomb Shelter tray icon in the Windows 95/98 taskbar.
2. Click the Deactivate button.

Bomb Shelter unloads from memory and removes itself from the StartUp folder or program group so it does not load the next time you start Windows.

WinGauge



Although Bomb Shelter protects you from error conditions and faults, you should get into the habit of constantly monitoring your system so you can take actions to prevent situations where these errors could occur.

WinGauge is a dynamic reporting tool that constantly monitors your use of Windows and your applications, to alert you to potential problems before they become serious. Information about your system is displayed to you in the form of gauges. You select what to monitor, which type of gauge to use and, more importantly, when you want notification that your specified limits have been reached.

You can choose to have one, a few or many gauges active at any one time—with each gauge reporting on the status of your system. The more advanced you are, or the more demanding your projects, the more gauges you may want to keep active to monitor particular aspects of your computer and applications.

By using WinGauge, and by customizing the gauges to your own specific needs, you will be warned about potential problems well in time to take the necessary preventative steps. WinGauge alerts you so that you can, for example, save your data, close programs or take other actions to prevent your system from slowing down, crashing, or locking-up. As an added bonus, you can also drag application icons and folders into WinGauge, so that WinGauge becomes your one-stop system monitoring and application launch pad.

The Most Important Gauges

The following short list summarizes the gauges that are the most important to have active, and outlines what they measure:

- **Highest Resources**—The Highest Resources gauge measures “system resources”—small, critical memory regions in Windows itself. When any of these regions fill up, your system may crash. You can increase your resources by closing some applications.
- **Virtual Memory**—The Virtual Memory gauge measures how much of your disk swap file is in use. The more of your swap file you use, the slower your system will run. If your swap file fills up, your system may crash. If you find that your virtual memory is frequently high, you should consider buying and installing more RAM and making more room available on your Windows drive.
- **Swap File Requests**—The Swap File Requests gauge measures how often Windows is accessing the swap file. The more frequent the accesses, the less efficient is your overall system.
- **Drive Space**—The Drive Space gauge measures how much room is left on your drives. If a disk fills up while a program is running, your system might crash.

Working With Gauges

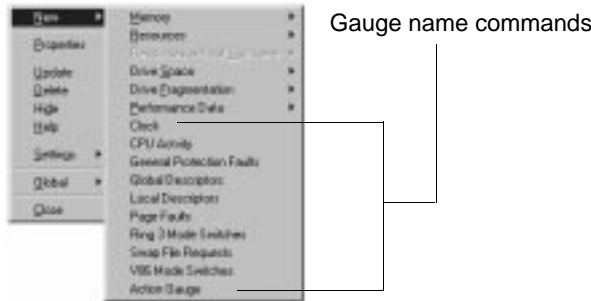
In WinGauge, you can add, update or remove gauges.

Adding a New Gauge

If a gauge that you want to see doesn't appear in the WinGauge window, you can add it.

To add a gauge to the WinGauge window's gauge area:

1. Point to a gauge or the empty gauge area and press the Right mouse button.
2. Point to or click the New menu.



3. Do one of the following:
- Choose «gauge name» from the New menu.
 - Point to the Memory, Resources, Resources without Hurricane, Drive Space, Drive Fragmentation, or Performance Data menu.
 - Choose a «gauge name» command from the menu.

WinGauge adds the gauge in the WinGauge window and hides the command title from the New menu until you remove the gauge. For an explanation of each gauge, see [Nuts & Bolts 98' online Help](#).

Updating a Gauge's Information

✦ **TIP:** To specify the Refresh Duration indicating how often gauges will be updated, or refreshed, see [Changing a Gauge's Appearance on page 60](#).

To update a gauge's information:

If you want an immediate update, point to a gauge, press the Right mouse button, and choose the Update command. WinGauge updates that gauge's information. To change the Refresh Duration for a gauge, or to recompute its value more frequently, see [Change a Gauge's Actions on page 65](#).

Removing a Gauge

To remove a gauge from the WinGauge window:

Point to a gauge, press the Right mouse button, and choose the Remove command. WinGauge removes the gauge and adds its command to the corresponding menu.

Manipulating the WinGauge Window

You can interactively change the appearance of the WinGauge window by doing any of the following:

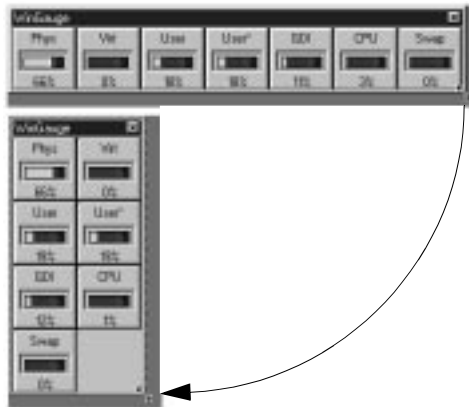
- Resizing only the window
- Resizing gauges and the window
- Rearranging gauges inside the window

Resizing the WinGauge Window

While the WinGauge window is undocked, you can interactively resize the window by dragging its sides or corners to a new location.

To resize the WinGauge window:

1. Point to any corner or side of the WinGauge window.
2. Drag the window edge in any direction to a new location.



Point to a side or corner of the WinGauge window and the pointer changes to a double-tipped Arrow pointer that indicates you can drag to resize the window without changing the size of the gauges

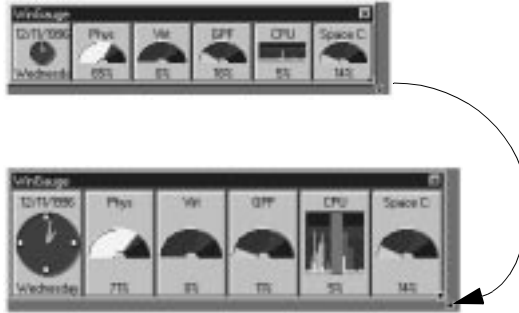
Resizing Gauges in the WinGauge Window

While the WinGauge window is undocked, you can interactively resize all gauges in the window, as shown below. You can also resize all gauges in the Properties sheet's Global tab. See [Changing All Gauges' Global Properties on page 64](#).

To resize gauges in the WinGauge window:

1. Point to any corner or side of the WinGauge window.

2. Hold down the CTRL key and drag the corner or side of the window in any direction to a new location.



Point to a side or corner of the WinGauge window and the pointer changes to a double-tipped Arrow pointer; hold down the Ctrl key and when you drag to resize the window, the gauges all change to a new size that fills the WinGauge window

Rearranging Gauges in the WinGauge Window

You must have the titlebar visible in order to rearrange gauges. You can drag gauges around in the gauge area to move them to a new location in the WinGauge window (while the titlebar is shown). You might do this to place related gauges in adjacent positions. After rearranging gauges, you might group them by changing the borders of adjacent gauges. See [Changing a Gauge's Appearance on page 60](#).

Changing WinGauge Properties

WinGauge allows you to customize the properties of gauges. You can select properties for:

- The appearance of the selected gauge or gauge you're pointing at
- The global dimensions, fonts, and Bubble Help options
- The actions to perform when a gauge reaches a threshold

Changing a Gauge's Appearance

You can change a gauge's appearance by selecting its type, refresh duration, threshold or data style, size, gauge text, borders, or colors.

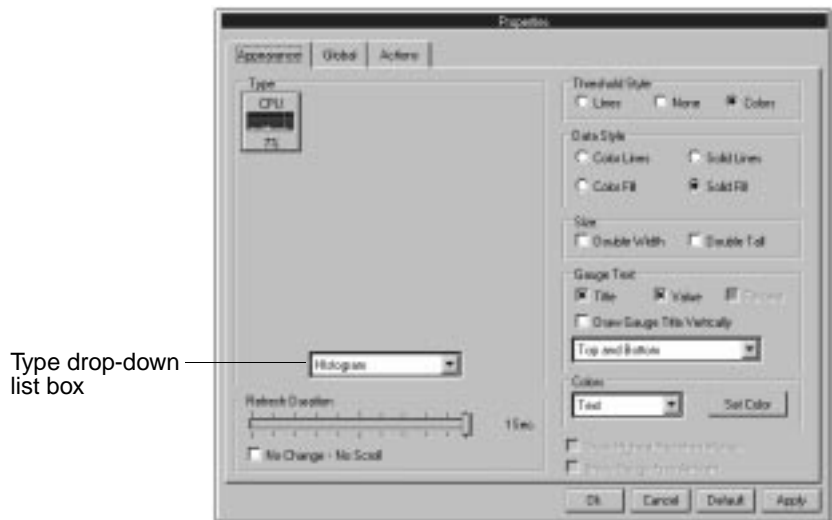
To change a gauge's appearance:

1. Point to a gauge and press the Right mouse button.
2. Choose the Properties command.
3. Select the Appearance properties to use as the default, or to apply to the selected gauge.

The Appearance tab lets you decide what sort of gauge you want, its refresh duration, size, colors, threshold limits and so on. For details, see the [Properties Sheet – Appearance Tab](#) section that follows. When you have finished specifying the appearance of the gauge, you can click Apply to apply the settings to the gauge and leave the Appearance tab open, or OK to apply the settings and close the Appearance tab. The Default button causes the gauge’s appearance to revert back to the WinGauge default settings.

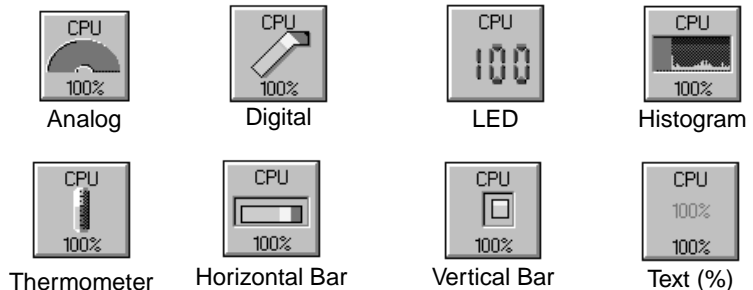
Properties Sheet – Appearance Tab

The Appearance tab contains several sections of options, so that you can customize every gauge individually.



Type

You can select the gauge type to use from the drop-down list box. The gauge preview shows what the currently selected gauge type looks like.



Refresh Duration

The Refresh Duration sets how often WinGauge checks the system to update information provided in the gauge. You can set the refresh duration for each gauge to your own liking, but there is obviously no point in having, say, your disk fragmentation levels checked every 15 seconds. The default settings should be OK. To increase or decrease the Refresh Duration, drag the slider to the left or right.

Threshold Style

You can highlight the threshold limits on each gauge by marking the thresholds as a Line or Color. To set or change the threshold levels, see [Change a Gauge's Actions on page 65](#).

Data Style

Selecting a Data Style of Color Lines, Color Fill, Solid Lines, or Solid Fill makes certain Colors options visible. See [Colors](#) below.

Size

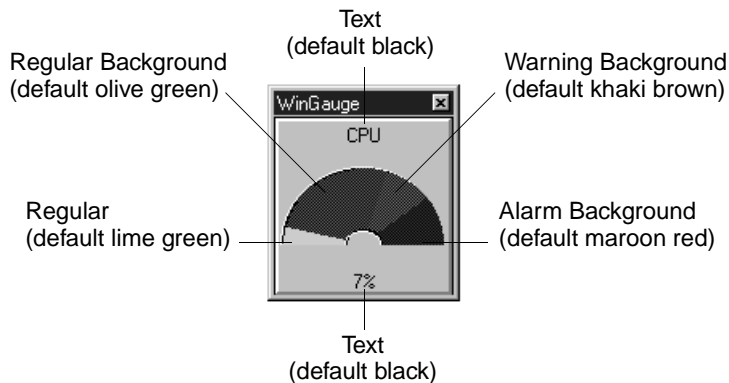
Selecting double wide or tall, both, or default adjusts the gauge size.

Gauge Text

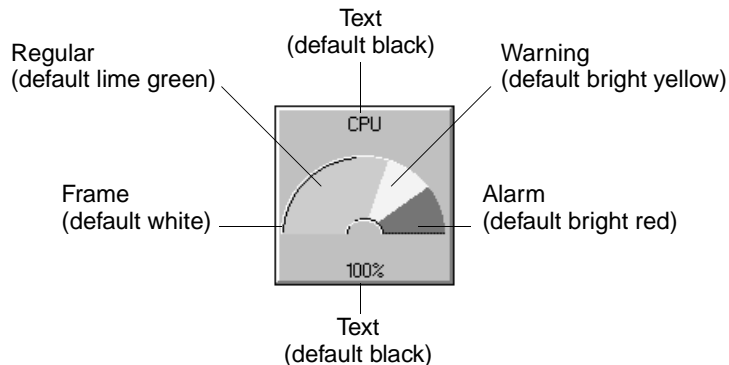
You can select whether to display a gauge's title and value, show the title vertically or horizontally, and show the value as a percent. You can also select where on the gauge the title and value appear.

Colors

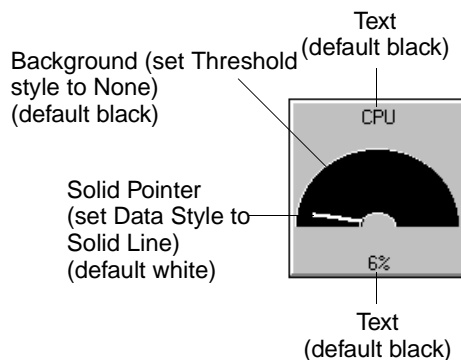
You can customize a gauge by changing the colors. To change the color on any part of the gauge, select the gauge part and click the Set Color button. A standard Windows Color dialog box appears where you can select basic colors or define your own custom colors.



- **Text** (default black)—Sets the color for gauge text (visible when Gauge Text is set to either or both the Title and Value).
- **Regular** (default lime green)—Sets the color for regular data usage (visible when Data Style is set to Color Lines or Color Fill).
- **Regular Background** (default olive green)—Sets the color for the regular background of the gauge indicator.
- **Warning Background** (default khaki brown)—Sets the color for the warning background of the gauge indicator.
- **Alarm Background** (default maroon red)—Sets the color for the alarm background of the gauge indicator.



- **Warning** (default bright yellow)—Sets the color for warning data usage (visible when Data Style is set to Color Lines or Color Fill).
- **Alarm** (default bright red)—Sets the color for the alarm data usage (visible when Data Style is set to Color Lines or Color Fill).
- **Frame** (default white)—Select Frame from the Colors drop-down list box. Then select an edge of the gauge preview to turn on or off the gauge's highlighted edges. You can also change the color used for the frame in the Color dialog box (click the Set Color button).



- **Background** (default black)–Sets the color for the gauge’s data background (visible when Threshold Style is set to Lines or None).
- **Solid Pointer** (default white)–Sets the color for the gauge’s data usage indicator (visible when Data Style is set to Solid Lines).

Changing All Gauges’ Global Properties

Global properties you can select for all gauges in WinGauge are: the gauge size, fonts used for the title text and value, and Bubble Help.

To change all gauges’ global properties:

1. Point to a gauge and press the Right mouse button.
2. Choose the Properties command.
Click the Global tab to bring the tab to the front. Select the Global properties to use as the default or to apply to all gauges.
Properties are described after the Global tab on [page 64](#).
3. Do one of the following:
 - Click Default to use WinGauge’s default Global properties.
 - Click Apply to apply the settings to all gauges in the window (including hidden ones). The Properties sheet stays open.
 - Click OK to apply the settings to all gauges in the window (including hidden ones). The Properties sheet closes.

Properties Sheet – Global Tab

The Global tab contains several sections of options you can select to change the appearance of all gauges.

Change Dimensions

Drag the sliders at the top and left of the gauge preview to resize all gauges. As you drag the sliders, the gauge preview changes size in real-time to show the current dimensions for all gauges.

Gauge Title Font, Gauge Value Font, and Gauge Font

Click the Select Font button to select a different font family, font style, or font size for all gauges’ titles, values, or gauge fonts, respectively. WinGauge displays a standard Font dialog box where you can select from the fonts available on your computer.

-
- ✦ **TIP:** Title text is visible when the Title check box is selected in the Gauge Text section of the Appearance tab. Value text is visible when the Value check box is selected. The fonts for titles and values are set in the Gauge Title Font section and Gauge Font section. The Gauge Font is the font used when you select a gauge type of Text Gauge.
-

Show Bubble Help

Select the Show Bubble Help check box to display Bubble Help when you point to a gauge and wait for the specified delay time. Drag the Delay slider left or right to change the delay (in seconds). The shortest delay is one second and the longest is ten seconds.

Change a Gauge's Actions

Although you may have your gauges displayed on the screen, you may also want to be notified whenever you reach the threshold limits on any gauge. WinGauge allows you to select actions that will be triggered whenever any of your thresholds are reached. Depending upon your requirements, you can have WinGauge play a sound, display a message, or even run an application, to alert you to the status of your system.

To change a gauge's actions:

1. Point to a gauge and press the Right mouse button.
2. Choose the Properties command.
3. Click the Action tab to bring the tab to the front.
4. Select the Actions properties to apply to a gauge you are creating.

The properties you can select are described after the Actions tab illustration below.

5. Do one of the following:
 - Click Default to use WinGauge's default Action properties.
 - Click Apply to apply these settings to the gauge.
The Properties sheet remains open.
 - Click OK to apply these settings.
The Properties sheet closes. The new Action gauge appears.

Properties Sheet – Action Tab

The Action tab contains several sections of options you can select.

Invert Alarms

WinGauge allows you to set up your gauges to monitor both increasing and decreasing values. Normally, you will want your gauges to show you what proportion of an available total you are using. That is, you want to see how “full” your gauge is and how close you are to reaching the upper limits. Typically, you would use a regular gauge to monitor a value that is increasing, such as occupied disk space. But occasionally, you will need to monitor a value that is dropping, such as available disk space.

To monitor reducing values, select the Invert Alarms check box.

The roles of threshold levels and alarm levels in Regular Alarms and Inverted Alarms are best explained by the following examples:

- If you are monitoring occupied disk space, you would use Regular Alarms and could set your warning threshold to 90% full with an alarm to be triggered when your disk becomes 95% full.
- If you are monitoring available disk space, you would use Inverted Alarms, and could set your warning threshold to 10% available, with an alarm being triggered when your available disk space drops to 5%.

Enable Warnings/Enable Alarms

Select the Enable Warnings or Enable Alarms check boxes to receive warnings or alarms, respectively, in WinGauge. After you select one or both of these check boxes, their related options become active. While they are deselected, the related options are dimmed. You can select any combination of the following options:

- **Threshold**—Drag the Threshold sliders left or right to specify the percent at which a warning or alarm should take place. The Warnings and Alarms thresholds are constrained to each other on the threshold range (from Off to 100%). This constraint relationship is determined by whether the Invert Alarms check box is selected.

When the *Invert Alarms check box is deselected*, you can set the Warnings Threshold percent equal to or less than the Alarms Threshold percent. The Alarms Threshold constrains the range available for the Warnings Threshold. For example, if you set the Alarms Threshold to 40%, you can subsequently set the Warnings Threshold at a value constrained between Off to 40%. You can then drag the Alarms Threshold slider above 40% and the Warnings Threshold remains the same. However, if you drag the Alarms Threshold slider below the current Warnings Threshold’s percent (in this case, below 40%), the Warnings Threshold slider “locks in” and decreases matching the Alarms Threshold percent.

When the *Invert Alarms check box is selected*, you can set the Alarms Threshold percent equal to or less than the Warnings Threshold percent. The Warnings Threshold constrains the range available for the Alarms Threshold.

- **Pop-up Dialog**—Select the Pop-up Dialog check box to see a pop-up dialog box when the gauge, reaches the threshold.
- **Sound**—Select the Sound check box to select a sound (a .WAV file) to play when the threshold is reached for this gauge. After selecting the Sound check box, you can click the Folder button to select the sound file to use, in the same way that you select sounds for other Windows applications or events.
- **Run**—Select the Run check box to select an application (an .EXE file) to run when the gauge reaches the threshold. You can click Folder to select the application to use. The Action File dialog box appears where you can enter a path to the application file, or browse to find it. You can also select whether the application should run in a normal window, or be minimized or maximized.

Saving and Loading Gauge Settings

After changing the WinGauge window, you can easily save all your settings by name. This lets you reload these settings later. You can save multiple WinGauge windows, and quickly reopen any of them you want to see or work with. Initially, WinGauge opens the Default.wgp file that contains the default settings. Most likely, you'll want to save settings using a unique name that reminds you of their purpose. Once you've given the settings a name, simply choose the Save command while those settings are loaded to resave any further changes you make.

-
- ✦ **TIP:** To have WinGauge automatically load using a particular gauge settings file in Windows 95/98, specify the filename of the settings file in the WinGauge shortcut's properties sheet.
-

To save gauge settings:

1. Point to a gauge and press the Right mouse button.
2. Choose the Save As command from the Settings menu.
3. Enter a filename for these settings and click Save.

You should use the .WGP file extension for settings files.

- ✦ **TIP:** To reopen saved settings, choose the Load command from the Settings menu. See online Help for details about loading a setting automatically in Windows.
-

Docking and Undocking WinGauge

- ✦ **TIP:** While the WinGauge window is docked, you cannot resize gauges interactively by CTRL-dragging. You can, however, rearrange gauges in the WinGauge window if the titlebar is showing.
-

You can dock and undock the WinGauge window at any time.

To dock the WinGauge window:

1. Point to a gauge and press the Right mouse button.
2. Choose the Dock WinGauge command from the Global menu.

The WinGauge window snaps to the closest edge of the desktop. The Dock WinGauge command changes to Undock WinGauge.

While the WinGauge window is docked, you can enable the Auto Hide feature. This temporarily hides the WinGauge window until you point at the edge of the desktop where the window is hidden.

To undock the WinGauge window:

1. Point to a gauge and press the Right mouse button.
2. Choose the Undock WinGauge command from the Global menu.

The WinGauge window undocks from the edge of the desktop. The Undock WinGauge command changes to Dock WinGauge.

- ✦ **TIP:** You can instantly undock the WinGauge window by dragging it away from the edge of the desktop.
-

Dragging Application Icons Into WinGauge

As well as displaying gauges to keep you informed of the status of your system, you can use WinGauge to house application icons and folders, giving you a quick and easy one-stop launch pad. In addition to freeing up your cluttered desktop, putting application items in WinGauge encourages you to visually check the status of your gauges regularly.

To drag an application icon into WinGauge:

Open WinGauge, open My Computer or Windows Explorer, locate the application's icon, and drag the icon into the WinGauge window. You can also drag icons, files or folders from the Desktop into WinGauge.



Figure 3-1. Drag an application icon into the WinGauge window to add it as an Action gauge; click an Action gauge to launch the application

McAfee VirusScan

Nuts & Bolts 98 comes with McAfee VirusScan, a separate software program, that checks your software for computer viruses.

Viruses can infect any computer and cause serious damage. A virus is a small program that, when it is inadvertently run, takes control of the infected computer. This gives the virus the opportunity to perform destructive actions, like deleting or writing over files or changing random bits of data.

A *virus*, like its biological namesake, replicates itself and attaches to another program, or any file that can be run (such as a word processing or spreadsheet macro). When you run the infected program or macro, you unknowingly run the virus. While the virus is running, it has the opportunity to clone itself, thus spreading from one disk or drive to another. It also has a chance to damage or destroy your valuable information.

For complete instructions, see the online [McAfee VirusScan](#) manual PDF file provided on the CD disc in the Manuals folder. The Adobe Acrobat Reader program is also provided on the CD disc so that you can view or print the electronic version of this manual.

Year 2000 Checker

The countdown is on to the year 2000. So what's all the hubbub about this date in the computer world?

What is the Year 2000 Problem?

For nearly a millennia, we have been abbreviating the year to simply two digits in date notations. Almost universally, people understand that 12/01/98 means December 1, 1998. Unfortunately, most computers and software followed suit. For details about why this happened, see [Why Do We Have Y2K Problems With Our Computers? on page 71](#).

The problem in a nutshell is simple math (which is the language of computers). Computers and software most often allocate two digits for the year, both when storing the information and when displaying it on the screen. Starting in the year 2000, our data will span two centuries. For that reason, four digits must be used to accurately sort, calculate and compare years in the 1900s and 2000s.

The human eye can instantly recognize that 00 means the year 2000 and 95 means 1995. Therefore on screen displays, dates are likely to still only show two-digit years. But the underlying storage and calculation of dates must change.

Using two digits for the year works fine when all the dates are in the same century. However, when dates span centuries, calculation problems can arise unless computers use four-digit years. For instance, when subtracting 06/01/95 from 06/01/05 to determine a person's age, a computer using two digits would produce an incorrect result of -90 instead of 10 (the accurate result).

Why is the Y2K Issue so Urgent?

The year 2000 is the beginning of the Gregorian calendar year that culminates with the start of a new century and a new millennium. It is also the year whose first tick of our clock's second hand will test the date handling of computers and software worldwide. What makes this issue urgent is that the deadline for bringing computers and software into Year 2000 (Y2K) compliancy is fixed. We simply cannot turn back the clock and still have meaningful data.

So will our computers and software accurately handle this transition from dates in the 1900s to dates in the 2000s? Or will our computers suddenly miscalculate the date and reset computer clocks to some date only

meaningful to the developers, such as January 1, 1990 or January 4, 1980? Or worse yet, will our computer systems stop working entirely? These situations are all possible. And the Y2K problem is massive, affecting governments, private sector business and home users alike.

For this reason, U.S. Government agencies estimate they will spend \$2.3 billion between the 1996 and 2000 fiscal years bringing government computer systems into compliancy before the beginning of the year 2000. Solving the Y2K issue is the most massive example of human cooperation and teamwork to date. In that respect, achieving total compliance before 2000 will be something to celebrate in itself.

Why Do We Have Y2K Problems With Our Computers?

The Year 2000 issue is a problem now, because of design decisions made two or more decades ago by engineers and programmers. These people knew that the turn of the century loomed only 20 years in the future. However, they were confident that their products would only have a five to ten year lifespan. Hardware wears out, and software is enhanced (at that time approximately once every year a new release of software was made available).

There were other factors involved in those early decisions to use a two-digit year. Screen “real estate” (or the area on the screen available for displaying information) has always been a precious commodity. Also the standard method of noting dates by hand and in printed forms used only the last two digits of the year. For these reasons, and for reasons associated with the storage space needed to store dates, developers opted to go with only two digits to represent the year (that is, 93 is 1993, 86 is 1986, and so on).

These developers were confident that their products would be “wall art” long before the next century commenced. In that regard, they were right. The earliest microcomputers (such as Z80 and 8080 CPUs) and their software have long been obsolete and are now in some cases collectors items.

What these developers did not predict was that the standard methods of storing dates that they defined would become “etched in stone.” They did not foresee that their hardware and software, although long out of production, might remain in use long into the future due to replacement costs. Neither did they expect that using two-digit years would start a chain reaction of backward compatibility and design stasis that has caused developers to scramble en masse to find and fix every single occurrence of Y2K non-compliance in hardware and software alike.

What are the RTC, BIOS, DOS, and Windows Clocks?

Nuts & Bolts 98's Year 2000 Checker can test the four clocks on your PC. They are the RTC, BIOS, DOS and Windows clocks.

The *RTC (Real Time Clock)* is a device in your computer that maintains the time (measuring elapsed time) even when you turn off or unplug your PC. Accurate time measurement is needed on your PC, and not just so that you can use your computer as a timepiece either. Your PC uses accurate time to perform a flow of computing tasks. The RTC clock gives your computer the ability to perform tasks in order.

The *BIOS (Basic Input/Output System) clock* is stored in firmware, such as PROM (Programmable Read Only Memory) or EPROM (Erasable Programmable Read Only Memory). When you start your computer, the BIOS reads the date and time from the RTC. The BIOS is your PC's "traffic cop," which dictates how software interacts with all the peripheral devices in your computer, including the RTC clock. Most software gets the date and time from the BIOS, DOS, or Windows clocks. Non-compliant BIOS clocks have reset themselves from 12/31/1999 to 01/01/1900 when the year 2000 begins.

The *DOS (Disk Operating System) clock* gets its date and time from the BIOS clock, and then makes the current date and time available to you or to any application that requests it. You can change the DOS date and time in an MS-DOS Prompt window using the DATE or TIME commands. Non-compliant DOS clocks have reset themselves from 12/31/1999 to 01/04/1980 (the date when DOS was originally released, and before which it did not need to support a current date).

NOTE: Although seemingly transparent, MS-DOS still runs underneath Windows 95/98, so the Year 2000 Checker fixes the DOS date if it is non-compliant.

The *Windows clock* gets its information from the DOS clock, and makes the date and time available to Windows applications, or to you via the Date/Time control panel. Non-compliant Windows clocks have also reset themselves from 12/31/1999 to 01/04/1980.

How to Ensure Y2K Compliancy of Your PC's Clocks

Nuts & Bolts 98's Year 2000 Checker can instantly determine exactly what the four primary clocks on your computer will do on certain milestone dates without some form of correction or intervention. It can also bring

these clocks into compliance by installing the Y2Kfixer.com program, and adding a line to your AUTOEXEC.BAT file that causes this program to run each time you start your computer. Even if you uninstall Nuts & Bolts 98, the Y2Kfixer.com program remains on your system so it continues to be Y2K compliant.

What Dates Does Year 2000 Checker Test and Why?

The Nuts & Bolts 98 Year 2000 Checker tests each of the four clocks for the following dates. In each case, it starts the tests a few seconds before the date and verifies that the transition to the next day's date is accurate.

01/01/2000

This date is the 2000 rollover. In some applications that perform forecasting or handle future dates, this date will be reached before the actual calendar date. Examples of this include banking, accounting and project management software. In many cases, these programs may begin using 01/01/2000 when the previous year begins on 01/01/1999 or even earlier. The Year 2000 Checker tests to make sure that all four clocks transition accurately from a few seconds before 01/01/2000 into the next day.

02/29/2000

The year 2000 is a leap year, so the Year 2000 Checker verifies that this date is accurate.

The rule for determining leap years is:

- Years divisible by 4 are leap years except for years ending in 00.
- Years ending in 00 that are divisible by 400 are leap years.

Reports have been made of computers failing to accurately consider 2000 a leap year (and instead making the year 2001 a leap year).

03/01/2000

Some BIOS clocks go correctly to February 29, 2000 but then continue to an inaccurate date of 02/30/2000. So the Year 2000 Checker tests not only 02/29/2000, but also that it then moves accurately to the first day of March (03/01/2000).

01/01/2002

The Year 2000 Checker tests 01/01/2002 to ensure that farther down the road your clocks are still handling dates accurately. It also confirms that the clocks do not consider the year 2002 to be a leap year.

What Other Y2K Problems Must You Resolve?

After you ensure that your PC's clocks are Y2K compliant using Nuts & Bolts 98's Year 2000 Checker, you still need to verify that the software you use, and your data itself, is also Y2K compliant.

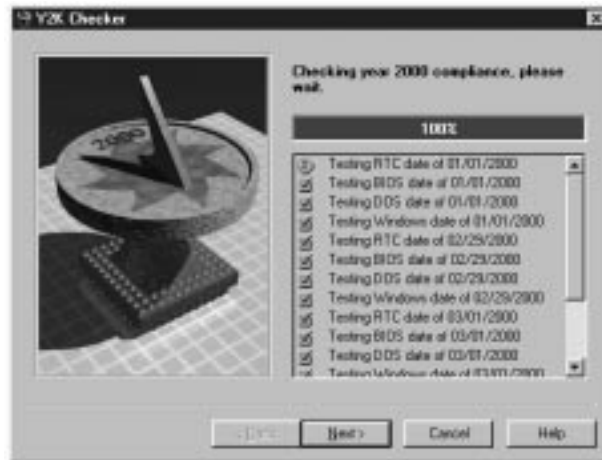
Check the ways that you use dates in your data (such as embedding dates in identifiers like serial numbers). Also check with your computer vendors for Year 2000 compliance in all new products or updates you acquire. If you are using older software, it is an excellent idea to update it.

If you have custom software, its programmers must examine the source code, looking for not only two-digit dates, but also for obscure times when dates, week counts, or even day of the week calculations are performed. If an inaccurate calculation of leap years is made, even the day of the week can be thrown off.

If your PC is connected to a LAN, be aware that networking software synchronizes the server clock with your PC's clock whenever you connect to a server. This means that LAN servers must be accurate, or they could update workstation clocks resetting them all to the wrong date.

To determine if your system is Year 2000 hardware compliant:

1. Click the Start button and do one of the following:
 - Choose the Nuts & Bolts command from the Start menu, click the Tools button and choose the Year 2000 Checker command.
 - Choose the Programs > Nuts & Bolts > Year 2000 Checker command.
2. Click Next >.



Y2K Checker tests your computer system for compliance. It displays a circled red X beside the dates that are non-compliant and a check mark in a green box for those dates that are compliant.

3. Click Next >.

If the Y2K Checker finds dates that are non-compliant, it copies the Y2Kfixer program to your Windows directory and adds a line to your AUTOEXEC.BAT file that causes this program to run each time you start your PC. The Y2Kfixer program ensures that your PC's dates remain accurate after January 01, 2000.

NOTE: If the RTC clock fails, but the BIOS clock checks out okay, the Year 2000 Checker indicates that your PC is year 2000 hardware compliant because the BIOS contains a fix.

4. Click Finish.

If your system clocks were inaccurate, the Y2Kfixer.com program is installed on your PC. Each time you start your computer, this program runs to correct the date as necessary. Even if you uninstall Nuts & Bolts 98 later, the Y2Kfixer.com program remains installed so it can continue to protect your system's dates each time you start your PC.

NOTE: You should leave the Y2Kfixer.com program on your system if it is installed to ensure on-going protection of your PC clock dates.

Trash Guard



When you enable Trash Guard, all deleted files, even ones you delete in DOS or in 16-bit applications, are moved to the Recycle Bin. When you start the Trash Guard application, you enable it.

To start Trash Guard, choose Programs > Nuts & Bolts > Trash Guard from the Start menu. You can also Right-click the Recycle Bin icon in My Computer or Windows Explorer, choose Properties, select the Nuts & Bolts 98 tab, and select the Enable Trash Guard check box.

Specifying Trash Guard Properties

Trash Guard's Properties sheet lets you decide if the Trash Guard Properties tab appears in the Recycle Bin's Properties sheet dialog box. You can also specify any files to exclude from delete protection.

To add files to exclude from delete protection, click the Add New button. Then locate the files to exclude or the path to a folder or directory of files to exclude. Or you can use standard wildcard characters to exclude all files that have the same file extension or similar names. The wildcard characters you can use are:

- **Asterisk (*)**—a multiple-character placeholder. For example if you enter `*.BAK`, all files that have the `.BAK` file extension would be excluded from delete protection. Or if you enter `~*. *`, all files that start with a tilde (`~`) and have any file extension would be excluded from delete protection.
- **Question Mark (?)**—a single-character placeholder. For example, you could enter `map?? .bmp` to exclude a range of files named `map01 .bmp` through `map99 .bmp`.

Trash Guard also lets you select files in the Files To Exclude list and click Modify to modify the definition of these files, or click the Remove button to remove them from the list of files to exclude.

Retake

The most important asset on your computer is the information, or *data*, you create and store there. Over time, this data grows in size and value. The storage devices where you keep this information, although typically quite reliable, are still vulnerable to a wide range of environmental and human factors that can damage or destroy all or part of the data stored there.

Valuable and vulnerable disk organizational structure information is also stored in various places on a hard drive. This includes the boot sector, partition tables, directories, the FAT (file allocation table), and other structural components. These structural components are used by Windows to find data on the drive, organize it, and so on. If any one of these components is damaged or destroyed, you will not be able to access the data you've stored on the drive.

Let's take a closer look at one of these structural components, the file allocation table. The FAT, your drive's roadmap, points to the locations where your files are physically stored on the drive. Files can either be stored in contiguous locations or scattered in pieces in different places. Since files are not always stored contiguously, the FAT information becomes even more indispensable than if files were stored one after another, end to end. If a drive's file allocation table becomes corrupt or scrambled (such as may be caused by a virus), your computer will be unable to find and assemble all the pieces of your files. This is true even if all the files' data still exists.

Protected Volume Files (The Ultimate Backup Protection)

Nuts & Bolts 98's Retake utility allows you to create backup sets in protected volume files, which is the safest and preferred type of backup, and is unique to Nuts & Bolts 98. A *protected volume file* is a sectioned off portion of the drive, sometimes called a logical drive. Retake's protected volume files have some very special characteristics that let Retake reconstruct backup files sector by sector, even if the drive's standard FAT is damaged or completely lost. In fact, files can be largely reconstructed even if large parts of the drive are unreadable or erased.

The protected volume file also includes enough information in each directory entry to completely reconstruct a file's entire directory tree even if all its parent nodes are erased.

Retake provides internal redundancy in the protected volume file backups you create. It does this by marking each sector of each file that it backs up with identifying information about the sector's contents and the file that sector belongs to. Each sector in a protected volume file contains enough information to allow files to be reconstructed from their individual sectors.

Why You Should Make Regular Backups With Retake

Your data is very valuable and costly to recreate. This means that making frequent or even mirror backup copies of the important data on your drives is *crucial*. A *mirror* backup copy is always identical to the original information on the source drive.

Retake automates the back-up process, doing the time-consuming and repetitive work for you. It lets you decide which types of files to back up, how often to save them, and where you want the backup set located (on the same drive, another local drive, or on a shared network drive). With Retake, you can create mirror backup sets that are, at any given time, an exact replica of the files you've selected to back up on the source drive. You can also specify a short time delay in the backup, or back up manually by copying files to the backup set on your drive if you prefer.

All forms of data storage are susceptible to losing the information they hold. The most common types of data storage—hard drives, 3.5-inch disks, ZIP disks or SyQuest tapes—are often called *permanent storage* (thus differentiating them from the volatile storage in your computer's RAM, random access memory). Permanent storage means the information remains intact even when you turn off your computer. Permanent storage does not mean *eternal* storage.

Many things can cause the data on disks, tapes or drives to become garbled or lost: hardware malfunctions, worn out media, electrical storms, excessive heat, static electricity, magnets, loose cable or power cord connections, and so on. CD discs, though durable, can become scratched enough to damage their data. Human actions can also cause lost data, such as deleting the wrong folder or formatting the wrong drive. Even a well-designed application can sometimes cause its own files to become corrupt.

With so much at risk, you have everything to gain by letting Nuts & Bolts 98's Retake utility automatically make backup copies for you. You simply decide what information is important to you, how you want it to be backed up, and where you want the backup copy to be stored. Retake takes care of the rest!

How Retake Creates Automatic Backups

When you select to have Retake automatically create a backup set for you, it creates the first backup set while you are stepping through the Retake Wizard. Thereafter, while the Enable Automatic Backup option is selected, it continues to update your backup set at the time delay you've specified.

If you chose to make Mirror backups, Retake updates your backup set at the same time that you resave the original source files.

If you select a write-behind delay longer than zero seconds (a Mirror backup), Retake updates the backup set at any time after the specified time delay when your PC is idle. This allows Retake to work in the background so that it does not interrupt the work you are doing. This is a good option to use with the protected volume file backup type since it eliminates any speed loss due to more frequent disk accesses and larger file sizes associated with the protected volume file backup type.

Defining Your Backup Strategy

After you decide which backup type you want to use (either a protected volume file or a directory backup set), the most important questions you must answer when defining your own backup strategy are:

- Where will you store the backup set?
- What files are important (which files must be backed up)?
- How often should you or Retake make these backups?

Where Will You Store the Backup Set?

If the survival of your business depends upon your PC being up and running at all times (and if money is not an object), the ultimate way to protect the data on your PC would be to set up a redundant PC with identical sized drives. This backup PC's only job would be to mirror the data on your primary PC. It would be waiting in the wings should your first PC fail for any reason. And if that happened, you could simply switch your work to the second PC while the first one is repaired.

Often money is a consideration in deciding where you'll store your backup sets. The least expensive way of making backups has traditionally been to copy data to 3.5-inch disks, though this is the most labor intensive way of storing backups because it requires you to switch disks by hand.

In today's computer marketplace, you may discover that it is as cost effective to acquire a separate backup hard drive where you can keep a current mirror backup copy of one or more other drives that you use on your PC.

In addition, you may want the backup copy to be stored at a remote location, for increased protection. As long as Retake can access a logical drive mapped on your PC, it can store the backup set there. That is, the backup set can be stored on a shared network drive.

NOTE: You can use the Map Network Drive command, available by Right-clicking My Computer, to assign (map) a drive letter to a location on a network drive. This makes that location a “logical drive” on your PC. For more details, see your Windows online Help.

Even if you cannot invest in another drive or disks for storing your backups, you can still create a backup copy of your data on the same drive. This offers the least protection should that drive fail, but the potential for data recovery is increased by having two sets of your most important information stored there. It is further enhanced if you select the protected volume file backup type, which allows recovery in many circumstances even with the drive physically damaged.

NOTE: If your data usually resides on a server, you can make a local copy so you can access data even when the server goes down.

What Files are Important to You?

Retake automatically selects files that are typically important to include in a backup set. However, you can select other files or types of files to include in your backup set.

In addition, you can create multiple backup sets of data for particular purposes. Each of these backup sets can be created when and where you specify. They can each include exactly the files or types of files that you choose. For example, you might create individual backup sets for each of your clients if you produce data for clients that is stored on your computer, such as advertising layouts, graphic images, books, or accounting data.

How Often Should You or Retake Make Backups?

The more recent your backup set, the happier you'll be if your PC does encounter a problem that compromises the data on your primary drives. However, you may want to keep the default Write-behind Delay of 20 minutes to give you time to recover a previous version of a file if you ever need to.

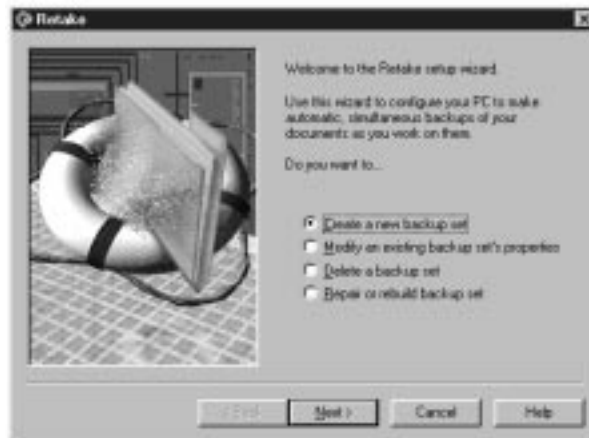
- ✦ **TIP:** Save early, save often. While working in applications, you can almost always press **CTRL-S** to save your work as you go. The more often you save your work, the less you have to lose at any given point in time. You may also want to be sure the auto-save option is selected in your applications for more frequent backups.

Creating a Backup Set

Creating a backup set, either manually or to be updated automatically, in Retake is very easy. Retake's default choices should work fine, though you may want to add additional folders or file types to your backup list.

To create a backup set:

1. Click the Start button and do one of the following:
 - Choose the Nuts & Bolts command from the Start menu and click the Retake button.
 - Choose the Programs > Nuts & Bolts > Retake command.



2. Click the Next > button while the Create a New Backup Set radio button is selected.
3. Select whether to back up to a Protected Volume File or a Directory. Then click Next >.

Protected Volume File—The Protected Volume File is the preferred backup type. A protected volume file is a sectioned off portion on the drive. It has special characteristics to ensure that even if organizational structures, such as the file allocation table on the drive is corrupted or lost, or the data becomes scrambled, the files in the backup set can be reconstructed. Retake stores extra information (in each sector for each file and also in a separate directory) to provide this level of protection. For details, see the *Protected Volume Files (The Ultimate Backup Protection)* on page 77.

NOTE: You can copy files into a protected volume file manually using My Computer or Windows Explorer to add them to your backup set and instantly protect them.

There are two drawbacks to using a protected volume file backup type. The first drawback is that three percent more storage space is required for the extra information that will be used to reconstruct the files in the event of a problem. The second drawback is that a protected volume file is slightly slower because it has to manipulate more information in more areas on the disk and more disk accesses are required. This is a marginal performance degradation, which you can eliminate by also selecting a Write-behind Delay of seconds or minutes.

Directory—The Directory backup type makes another copy of the files and directories selected for backup in a different location. This type of backup creates no performance drain on the system and it's simple to manage the backup area. You can use My Computer or Windows Explorer to cut or copy files in or out of the backup location or delete the files. The drawback of selecting a directory backup type is that the files are no more protected than if you had created a backup copy yourself.

4. Specify the target destination where the backup set will be created and click Next >.
5. Click the Settings button if you want to customize any of the settings for this backup set.

Volume Settings

- **Backup Type**—Displays the currently selected backup type (Protected Volume File or Directory).
- **Enable Automatic Backup**—While this check box is selected, Retake automatically updates this backup set as you update the files it contains based on the time delay you specify.

- **Name of Backup Set**—If you are saving this backup set to a non-Windows 95/98 or NT drive (such as to a UNIX server on your network) be sure to follow the 8.3 naming convention for this name.
- **Write-behind Delay**—Select the Mirror (0) write-behind delay if you want your backup set to remain in constant synchronization with the original files as you change them. Select a write-behind delay in seconds or minutes if you want your backup to be created during times when your PC is idle starting at any time after the time delay you select.

NOTE: A write-behind delay in seconds or minutes is recommended if you are using the protected volume file backup type and want to eliminate the slight speed reduction caused by extra disk accesses in more locations on the drive.

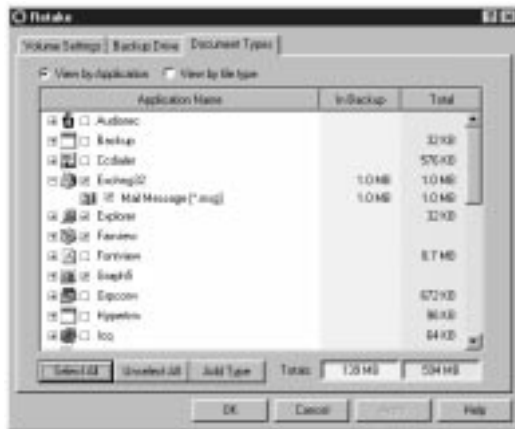
- **Protected Volume Drive Letter**—(*available only for backup sets stored as a Protected Volume File*). The drive letter you want to use for the Protected Volume File backup set.
- **Keep Deleted Files For**—Select how long you want the backup set to keep files whose original counterparts have been deleted from your system.
- **Limit Size of Backup Volume**—Drag the slider left to reduce the backup volume size limit or right to increase the backup volume size limit.

Backup Drive

Drive and Directory Folders appear in the Backup Drive list so you can select any of the ones you want to add to your backup set. Click folders to open and close them. Click the check boxes to place a check mark beside the drives or directories that you want to back up.

Document Types

You can select groups of files that you want to include in your backup set by selecting their file type. The file type, such as TXT (for a text file), indicates the file's purpose. Retake displays a list of all the registered file types in Windows 95/98. The file types with check marks show the types of files that will be included in your backup set.



Retake obtains its list of registered file types from Windows. You can view or add registered file types in My Computer or Windows Explorer.

If you are not yet familiar with file types and want to see them, you can open My Computer or Windows Explorer, choose the Options command from the View menu, and click the File Types tab.

In the Options dialog box you can examine the list of the registered file types on your system. These are the file types that will be available to you in Retake. You can add new registered file types in the Options dialog box to make them available to Retake the next time you run it.

Many file types are standard, such as BMP and PCX which are used by paint applications like Microsoft Paint, or TIF which is a standard file type for TIFF graphic images. Each application's documents typically have a file type (which may or may not be registered in Windows). For example, Microsoft Word documents may be stored using registered file types of DOC, RTF or TXT, depending on the file type selected when saving the document.

NOTE: You can also view file types directly in My Computer or Windows Explorer. Choose the Options command from the View menu, click the View tab, and make sure the HIDE MS-DOS FILE EXTENSIONS FOR FILE TYPES THAT ARE REGISTERED check box is deselected. Registered file types are also listed in the File Types tab in the Options dialog box. The other place where file types appear is in the Save As dialog box of Windows applications.

6. Click Apply to apply changes. Then click OK when you are done.
If you want to make a backup set manually, deselect the Enable Automatic Backup check box.
If you've selected the 3.5-inch drive or a removable media drive that provides less space than needed for the backup set, follow the instructions on the screen and switch disks or tapes when instructed.
7. Click Next >, enter a backup volume name and click Next > again.
8. Click OK.

Restoring Files from a Backup Set

If you encounter a problem with the information on your drive, you can restore one or more of the files in your Retake backup sets.

NOTE: Unless you create a backup set containing the entire contents of a drive, you *should never* drag and drop or copy/paste the contents of a Retake backup set's <drive letter> folder into a drive icon or window. Though the folder names match between a Directory type backup set and the folders on the drive, the files inside are most likely very different. By default, Retake only backs up files it considers essential, such as INI, TXT, RTF, DOC and WRI files. It backs them up using the original hierarchical directory structure from the source drive. You will know where to restore each file, if you need to, based on its location in the backup set. It does not automatically back up application or DLL files, nor does it back up the Windows directory without your explicit instructions to do so.

- ✦ **TIP:** You can use the bootable disk created by Rescue to restore files from a backup set located on a damaged drive.
-

To restore a backup set:

1. Open Windows Explorer or My Computer and open the backup set.
If the backup set is a Directory type backup, the folder name (by default) is Backup_1, Backup_2, and so on. If the backup set is a Protected Volume File, it is located at the same level as your physical drives.
2. Find the files to restore and use Drag and Drop or Copy/Paste to copy files from your backup set to the location where you want them.

Modifying or Deleting Backup Sets

Modifying an Existing Backup Set

To modify a backup set:

1. Click the Start button and do one of the following:
 - Choose the Nuts & Bolts command from the Start menu and click the Retake button.
 - Choose the Programs > Nuts & Bolts > Retake command.
2. Select the backup set to modify and click the Properties button.
3. Change the settings and click OK when you are done. Click Finish.

Deleting a Backup Set

If you created a Retake backup set as a protected volume file, you cannot delete it in My Computer or Windows Explorer. You can *only delete the protected volume file* using Retake.

If you created a Retake backup set as a directory, you should still delete it using Retake; however, you can delete the backup directory via My Computer or Windows Explorer.

To delete a backup set:

1. Start Retake.
2. Click Next > while the Delete a Backup Set radio button is selected.

3. Select the backup set to delete and click Finish. Then click Yes to confirm the deletion.

Repairing and Rebuilding a Backup Set

If you encounter a problem with the backup set itself, you can repair or rebuild it. For example, if your computer crashes while the backup is being created or updated automatically, the backup's contents may be incomplete or damaged. Retake automatically checks the backup's integrity when you start Windows. If it is damaged, Retake starts and asks if you want to repair the backup set.

To repair or rebuild a backup set:

1. Start Nuts & Bolts 98's Retake utility and click Next > while the Repair or Rebuild Backup Set radio button is selected.
2. Do one of the following:
 - Click the Repair button and click Next > if you can see the backup set in My Computer or Windows Explorer, but the information is somehow damaged. For example, if a backup was not finished due to a power outage or computer crash.
 - Click the Rebuild button and click Next > if you can no longer see the backup set (for example if the protected volume file is no longer visible in My Computer or Windows Explorer).

NOTE: Performing a Rebuild is a time-consuming process because Retake searches your entire system to find all backup sets that are stored there.

3. Select the drives that contain a protected volume file you want to restore. Then click Next >.
The Restore utility searches the selected drives for protected volume files or backup directories. If it finds a protected volume file, a message appears asking if you want to Save As, Ignore, or Ignore All.
4. Click the Save As button and select where you want the restored volume file to be placed. Then click Save.

This chapter explains how to use Nuts & Bolts 98 to secure your valuable information so it remains private from unauthorized access. It also describes how to manage your system to customize the appearance and behavior of Windows; how to keep the programs, documents and folders you use most often at your fingertips; and how to quickly and effectively archive information or exchange it with others. The Nuts & Bolts 98 Secure and Manage suite consists of five utilities:

- **EZ Setup**—lets you customize the appearance of Windows, including the desktop, startup programs, icons, startup and close screens.
- **Launch Pad**—lets you create customizable Launch Pad windows where you can place any desktop icon so it is easily accessible.
- **McAfee Fortress**—lets you encrypt and decrypt files, and build self-decrypting executables
- **McAfee Shredder**—lets you permanently erase selected files or non-file data on your hard drives.
- **McAfee Zip Manager**—lets you create Zip files, expand Zip files, and build self-expanding executable Zip files.
- **Quick Copy**—lets you copy the files or folders that you select fast.

What you're about to learn:

- How to set up the behavior of Windows during startup; the appearance of Windows' logo screens; the Windows Explorer's behavior and appearance; the appearance of icons and behavior of the mouse and CD player on the Windows desktop; the programs that run automatically at Windows startup and appear in the Start > Program menu; and the location commands available on the File > Send To menu in My Computer or the Right-click pop-up menu.
- How to create Launch Pad windows to keep the icons you use most handy on your desktop so you can get to your work quickly.
- How to encrypt and decrypt files so only authorized people can gain access to the information they contain, while anyone who intercepts your files will only see unintelligible cipher text.
- How to permanently erase information on your hard drives so that no one can reconstruct it later.
- How to compress and decompress files to archive or exchange them with others in the most compact, cost-effective, and safely transmittable form.

EZ Setup



EZ Setup lets you customize the appearance of Windows (the Windows desktop, startup programs, icons, startup and close screens, and so on). Although you can perform some customization using the Control Panel, EZ Setup lets you change the appearance of these objects more fully and easily than in the Control Panel.

System

The System tab lets you set Startup options that determine what Windows does during startup. The System tab also lets you decide whether to display logo screens (and what images should appear in these screens) when you start Windows and shut down or turn off your computer from within Windows.

Explorer

The Explorer tab lets you specify settings that affect the Windows Explorer's menu speed, shortcuts, history and other settings.

Desktop

The Desktop tab lets you add, hide and rename desktop icons. You can change a program's icon image and its properties. EZ Setup also lets you define the mouse sensitivity for double-clicking and dragging, whether to play audio and data CDs automatically, and whether to wrap shortcut names.

Startup Program and Program Menu

The Run/Add/Remove tab lets you add, remove, edit, and set properties for programs that automatically run when you start Windows, and for programs that appear on the Start > Program menu.

Send To Menu

The Send To tab allows you add, remove, edit, and set properties for the commands that appear on the File > Send To menu in My Computer. Commands on the Send To menu specify locations where you want to send the files you've selected in a drive or volume window that is open inside My Computer. For example, you might add an application or a folder to the Send To menu.

Context Menu

The Context Menu tab lets you customize the commands that appear in the Windows Context menu. This is the menu that appears when you right-click objects on the desktop or open areas or windows.

Nuts & Bolts

The Nuts & Bolts tab lets you select Nuts & Bolts enhancements, such as Common, Start Menu, Background Pattern and Other enhancements.

Specifying Startup Options or Logos

The System tab allows you to configure your system by setting a variety of Startup options that customize how Windows behaves when it starts. The System tab also lets you decide whether to display logo screens (and what images should appear in these screens) when you start Windows and shut down or turn off your computer in Windows.

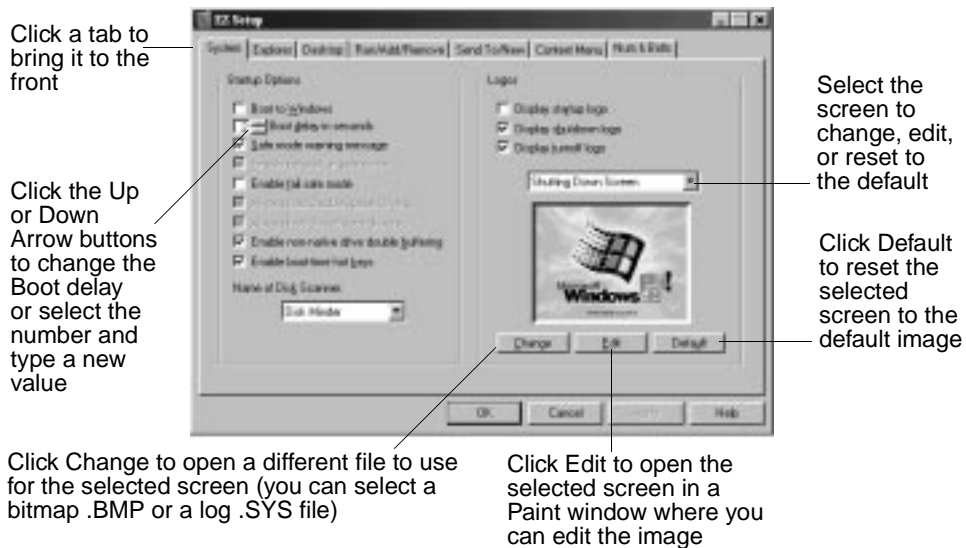


Figure 1. The EZ Setup window

The System options are:

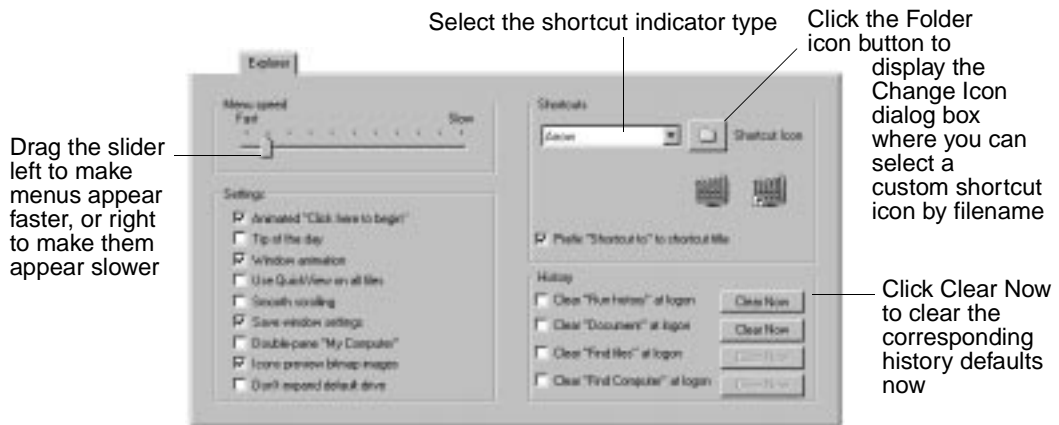
- **Boot to Windows**—Select this check box to start Windows when you start your computer. When you deselect this check box and restart your computer, it boots up and takes you to the DOS prompt (usually the `C:\>` prompt). To start Windows from this prompt, type `WIN` and press `ENTER`.
- **Boot delay in seconds**—Select or enter the number of seconds of delay you want when booting the PC. You can increase the boot delay to have extra time for pressing the Windows startup hot keys.

- **Safe mode warning message**—Select this check box if you want Windows to display a warning message if it starts in Safe mode. If Windows cannot start normally for some reason, it starts in *Safe mode*, so you can make changes to eliminate the problem.
- **Enable network in safe mode**—Select this check box if you want to start Windows in Safe mode including network capabilities.
- **Enable fail safe mode**—tells Windows to boot in Safe mode, even if everything appears to be OK.
- **Always load DoubleSpace drivers**—Most likely you should keep this check box selected. The DoubleSpace driver is the file named `Dblspace.bin`. It is used to access drives compressed using DoubleSpace. DoubleSpace is a disk compression method that creates a compressed drive, which is actually a compressed volume file, or CVF, (usually named `DBLSPACE.001`) that is stored on your hard drive.
- **Always load DriveSpace drivers**—Most likely you should keep this check box in its default state. The DriveSpace driver is a file named `Drvspace.bin`. It is used to access drives compressed using DriveSpace. DriveSpace is a Windows 95/98 disk compression method that creates a compressed drive which is a compressed volume file (usually named `DRVSPACE.001`) that is stored on the hard drive.
- **Enable non-native drive double buffering**—This option is set automatically by Windows and generally should not be changed. Select this check box to avoid lock-ups or errors if your PC has an ISA controller card *and* a DOS driver, and if you have over 16MB of RAM in your PC. If your PC does not have an ISA disk controller card or if you use an ISA disk controller card, but have 16MB or less of RAM, keep this check box deselected because the double buffering could slow down the performance of your computer and it provides no benefit below the 16 MB threshold for ISA cards.
- **Enable boot-time hot keys**—Select this check box if you want to be able to use the Windows startup keys (also called shortcut or hot keys). Press these hot keys after the Windows starting message appears and before the Windows 95/98 startup screen appears.
- **Name of Disk Scanner**—Choose Disk Minder or Scan Disk (only for the OEM SR2 version of Windows 95 or later) to pick which one you want Windows 95 to start if it encounters a problem with a disk.
- **Display startup logo**—Select this check box to have the Windows Startup logo to appear whenever you start Windows.
- **Display shutdown logo**—Select this check box to have the Windows Shutdown logo to appear whenever you restart the PC in Windows.

- **Display turnoff logo**—Select this check box to have the Windows Turnoff logo to appear whenever you turn off the computer after shutting down Windows.
- **Screen drop-down list box**—Choose a logo screen name and the screen preview shows the current image for that logo screen. Then you can use the Change, Edit or Default buttons to change, edit, or reset the default image for the chosen logo screen, respectively.
- **Change**—Select a screen in the pop-up menu. Then click Change to select a bitmap image (.BMP) or logo file (.SYS) to use for it. Note, Start-up images must be 320 x 400 color images—several are provided in the Nuts & Bolts directory.
- **Edit**—Select a screen in the pop-up menu. Then click Edit to edit the image displayed in the logo preview. EZ Setup opens the image in a standard Paint window.
- **Default**—Select a screen in the pop-up menu. Then click Default to use the default bitmap image for this screen.

Specifying Menu Speed, Settings, Shortcuts and History

The Explorer tab lets you customize the Windows Explorer's behavior and appearance.



Your Explorer options are:

- **Menu speed**—Drag the slider left to make menus appear faster, or right to make them appear more slowly.
- **Settings**—Select the check boxes for these self-explanatory settings.

- **Shortcuts**—Select a shortcut indicator to use to visually distinguish shortcut icons from regular file icons. The shortcut indicator is part of all shortcut icons on your desktop. The default shortcut indicator is a small curved arrow inside an outlined white box.

You can also click the Folder button to select any icon to use as the custom shortcut icon. After you select an icon, EZ Setup displays it in the Explorer tab as the currently specified Shortcut Icon.

-
- **TIP:** You can modify any shortcut icon supplied with EZ Setup using Discover to extract the icon to a file. Click the Software tab, the Advanced button, and the App Resources icon. Then select EZ Setup in the Modules list, select the icon in the Resources list at the lower left, and click the Extract Resources to File button.
-

- **History**—Select the Clear at Logon check boxes for the history information you want Windows to clear when it starts. History information includes the run history of programs most recently run, the history of documents most recently opened, the last find files settings, and the last find computer settings. You can also click Clear Now to instantly clear the corresponding history information.

Specifying Windows Desktop Icons and Behavior

The Desktop tab lets you add, hide, and rename desktop icons. You can change a program's icon and properties. EZ Setup also lets you select the mouse sensitivity for double-clicking and dragging, and whether to play audio and data CDs automatically or wrap shortcut names.

The Desktop options are:

- Click **Add** to select a file whose icon you want to add to the Windows desktop.
- Click **Hide/Show** to hide or show the selected desktop icons on the Windows desktop.
- Click **Rename** to change the name of the selected desktop icon.
- Click **Change Icon** to change the image used for the selected desktop icon.
- Click **Properties** to display the Properties sheet for the selected entry in the Desktop Icons list. This gives you the same information you see after selecting an icon in My Computer or Windows Explorer and choosing Properties from the File menu.

- **Double Click**—Enter, or click the Up/Down arrow buttons to select, the hot zone size in pixels for double-clicking. The *hot zone* is the number of pixels you can move the mouse when double-clicking before Windows assumes you are not clicking twice. This is *not the speed* of the double-click, which you set in the Mouse control panel. Rather, this is the distance you can move the mouse in between the two clicks. The higher the number, the larger the hot zone—and more movement is allowed during the double-click.
- **Drag**—Enter, or click the Up/Down arrow buttons to select a number that indicates the mouse sensitivity for dragging objects on the desktop. The higher the number, the longer the pause before an object begins following the Arrow pointer when you drag. This lets you move the mouse a bit when selecting an object before Windows interprets your action as dragging that object. The lower the number, the faster and more closely an object follows the Arrow pointer when you begin dragging it.

✦ **TIP:** If the Drag mouse sensitivity number is set very low, and you slightly move the mouse while clicking an application icon (in Windows Explorer or My computer) to select that icon, Windows will interpret your action as *dragging instead of selecting* the icon. If this happens, a shortcut icon for the application is created instead of the icon being highlighted, which indicates it is selected.

- **Auto Play**—Select the check boxes to have Windows to begin playing audio or data CDs automatically when you insert them into your CD drive while the desktop is active.
- **Shortcut Name Display**—Select the Wrap Shortcut Names on Desktop check box if you want long shortcut icon names to wrap to multiple lines rather than extending across a single horizontal line.

Specifying Startup and Start Menu Programs

The Run/Add/Remove tab lets you add, remove, edit, and specify properties for programs that automatically run when you start Windows, and for programs that appear on the Start > Program menu.

The Run/Add/Remove options are:

- **Programs Run Automatically at Windows Startup**—Click Add to add a new program to run automatically at Windows startup. The next time you start Windows, the program starts automatically. These programs will be added to your StartUp folder.

- ✦ **TIP:** Hold down the Shift key immediately after the Windows Starting screen appears (or after logging in) and Windows will skip loading the files in your StartUp folder.
-

Select a program and click **Remove** to remove it from the Windows Startup folder. The next time you start Windows, the program no longer starts automatically.

Select a program and click **Edit** to edit the program's filename or path.

Select a program and click **Properties** to view its Properties sheet. The Properties sheet shows where the program is beginning from: Registry or StartUp.

- **Add/Remove Program Menu**—When you load programs into Windows 95/98, they can register their install program with the Add/Remove Programs control panel. This section shows you which programs are registered this way. When you run Control Panel and open the Add/Remove Programs control panel, you see the same list. If you double-click an item in this list, it runs the associated Setup program, which generally allows you to add or remove features of the program. For example, the Microsoft Office Add/Remove option would allow you to remove Office components, or add ones that you originally did not install. This EZ Setup screen lets you view or modify all registered install/deinstall utilities.

Specifying Send To Menu Commands

The Send To tab lets you add, remove, edit, and select properties for the commands that appear on the File > Send To menu. The Send To menu is also sometimes available in the context-sensitive pop-up menu that appears when you Right-click the mouse button, such as when you point to an icon in My Computer. Commands on the Send To menu specify locations where you want to send the files you've selected in a drive or volume window that is open inside My Computer or Windows Explorer. For example, you might add an application or folder to the Send To menu.

The Send To options are:

- Click **Add** to add a new program to the File > Send To menu, available in a drive window you open in My Computer.
- Select a program and click **Remove** to remove it from the File > Send To menu.
- Select a program and click **Edit** to change the program's name in the Send To Locations list, which is how the corresponding command will appear in the Send To menu.

- Select a program and click **Properties** to view its Properties sheet.

Customizing the Context Menu

The Context Menu tab lets you disable, enable or delete commands in the top section of the Windows Context menu. You cannot remove the Open, Edit or Print commands, and you cannot add any commands to the top section of the Context menu.

The *Context* menu is the pop-up menu that appears when you right-click an object or the empty portion of a window. The Context menu for a file usually consists of several sections containing commands, with sections divided by a horizontal separator bar. The first command in the top section is generally **Open**, where the bold type indicates the default choice. The default is the command performed when you double-click the file icon. There are usually other Context menu commands in the first section, such as Edit, Print, Debug, Quick View and so on.

The actual list of commands in the top section of a Context menu is determined by the file's extension, and a context menu handler performs the action specified when a particular command is selected. EZ Setup's Context Menu tab displays the relationship among file types, Context menu commands, and Context menu handlers from two different viewpoints. The default viewpoint, is to show all the Context menu handlers (except those for Open, Edit or Print) as root nodes of a hierarchical tree.

Disabling or Enabling a Context Menu Handler

To disable a particular Context menu handler, expand its node by clicking the Plus sign or double-clicking the icon. The child nodes revealed indicate the Context menu commands performed by that particular Context menu handler. Some Context menu handlers perform only one command, whereas others perform several.

In most cases, each Context menu command has a check box beside it. By selecting or deselecting the check box, you can enable or disable each command performed by a Context menu handler. For different file types, a different Context menu handler can perform the same command. To disable a particular Context menu command for more than one file type, you must disable it separately for each file type.

Some Context menu commands have a folder icon next to them, instead of a check box. This is the case when the same Context menu handler is used to perform the same Context menu command on more than one file type. In this case, expand the node to reveal the various file types that the option

applies to and select or deselect them individually. If a Context menu command has a check box next to it, its corresponding Context menu handler only performs that command on one file type. You can expand the Context menu command node to reveal the particular file type.

To view or disable all the Context menu commands for a particular file type irrespective of which context menu handler performs them, click the By File Type radio button. This causes the registered file types to display as root nodes of a hierarchical tree. You can then expand the node of the file type you are interested in to display all the Context menu commands (except Open, Edit or Print) for the top section of the Context menu associated with that file type.

Then you can select or deselect the check boxes as in the default viewpoint, and the two viewpoints remain consistent with each other. Each Context menu command node can be further expanded to reveal the Context menu handler that performs a command for a particular file type.

Removing a Context Menu Command

In addition to disabling and enabling Context menu commands, EZ Setup allows them to be permanently removed from the Windows Registry.

NOTE: Permanently deleting Context menu commands is not recommended unless you are positive that you will never use them. A warning message appears to let you confirm these deletions before they happen.

You can remove a Context menu command either by clicking the Remove button or by right-clicking the command and choosing Remove from the EZSetup Context menu.

NOTE: EZSetup Context menus cannot be modified by EZSetup.

After you remove a Context menu command in this way, it can only be restored by the application that inserted the command in the Context menu originally (or by hacking at the Windows Registry). On the other hand, you can easily restore commands whose check boxes you deselect using EZSetup.

Specifying Nuts & Bolts Enhancements

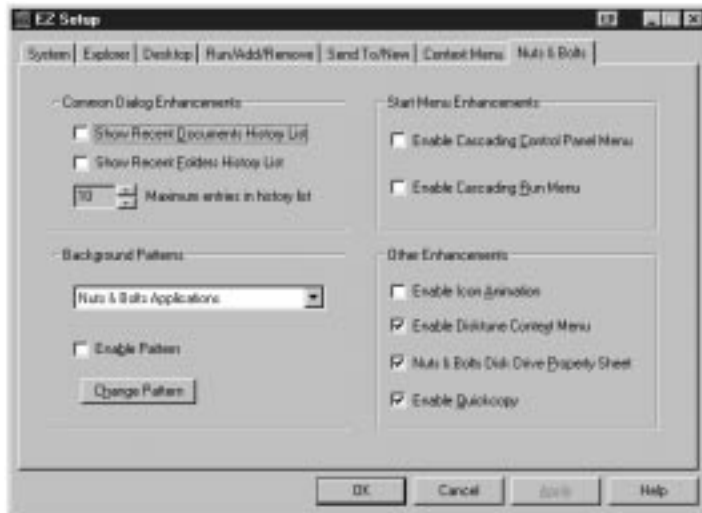


Figure 2. The Nuts & Bolts tab

The Nuts & Bolts tab lets you enable and configure the following Nuts & Bolts enhancements:

Common Dialog Enhancements

- **Show Recent Documents History List**—Adds a button at the top right corner of the standard Open dialog box. When you click this button, a list appears of the recent documents the program has opened.
- **Show Recent Folders History List**—Adds a button at the top right corner of the standard Open dialog box. When you click this button, a list appears of folders that contain files recently opened by the program.

Start Menu Enhancements

- **Enable Cascading Control Panel Menu**—Displays the Control menu in a cascading menu. The Control menu is available when you click the top left icon in a window's Title bar.
- **Enable Cascading Run Menu**—Adds a cascading menu to the Run dialog box that shows the most recent commands performed using the Run dialog box.

Background Pattern

- **Enable Background Pattern**—The background pattern lets you specify a pattern for Wizard windows and dialog boxes in Windows.
- **Select Background**—Shows a standard Open dialog box where you can select the bitmap (BMP file) to use for the background.

Other Enhancements

- **Enable Icon Animation**—animates desktop icons.
- **Enable Disktune Context Menu**—adds access to Disk Tune from the Windows Explorer Context menu. To use Disk Tune via the Context menu, open Windows Explorer, select a disk drive and click the right mouse button. Then choose the Defragment command from the Context menu.
- **Nuts & Bolts Disk Drive Property Sheet**—to access this Property sheet, open Windows Explorer, select a disk drive and click the right mouse button. Choose Properties from the Context menu and click the Nuts & Bolts tab.
- **Enable Quickcopy**—adds Quickcopy to the Windows Explorer Context menu.

Launch Pad



Launch Pad is a simple and efficient way for you to access programs, files and folders without either cluttering up your desktop with numerous icons, or wading through the Start and Program menus to locate and open the applications you want to work with.

You can drag application, document and folder icons into Launch Pad, and rearrange or delete them in the Launch Pad window. A Launch Pad window can contain any icon (such as an application, document or folder icon) that you want to open with a single mouse click.

Starting Launch Pad



To start Launch Pad, click the Launch Pad icon on your desktop, or choose the Launch Pad command from the Start > Programs > Nuts & Bolts 98 menu. An empty Launch Pad appears, which is a small window.

Adding, Updating and Removing Icons



You can add icons to Launch Pad by dragging an application icon, folder or file from its location on the desktop, Windows Explorer, or My

Computer into Launch Pad. Or you can right-click an empty area in the Launch Pad window and use the New command to create a new icon.

To remove an icon, Right-click the icon and choose the Remove command from the Launch Pad menu.

Manipulating the Launch Pad Window

You can interactively customize a Launch Pad window by resizing it or its icons, rearranging icons in Launch Pad by dragging them, docking/undocking Launch Pad, and having Launch Pad *hide* until you need it.

Hiding and Showing Launch Pad

You can hide Launch Pad and restore it to your desktop in two different ways. If you want to use Launch Pad to launch an application and then have Launch Pad disappear from your desktop, Right-click in the Launch Pad and choose Hide LaunchPad from the Global menu.

To show Launch Pad, double-click the Launch Pad icon in the taskbar icon tray. Once you have started an application by double-clicking it, Launch Pad hides again.

The Enable Auto Hide command lets you hide a docked Launch Pad. Once auto hidden, Launch Pad reappears if you point to the edge of the desktop. It hides again if you move the pointer away from the edge.

To restore Launch Pad permanently, Right-click and choose the Disable Auto Hide command from the Global menu.

Docking & Undocking Launch Pad

Docking locks Launch Pad to the nearest edge of your desktop, where it will remain as an uppermost Window (just like your taskbar).

To dock Launch Pad, drag Launch Pad close to any edge of the desktop where you want it to be docked. Then point inside the Launch Pad window and Right-click. Choose the Dock Launch Pad command from the Global menu, and Launch Pad snaps to the edge of the desktop.

To undock Launch Pad, Right-click and choose the Undock Launch Pad command from the Global menu.

While Launch Pad is docked, you can temporarily hide Launch Pad by enabling the Auto Hide feature (choose the command from the Global menu). To see Launch Pad, you just have to point to the edge of the

desktop. To show Launch Pad again, choose the Disable Auto Hide command from the Global menu.

Resizing the Launch Pad Window

You can change the shape of the Launch Pad by dragging one of its corners or edges. As you resize the window, the number of rows and columns of icons changes, but their order and size remain the same.

Resizing Icons in Launch Pad

You can resize Launch Pad and all the icons inside the window by holding down the CTRL key as you drag the corner or edge of the Launch Pad window. As you resize, the sizes and dimensions of the icons adjust to fit your new Launch Pad window.

Saving and Loading Settings

Launch Pad lets you save your settings by choosing the Settings > Save or Save As from the Launch Pad menu. The Launch Pad filename uses a file extension of .LPD. You can reload these settings using the Settings > Load command.

Changing Launch Pad Properties

You can customize the appearance and text of an individual icon, or make global changes to icon dimensions, fonts and Bubble Help, through the tabs in the Properties sheet. These, and other commands that you access from Launch Pad, work the same way as those that you use for customizing WinGauge.

McAfee Fortress




McAfee Fortress lets you encrypt sensitive files so that unauthorized people cannot access them. This is particularly useful if you keep personal or sensitive data on your system, or if you want to send files to another person, such as electronically over the Internet. You can have McAfee Fortress as an icon on your desktop, and drag files into the icon for encryption. McAfee Fortress automatically opens when you drag files into it.

About Encryption

Encryption is the ciphering of information to convert plain text to cipher text. During encryption, McAfee Fortress uses an algorithm (your choice of Blowfish or DES) and a secret key to produce pseudorandom bit sequences that are combined with the plain text in the file to produce cipher text.

The person who receives the encrypted cipher text file uses the same algorithm and key to decrypt the information. Decryption reverses the process—in what is called *symmetric encryption* (which means the same algorithm and key are used to encrypt and decrypt a file)—by subtracting the same pseudorandom bit sequences to restore the original file.

 **IMPORTANT:** Is encryption legal? Yes. However, the U.S. government places strict export controls on encryption software. Network Associates, Inc. has developed an export version of McAfee Fortress, licensed by the U.S. Department of Commerce.

McAfee Fortress lets you send an encrypted file to someone else, even if they don't use McAfee Fortress. You can do this by building a self-decrypting executable (.EXE) file. A self-decrypting file has a decrypting program, together with the encrypted document. When you run the program, it asks for the password and then decrypts the file if the correct password is given.

McAfee Fortress Password Protection

Both McAfee Fortress and the files you encrypt using McAfee Fortress are protected with a password you create. McAfee Fortress passwords are case sensitive, which means that uppercase letters are not the same as lowercase letters. So a password of ocean5sea is different than OCEAN5sea or OCEAN5SEA. You must remember not only your passwords, but the case you used to originally enter them. McAfee Fortress encourages you to verify the password and its case by asking you to confirm it (enter it twice) when you first define it.

You *should not share* your McAfee Fortress password with anyone else, and you should only share the password to an encrypted file with that file's recipients. When you send an encrypted file to someone, you also need to send them the password for the file. Send a file's password separately from the encrypted file.

Choose your passwords carefully, making sure you do not use a password that another person might easily guess. Using people's names, pet's

names, hobbies, or other familiar words are not recommended. For example, if your office walls are adorned with pictures of *Porsches*, you would not want to use *Porsche* as your McAfee Fortress password. Furthermore, it is a good idea to mix letters, numbers and symbols, such as an exclamation point (!), dollar sign (\$) or ampersand (&), in your passwords, making them more difficult to guess. The ultimate password is one that is a random mix of letters, numbers and symbols, though that is harder to remember. Also, a longer password is better than a shorter one, and we recommend that you use at least 8 characters for passwords, however using 12 characters gives you even better protection.

Encrypting a File

You can encrypt a file to protect it. *Encryption* is ciphering information using an algorithm and a key to convert plain text to cipher text.

To encrypt a file:

✦ **TIP:** You can click the Properties button to select McAfee Fortress properties before you begin encrypting a file.

1. Select the Encrypt a File radio button and click the Next > button.
2. Enter the path to one or more files to encrypt or click the Browse button to select files to encrypt. Then click the Next > button.
3. Enter a password for the file you are encrypting, and type the password again to confirm it.
4. Click Finish.

When the files have been encrypted, McAfee Fortress closes and returns you to the desktop.

Decrypting a File

You can decrypt files that have been encrypted with McAfee Fortress. *Decryption* is the conversion of encrypted text into regular text using mathematical equations to reverse the encryption process.

To decrypt a file:

1. Select the Decrypt a File radio button and click the Next > button.
2. Enter the path to one or more files to decrypt or click the Browse button to select files to decrypt. Then click the Next > button.

3. Enter the password specified when the encrypted files were created.
4. Click Finish.

When the files have been decrypted, McAfee Fortress closes and returns you to the desktop.

Building a Self-Decrypting Executable File

You can build a self-decrypting executable file (an EXE file) using McAfee Fortress. This ensures that you or other people can decrypt the file (if they enter the correct password) even if McAfee Fortress is unavailable.

To build a self-decrypting executable file:

1. Select the Build a Self Decrypting Executable radio button and click the Next > button.
2. Enter the path to one or more files to encrypt or click the Browse button to select files to encrypt.
3. Click the Advanced button to specify self-decrypting file properties if you want.

The Advanced options let you customize the behavior of the self-decrypting application. For more details, see [Selecting Self-Decrypting File Properties on page 107](#).

4. Specify options you want for the self-decrypting file and click OK.
5. Click the Next > button.
6. Enter a filename and path for this self-decrypting executable file and click Next >.

You can also click Browse to select a path for storing this file.

7. Enter a password for the file you are encrypting, and type the password again to confirm it.
8. Click Finish.

When the self-decrypting files have been encrypted, McAfee Fortress closes and returns you to the desktop.

Selecting McAfee Fortress Properties

You can select properties for encryption, file deletion and the desktop.

To select McAfee Fortress properties:

1. Click the Properties button.
2. Select properties you want to use and click Apply. Then click OK.

Your options are:

- **Algorithm**—Select either the Blowfish or DES (Digital Encryption Standard) *cipher*, or algorithm.

Designed by Bruce Schneier (schneier@counterpane.com), Blowfish, the newer and faster algorithm, is a block cipher with a variable length key, designed for 32-bit computers.

DES is a 56-bit encryption standard developed by IBM under the auspices of the U.S. Government. DES uses the 56-bit key to perform a series of nonlinear transformations on a 64-bit block of data. Triple DES encrypts a file using three passes of DES with variations of the key, which makes it the slowest algorithm. However, it is the most tested algorithm and is likely to be the most secure.

- **Key Length**—McAfee Fortress selects a default key length for the currently selected algorithm. The longer the key length, the more secure (but somewhat slower) the encryption.
- **Compress Before Encrypting**—Select this check box if you want McAfee Fortress to compress a file before encrypting it. This is a good idea if you plan to electronically send a file to someone because it reduces transmission time and cost. If you are encrypting a file that is already compressed, you can deselect this option.
- **File Deletion**—Select what you want McAfee Fortress to do with the original files after it finishes encrypting them, if anything. Your options are to: keep the original files after encryption, delete the originals, or shred the originals. If you shred the original files, you can also select whether to use a Shred Level of Quick or U.S. Government Multipass, which makes seven passes of shredding.
- **Desktop**—Select whether you want the McAfee Fortress icon to appear on your desktop (this lets you quickly drag and drop selected files onto the icon to encrypt or decrypt them). You can also select to add the McAfee Fortress command to the Send To menu.

Selecting Self-Decrypting File Properties

McAfee Fortress lets you specify file properties for the self-decrypting files you build. These include a text caption, a main text description, what icon to use for the file, and other settings. The other settings let you make self-decrypting files that:

- Prevent the user from changing the destination where the decrypted files are placed.
- Let the user view the contents of the files.
- Always overwrites earlier versions of the same file.
- Automatically decrypts files.
- Executes a command (that you specify in the Command Line text box) after the decryption is complete.
- Decrypts to either the current or a temp directory.

McAfee Shredder



When you save a file in Windows, it is stored in multiple pieces (in clusters made up of multiple sectors) on the disk. Windows also saves a roadmap, or index, that points to these clusters in two copies of the FAT (File Allocation Table). The FAT contains the directions to all the pieces of your files, so that applications can find them again later.

When you delete a file, all the information stored in that file is not actually erased from your disk. Instead, Windows simply frees the clusters where the file was stored, making those locations available in the FAT. Thereafter, applications can write new information to those clusters. This means that all or part of your files can be reconstructed even after you delete them. Undelete programs can reconstruct a deleted file very easily, especially immediately after you delete the file and before you save any new information that might be written over the deleted file's contents.

For privacy and security reasons, you may want to be positive that the information stored in files you delete is permanently erased from your computer. McAfee Shredder does this for you by "security wiping" deleted files so they cannot be restored or rebuilt using undelete utilities. Unlike other file security erase programs, McAfee Shredder erases even the filename and the compressed data on DriveSpace drives. Note that it is not possible to shred network files, or files compressed with compression other than DriveSpace in an absolutely secure manner.

- ✦ **TIP:** You can select McAfee Shredder properties to specify the shredding level to perform. You can select Quick, which shreds the information once, or U.S. Government Multipass, which makes seven passes of repeatedly erasing the data.
-

McAfee Shredder also lets you completely erase other critical non-file information that might still be accessible on your disk. The non-file data on your disk is the free disk space, file slack, and deleted filenames. When you shred a file, McAfee Shredder erases this non-file data for the file you shred. However, this information can still be accessible for other files you've deleted in the past. When you are working with files, Windows creates and deletes temporary copies of your work. To be certain that no left-over, confidential items are hiding in the free space on your drive, you may want to periodically shred the non-file data. When you do this, you can no longer undelete previously deleted files.

Free disk space is the amount of currently available disk space on your hard drive. It can contain information from files you've saved and then deleted in the past.

Windows allocates storage space in clusters of sectors that have a predetermined size. However the files you save rarely use all the storage space reserved for them. The extra, unused storage space reserved for a file, but not used, is called *file slack*. Like free disk space, the file slack may contain old data from files you've deleted in the past.

In Windows 95, filenames can be up to 255 characters long. This means you may have entered sensitive information as part of a filename. And just as Windows does not actually erase data in a file when you delete it, it does not erase the filenames of deleted files either. McAfee Shredder can erase these deleted filenames for you.

Shredding Selected Files

You can shred files using drag and drop, which is a fast way if all the files are centrally located. Or if the files are in several places, you can shred them by starting McAfee Shredder and selecting the files to erase.

To shred files using drag and drop:

1. Select files in My Computer or Windows Explorer and drag them onto the McAfee Shredder icon on the desktop.

If you have selected the McAfee Shredder properties option to Prompt Before Shredding, a message appears listing the first file you dragged onto the McAfee Shredder icon. It asks you to confirm that you want to shred this file.

2. Do one of the following:
 - Click OK to shred the listed file. Repeat this step for each file.
 - Click OK to All if you're positive you want to shred all the files you dragged onto the McAfee Shredder icon.
 - Click Skip to not shred the listed file and continue selecting whether to shred any other files you dragged onto the McAfee Shredder icon.
 - Click Cancel to return to the desktop without shredding the listed file or any others you dragged onto the McAfee Shredder icon.

To shred files in the McAfee Shredder:

1. Select the Select a File to Erase radio button and click Next >.
2. Do one of the following:
 - Enter a path for one or more files to erase, separating each path with a space character.
 - Click the Browse button to locate one or more files to select. Select one or more files and click Open.

✦ **TIP:** To select multiple adjacent files, hold down the **SHIFT** key while clicking filenames. To select multiple non-adjacent files, hold down **CTRL** while clicking.

3. Click the Finish button.

If the Prompt Before Erasing check box is deselected in the McAfee Shredder Properties dialog box, McAfee Shredder erases the files, closes, and returns to the desktop.


If the Prompt Before Erasing check box is selected, a confirmation message appears. Go to [Step 4](#).

4. Do one of the following:
 - Click OK to shred the listed file. Repeat this step for each file.
 - Click OK to All if you're positive you want to shred all the specified files.
 - Click Skip to not shred the listed file and continue selecting whether to shred any of the remaining files you specified.

- Click Cancel to return to the desktop without shredding the listed file or any others you specified.

Shredding Non-File Data

You can shred non-file data, which is any combination of free disk space, file slack, or deleted file names, at any time. Most likely, you'll want to do this after you install Nuts & Bolts 98. If you always use McAfee Shredder instead of deleting files in Windows, this non-file data will be shredded as part of each file you shred. So if you sometimes delete files, you'll want to periodically shred the non-file data again.

 **IMPORTANT:** After you shred non-file data, you will not be able to undelete any deleted files that utilized this information.

To shred non-file data:

1. Select the Erase Non-File Data radio button and click Next >.
2. Select the information to erase (any combination of Free Disk Space, File Slack, and Deleted File Names).
3. Select the drive where you want to erase the selected non-file data and click Next >. Then click Finish.

A message appears showing you how the non-file data erasure is progressing. When the process is complete, McAfee Shredder closes and returns you to the desktop.

McAfee Zip Manager



A *zip file* is a file that has been compressed and which, therefore, takes up less space than it did in its original, decompressed form. A zip file can contain one or more files. That is, you can group together several files and zip them to form a single, zipped file.

The Nuts & Bolts 98' McAfee Zip Manager is a complete zip management utility that you can use in two ways: via ZipMan Wizard or the advanced McAfee Zip Manager.

ZipMan Wizard provides you with all the zip file management features you will normally use. It takes you, step by step, through the process of zip file creation and extraction.

Advanced McAfee Zip Manager is more suited to people who are experienced with manipulating files, to those who want to work

independently of a Wizard, or to those who want to take advantage of McAfee Zip Manager's advanced capabilities, some of which are not accessible from ZipMan Wizard.

McAfee Zip Manager can become an integral part of your Windows file management operations. You can drag files from any location directly into the McAfee Zip Manager icon, and you can Right-click a file, and choose McAfee Zip Manager from Windows 95/98's Send To menu to send that file directly to McAfee Zip Manager.

Zip Files

There are three good reasons why you would want to create zip files. First, zipping files (especially those that you don't use often) is an effective way of reclaiming hard disk space. In general, a zipped file takes up about half as much space as its unzipped counterpart.

Second, zipping is a good way to create, manage and store collections of related files as archival back-ups. By grouping files, zipping them as a single file, and transferring them to a 3.5-inch disk (or other drive) you can create archive back-ups of data without tying up large amounts of disk space.

Third, you can efficiently share zipped files with other people. Most of the larger files you download from the Internet are zipped, so you can download them quickly. And by zipping files, you can use one or more 3.5-inch disks to transfer large amounts of data between computers.

McAfee Zip Manager also lets you create self-extracting zip files, which are especially helpful if you share zip files with other people who may not have Nuts & Bolts 98's McAfee Zip Manager or another program to unzip the files. A self-extracting zip file contains the decompression portion of the McAfee Zip Manager and enables the zip file to extract itself on another computer.

-
- ✦ **TIP:** When you use the Cleanup Wizard to perform file maintenance, one of your options is to zip files. This allows you to compress files first rather than shredding, moving, recycling, or deleting them. Zipping files you want to dispose of is a good way to verify that none of the files are ones you actually need before permanently removing them from your system.
-

ZipMan Wizard

ZipMan Wizard provides an easy way to use a Wizard-style interface to perform the most common tasks. If you do not regard yourself as an advanced user of Windows utilities, you will find that ZipMan Wizard lets you perform almost all the zip file management tasks you ever need, including creating zipped archives, creating self-extracting zip archives, adding to zip archive files, unzipping files, and so on. ZipMan Wizard also lets you make a default association with Windows Explorer. That is, you can simply double-click any zipped file in Explorer to have ZipMan Wizard automatically unzip that file and place the extracted file in any directory you specify.

And, you can drag files from any location into the ZipMan icon on your desktop, just like you drag files that you no longer want into the Windows Recycle Bin. After you drag zipped or unzipped files into the ZipMan Wizard icon, ZipMan Wizard automatically opens with those files ready for you to zip or unzip them.

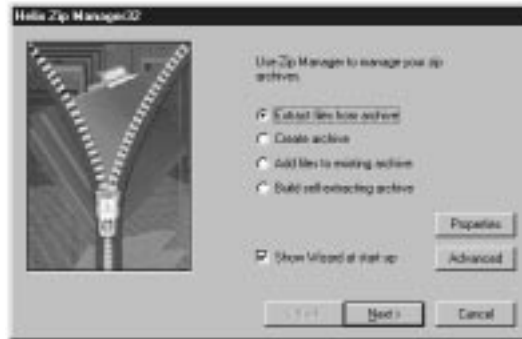
Advanced McAfee Zip Manager

If you are an advanced Windows utilities user, you may want to use the advanced McAfee Zip Manager. The advanced McAfee Zip Manager provides a file manager-like interface that lets you perform more advanced tasks, such as deleting a file from a zip archive, verifying the integrity of a zip archive, adding zip archive comments to files, and so on.

Using ZipMan Wizard

You can use the ZipMan Wizard to perform four separate zip file management tasks:

- **Extract Files from archive**—lets you unzip files (either from your zip archives or from another source) and save them to your specified directories.
- **Create archive**—lets you create zip archives in any directories and specify which files you want to zip and place in these archives.
- **Add files to existing archive**—lets you zip files and place them in existing archives.
- **Build self-extracting archive**—lets you convert an existing archive, containing one or more zipped files, into an unzipping program that can decompress the files without the use of McAfee Zip Manager or another unzip program.



Selecting McAfee Zip Manager Properties

You can specify the properties that you want McAfee Zip Manager to have. The properties that you select apply to both ZipMan Wizard and advanced McAfee Zip Manager, but you can override some of these properties if you are working in advanced McAfee Zip Manager.

Setting Explorer and Startup Options

The General tab in the McAfee Zip Manager Properties sheet offers the following options:

- **Make default association**—allows you to have McAfee Zip Manager as your default zip utility. If McAfee Zip Manager is your default, you can unzip zipped files in Windows Explorer, simply by double-clicking them.
- **Add to Send To menu**—adds McAfee Zip Manager to the Windows' Send To menu. You can Right-click a file in Windows Explorer and use the Send To > ZipMan command to send the file to McAfee Zip Manager.
- **Install Desktop Icon**—places a ZipMan icon on the desktop, allowing you to open McAfee Zip Manager from your desktop, and drag files into the ZipMan icon for zip file management.

Setting Compression and Source Location Options

The Zip tab in the McAfee Zip Manager Properties sheet offers these options:

- **Compression Options**—There are three compression options: Save Folder Information, Save Current Folder, and Recurse Folders. If none of these check boxes are selected, any files you zip, regardless of which folder (or directory if you are using Windows 3.1x) they originate from, will be saved without any folder information. When you unzip these files, they simply appear in the folder where you unzip them.

Save Folder Information—saves the folder name with the files you select. When you unzip these files, McAfee Zip Manager checks whether the same folder names exist as subfolders at the location where you want to place these extracted files. If the subfolders do not exist, McAfee Zip Manager creates them.

Save Current Folder—allows you to group all files using their current folder, so that the folder information is saved even for files added without a folder.

Recurse Folders—allows you to save the files that may exist in any subfolders of the folder where you are currently working. If, for example, you drag a folder called `My Documents` into ZipMan, and if this folder contains files and two subfolders (say one named `Word` and another called `Excel`), setting the Recurse Folders option lets you save the contents of the `Word` and `Excel` folders as well. Used on its own, the Recurse Folders option will not save the sub-folders' paths. When you extract the files, they are all put into the folder you select when you extract them.

You can select any combination of Save Folder Information, Save Current Folder, and Recurse Folders to customize the compression of your files. For example, selecting all three check boxes saves all the files in your current folder and subfolders together with the path information. When you extract these files, the folders and subfolders are created as subfolders of the folder you select for the extraction process.

- **Source of Files to Compress**—these options let you default to a selected folder. You can use these options to accelerate the process of locating the folders where your files are located, especially if you normally store the files you want to compress in a specific folder.

Current Folder—automatically brings up the current folder where you are working.

Archive Folder—lets you default to your specified archive folder—useful if you always keep your 'files-to-be-zipped' in a special folder.

Last Folder—automatically opens the last folder where you were working—useful if you have created or saved files in one of your folders and now want to zip them.

Setting Overwrite, Destination and Other Options

The Unzip Options let you customize the overwrite and extraction features of your zip file management tasks. You can specify whether the extracted files should overwrite existing files with the same name located in the folder where you are placing the extracted files, or whether you want to be notified that files with the same name already exist. You can also establish your default extraction folder as your current folder, the last folder where you were working, or a special, dedicated 'extraction' folder.

Extracting, Archiving or Adding Files

You can easily extract files, create archive files (zip files), and add files to an existing archive (zip the files and add them to a group of existing zipped files). To do this, simply select the applicable radio button in the ZipMan Wizard window and follow the step-by-step on-screen instructions. In each case, ZipMan Wizard walks you through the entire process, helping you identify and select the files you want and the locations where you want to put the final compressed or extracted files.

Building Self-extracting Archives

You can use ZipMan Wizard to build self-extracting archives—zipped files that can be unzipped without the use of an unzip utility. In ZipMan Wizard this is a two-stage process. First you need to identify the zipped files that you want to convert into self-extracting archives, then you create a self-extracting file. You can rename the file to ensure that you keep the original zipped files on your system.

Switching Between the Wizard and McAfee Zip Manager



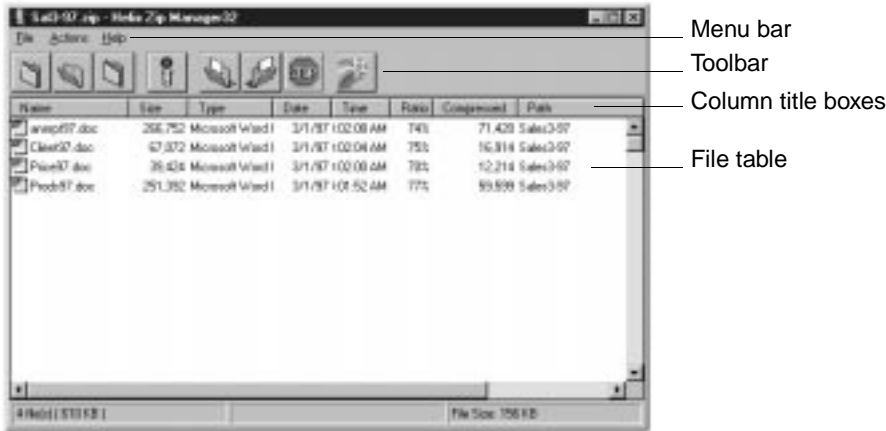
Click the Advanced button in any ZipMan Wizard window to automatically go to the advanced McAfee Zip Manager.



Click the ZipMan Wizard tool button in the McAfee Zip Manager window to instantly go to ZipMan Wizard.

Using Advanced McAfee Zip Manager

Advanced McAfee Zip Manager provides all the capabilities of ZipMan Wizard, plus other, more advanced zip file maintenance features. You would use advanced McAfee Zip Manager if you are a more advanced user, are familiar with archiving and extracting files, and if you want to perform many complex archiving and extraction tasks.



McAfee Zip Manager Tool Buttons

✦ **TIP:** Point to a McAfee Zip Manager tool button and the status bar at the bottom of the window displays a brief description of the tool button's purpose.

The McAfee Zip Manager tool buttons on the toolbar allow you to quickly:

- Create a new archive
- Open an existing archive
- Delete an existing archive
- Obtain information about your current zip archive
- Add files to a zip archive
- Remove files from an archive
- Delete files from the archive
- Switch to ZipMan Wizard

McAfee Zip Manager Menus

As with all Windows programs, the menus let you perform the same actions as the tool buttons, as well as perform more specialized and detailed tasks. In particular, the Make Self-Extracting Archive command—which you can choose from the Actions menu—lets you greatly customize the properties of self-extracting files you build.

McAfee Zip Manager File Table

The File table in the McAfee Zip Manager window displays the files you are currently manipulating. You can select files by clicking them, using standard Windows selection techniques. You can rearrange the columns by dragging the column title boxes left or right to a new location. You can click any column title to sort the files by that information. You can also drag files from any location (such as from Windows Explorer) directly into the McAfee Zip Manager File table—an effective and efficient method of selecting and managing files and archives that follows standard Windows file management conventions.

Quickcopy

Nuts & Bolts 98 Quickcopy lets you copy files and folders from one location to another faster than using Windows Explorer's standard copy methods. Use [EZ Setup](#) to add Quickcopy to the Windows Context menu. For more information, see the [Nuts & Bolts 98 online help](#).

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