



# Emergency Response Manual

For Fix-It Utilities 7 Professional

**Avanquest**

---

USA  
3132 Dwight Road Suite 500  
Elk Grove CA 95758-6469  
USA

[www.avanquestusa.com](http://www.avanquestusa.com)

*Emergency Response Manual*

Copyright ©1998–2006 Avanquest Publishing USA, Inc.

All Rights Reserved.

Fix-It Utilities, VCOM, JETDefrag, PCDiagnosics, SMARTDiskCheck, System Explorers, SystemMonitors, and VirusScanner are trademarks of Avanquest Publishing USA, Inc. Fix-It is used under license from Musick International, Inc. All other trademarks are the property of their respective owners.

The information in this document is subject to change without notice. Companies, names, and data used in examples herein are fictitious unless otherwise noted. No part of this document may be reproduced, transmitted, transcribed, stored in a retrieval system, or translated into a language or computer language, in any form by any means, electronic, mechanical, optical, chemical, manual, or otherwise, for any purpose, without the express written permission of Avanquest Publishing USA, Inc.

Documentation by D. Leatherman and L. Bridgeman.

## AVANQUEST END USER'S LICENSE AGREEMENT

The software that is subject to this End User's License Agreement (EULA) is licensed, not sold, to the Licensee by Avanquest USA.

IF LICENSEE DOES NOT AGREE TO ALL OF THE TERMS AND CONDITIONS OF THIS EULA, THEN WITHIN 30 CALENDAR DAYS AFTER ACQUIRING THE LICENSED SOFTWARE, LICENSEE MAY RETURN IT TO THE PLACE WHERE LICENSEE OBTAINED IT FOR A FULL REFUND (LESS, IF APPLICABLE, SHIPPING, HANDLING, AND ANY TAXES), BUT ONLY IF LICENSEE HAS NOT INSTALLED, ACCESSED, OR USED THE LICENSED SOFTWARE.

Installing, copying, accessing, or using the Licensed Software constitutes Licensee's acceptance of, and promise to comply with, all of the terms and conditions of this EULA.

### LICENSE TERMS

#### CONTENTS.

The "Licensed Software" includes all of the contents of the files, disk(s), CD-ROM(s), DVDs, or other media for which this EULA is provided, including:

- (1) third party computer information or software that Avanquest USA has licensed for inclusion in the Licensed Software;
- (2) written materials or files relating to the Licensed Software ("Documentation");
- (3) fonts; and
- (4) upgrades, modified versions, updates, additions, and copies of the Licensed Software, if any (collectively, "Updates").

#### INSTALLATION.

Licensee may install one copy of the Licensed Software on a single computer. If Licensed Software includes multiple licenses, Licensee may install the number of copies licensed to Licensee by Avanquest. Licensee shall be solely responsible for all expenses incurred in Licensee's installation of the Licensed Software.

#### ACTIVATION.

The Licensed Software contains technological measures that are designed to prevent its unlicensed or illegal use. The Licensed Software may contain enforcement technology that limits Licensee's ability to install and uninstall the Licensed Software on a machine to no more than a finite number of times, and for a finite number of machines.

The Licensed Software may require activation as explained during installation and in the Documentation. If any such applicable activation procedure(s) is not followed, then the Licensed Software may only operate for a finite period of time. If activation is required, and not completed within the finite period of time set forth in the Documentation and explained during installation, then the Licensed Software will cease to function until activation has been completed, at which time functionality will be restored. If Licensee has any problem with the activation process, Licensee should contact Avanquest USA customer support.

#### COPIES.

Licensee may make one copy of the Licensed Software for backup or archival purposes only, except that the Documentation may not be duplicated.

#### TRANSFER.

Licensee may not sell, assign, or transfer the Licensed Software or the License granted by this EULA without prior written consent of Avanquest USA.

## **USE.**

The License granted by this EULA is non-exclusive.

## **PROHIBITED USES.**

- (1) Licensee may not modify, adapt, translate, sublicense, rent, lease, or loan all or any portion of the Licensed Software or Documentation;
- (2) Licensee may not create any derivative works from all or any portion of the Licensed Software or Documentation;
- (3) Licensee may not reverse engineer, decompile, disassemble, or otherwise attempt to discover the source code of the License Software the Licensed Software except, and then: only to the extent expressly permitted by applicable law; after notification to Avanquest USA; upon payment of a reasonable fee; and execution of a confidentiality agreement to protect the code from disclosure to any third parties;
- (4) Licensee may not use a previous version of the Licensed Software after receiving a media replacement or upgraded version as a replacement to a prior version (in such case you must destroy the prior version);
- (5) Licensee may not use the Licensed Software in the operation of aircraft, ship, nuclear facilities, life support machines, communication systems, or any other equipment in which the failure of the software could lead to personal injury, death, or environmental damage;
- (6) Licensee may not remove or obscure Avanquest USA's copyright or trademark notices, or the copyright and trademark notices of third parties that Avanquest USA has included in the Licensed Software or Documentation; and
- (7) Licensee may not use the Licensed Software to host applications for third parties, as part of a facility management, timesharing, service provider, or service bureau arrangement; and
- (8) Licensee may not use the Licensed Software in any manner not authorized by this EULA.

## **CONTENT.**

Licensee may use any clip art, photographs, icons, fonts, shapes, animations, sounds, music, video clips, and all other graphic content (collectively, "Content") included with the Licensed Software, if any, only as stated in the Documentation. If the Documentation does not permit Licensee to use the Content, then Licensee may not display, modify, reproduce, or distribute any of the Content; and even if the Documentation permits Licensee to use the Content, Licensee may not distribute the Content on a stand-alone basis such as where the Content constitutes the primary value of whatever Licensee is distributing.

Certain portions of the Content may consist of the copyrights, trademarks, service marks, trade names, or other intellectual property of third parties. Avanquest USA has provided these portions of the Content for Licensees' convenience in using the Licensed Software, pursuant to authorization of their owners. Except for this limited use, Licensee may not use any third-party intellectual property identified as belonging to others without the owners' express authorization. Furthermore:

- (1) Licensee may not sell, license, distribute (commercially or otherwise), or make available the Content as stand-alone images or sounds, or in catalogs, design books, compilations, collections, templates, designs, stock engravings, products, services, or the like;
- (2) Licensee may not sell, license, distribute (commercially or otherwise), or make available electronic copies of the Content to third parties in any manner, including without limitation, via the Internet, on any tangible media or by broadcast, that is intended or designed to enable a third party to copy the Content for its own use;

- (3) Licensee may not sell, license, distribute (commercially or otherwise), or make available electronic copies of the Content that includes representations of identifiable individuals, governments, logos, initials, emblems, trademarks, or entities that expresses or implies any endorsement or association with any product, service, entity, or activity; and
- (4) Under no circumstances may the Content be used in the production of defamatory, fraudulent, infringing, lewd, obscene, or pornographic material, or in any otherwise illegal manner.

Licensee is solely responsible for Licensee's use of the Content. Licensee may only use the Content responsibly, in a manner consistent with the exercise of good judgment. If Licensee is having difficulty deciding whether Licensee's intended use is appropriate, or whether Licensee needs written permission, or whether other legal issues should be considered, Avanquest USA strongly encourages Licensee to seek competent legal counsel. Avanquest USA will not assist Licensee in making this determination, nor can Avanquest USA provide Licensee with legal advice as to intellectual property rights.

If Licensee or Licensee's attorney determines that Licensee is required by law to obtain written permission to use portions of the Content, Licensee must request permission for reproduction, redistribution, or modification of the Content from the appropriate owner of the subject materials (as may be cited in the Licensed Software). If, on the other hand, Licensee or Licensee's attorney determines it is permissible to proceed and include Content from the Licensed Software, Avanquest USA asks Licensee to correctly designate Avanquest USA's trademark(s) when referring to the Licensed software in the notice or copyright portion of Licensee's paper, project, or product.

Licensee shall indemnify, hold harmless, and defend Avanquest USA and Avanquest USA's suppliers from all claims, damages, attorneys' fees, costs, and lawsuits that arise from, or result from, Licensee's use or distribution of Content.

### **SOFTWARE UPDATES.**

If the Licensed Software is an Update to a previous version, Licensee must possess a valid License to the previous version. Any Update provided to Licensee is made on a License exchange basis such that Licensee agrees, as a condition for receiving an Update, that Licensee will terminate all of Licensee's rights to use any previous version of the Licensed Software. However, Licensee may continue to use the previous version only to assist in transitioning to the Updated version. Once an Update has been released, Avanquest USA may cease support for prior versions, without any notice to Licensee.

### **CONTENT UPDATES.**

Avanquest USA provides updates to the content of some of its software from time to time, including but not limited to, virus definitions, URL lists, rules, and updated vulnerability data. These types of updates are collectively referred to as "Content Updates." Licensee may obtain any such Content Updates during the initial period provided for by the applicable software without additional charge. Licensee may purchase a separate subscription for a specified period of time to continue to receive Content Updates after the initial period expires. Avanquest USA reserves the right to designate specified Content Updates as requiring purchase of a separate subscription at any time, and without prior notice to Licensee, except that any such change will only become effective at the earlier of the expiration of the initial period provided for by the applicable software, or the expiration of the term of a separately paid for subscription.

### **SUPPORT.**

Avanquest USA is not obligated by this EULA to provide Licensee with any technical support services relating to the Licensed Software; however, Licensee may order additional support services for an additional charge as Avanquest USA may offer from time to time during the term of this EULA.

## **LIMITED WARRANTY ON MEDIA.**

Avanquest USA warrants that the media on which the Licensed Software is distributed will be free from defects for a period of 30 days from the date the Licensed Software is delivered to Licensee. If Licensee discovers a defect in the media during this 30-day period, Licensee must then return the defective media to Avanquest USA within 10 calendar days of discovering the defect, and Licensee's sole remedy is to have either the defective media replaced, or at Avanquest USA's sole option, a refund of the money that Licensee paid for the Licensed Software.

## **NO WARRANTY ON LICENSED SOFTWARE.**

The Licensed Software is provided to Licensee "AS IS." Avanquest USA, and Avanquest USA's suppliers, make no warranty as to its use or performance. AVANQUEST USA, AND AVANQUEST USA'S SUPPLIERS, MAKE NO WARRANTIES, CONDITIONS, REPRESENTATIONS, OR TERMS (EXPRESS OR IMPLIED WHETHER BY STATUTE, COMMON LAW, CUSTOM, USAGE, OR OTHERWISE) AS TO ANY MATTER INCLUDING WITHOUT LIMITATION NON-INFRINGEMENT OF THIRD PARTY RIGHTS, MERCHANTABILITY, INTEGRATION, SATISFACTORY QUALITY, OR FITNESS FOR ANY PARTICULAR PURPOSE, EXCEPT FOR, AND TO THE EXTENT, THAT A WARRANTY MAY NOT BE EXCLUDED OR LIMITED BY APPLICABLE LAW IN LICENSEE'S JURISDICTION.

## **LIMITATION OF LIABILITY.**

IN NO EVENT WILL AVANQUEST USA, OR AVANQUEST USA'S SUPPLIERS, BE LIABLE TO LICENSEE FOR ANY DAMAGES, CLAIMS, OR COSTS WHATSOEVER, OR FOR ANY CONSEQUENTIAL, INDIRECT, INCIDENTAL DAMAGES, OR ANY LOST PROFITS OR LOST SAVINGS, EVEN IF A REPRESENTATIVE OF AVANQUEST USA OR ONE OF AVANQUEST USA'S SUPPLIERS HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH LOSS, DAMAGES, CLAIMS, OR COSTS, OR FOR ANY CLAIM BY ANY THIRD PARTY. THESE LIMITATIONS AND EXCLUSIONS APPLY TO THE EXTENT PERMITTED BY APPLICABLE LAW IN LICENSEE'S JURISDICTION. THE AGGREGATE LIABILITY OF AVANQUEST USA, AND AVANQUEST USA'S SUPPLIERS, UNDER OR IN CONNECTION WITH THIS EULA, SHALL BE LIMITED TO THE AMOUNT PAID FOR THE LICENSED SOFTWARE, IF ANY.

## **ADDITIONAL TERMS FOR BETA SOFTWARE.**

If the Licensed Software that Licensee receives with this EULA is pre-commercial release or "BETA" software ("Pre-release Software"), then, to the extent that any provision in this section is in conflict with any other term or condition in this EULA, this section supersedes such conflicting term(s) and condition(s) as to the Pre-release Software, but only to the extent necessary to resolve the conflict.

Licensee acknowledges that the Pre-release Software does not represent the final product from Avanquest USA, and may contain bugs, errors, and other problems that could cause system or other failures and data loss. Consequently, Avanquest USA disclaims any warranty or liability obligations to Licensee of any kind whatsoever.

IN APPLICABLE JURISDICTIONS WHERE LIABILITY CANNOT BE SO EXCLUDED FOR PRE-RELEASE SOFTWARE, BUT MAY BE LIMITED, AVANQUEST USA'S LIABILITY, AND THAT OF ITS SUPPLIERS, SHALL BE LIMITED TO THE TOTAL OF FIFTY DOLLARS (U.S. \$50.00).

Licensee acknowledges that Avanquest USA has not promised or guaranteed to Licensee that the Pre-release Software will be announced or made available to anyone in the future, and that Avanquest USA has no express or implied obligation to Licensee to announce or introduce the Pre-release Software. Avanquest USA may decide not to introduce a product similar to, or compatible with, the Pre-release Software. Accordingly, Licensee acknowledges that any research or development that Licensee performs regarding the Pre-release Software, or any product associated with the Pre-release Software, is done entirely at Licensee's own risk.

During the term of this EULA, if requested by Avanquest USA, Licensee will provide feedback to Avanquest USA regarding testing and use of the Pre-release Software, including error or bug reports.

If Licensee has been provided the Pre-release Software pursuant to a separate written agreement, then Licensee's use of the Pre-release Software is also governed by that agreement. Notwithstanding anything in this EULA to the contrary, if Licensee is located outside the United States, Licensee will return or destroy all unreleased versions of the Pre-release Software within 30 days of the completion of Licensee's testing of the Pre-release Software if that date is earlier than the date scheduled for Avanquest USA's first commercial shipment of the publicly released (commercial) Software.

### **SURVIVAL OF DISCLAIMERS.**

The exclusions of warranties and liability limitations shall survive the termination of this EULA, howsoever caused; but this survival shall not imply or create any continued right to use the Licensed Software after termination of this EULA.

### **EXPORT RULES.**

Licensee shall not ship, transfer, or export Licensed Software into any country or use Licensed Software in any manner prohibited by the United States Export Administration Act or any other export laws, restrictions, or regulations (collectively the "Export Laws.") If the Licensed Software is identified as export controlled items under the Export Laws, Licensee represents and warrants that Licensee, and Licensee's employees who will use the Licensed Software are not a citizen, or otherwise located within, an nation embargoed by the United States (including without limitation: Iran, Syria, Sudan, Cuba, and North Korea), and that Licensee, and Licensee's employees who will use the Licensed Software, are not otherwise prohibited under the Export Laws from receiving the Software. All rights to use the Licensed Software are granted on condition that Licensee complies with the Export Laws, and all such rights are forfeited if Licensee fails to comply with the Export Laws.

### **GOVERNING LAW.**

This EULA is subject to, and will be governed by and construed in accordance with the substantive laws in force of:

- (1) the State of California, if the Licensed Software is obtained when the Licensee is in the United States, Canada, Mexico, or Chile; or
- (2) the applicable law of any other jurisdiction if the Licensed Software is obtained in any location not described in (1), but only to the extent the law of the other jurisdiction conflicts with California Law.

Unless prohibited by law of an applicable jurisdiction, the courts of the State of California shall have exclusive jurisdiction over all disputes relating to this EULA. This EULA will not be governed by the conflict of law rules of any jurisdiction, or the United Nations Convention on Contracts for the International Sale of Goods, the application of which is expressly excluded.

### **INTELLECTUAL PROPERTY OWNERSHIP.**

The Licensed Software and any authorized copies that Licensee makes are the intellectual property of, and are owned by, Avanquest USA, and by third parties whose intellectual property has been licensed by Avanquest USA. The structure, organization, and code of the Licensed Software are the valuable trade secrets and confidential information of Avanquest USA and such third parties. The Licensed Software is protected by law, including without limitation, the copyright laws of the United States and other countries, and by international treaty provisions. Except as expressly provided in this EULA, Licensee is not granted any intellectual property rights in the Licensed Software.

### **RESERVATION OF RIGHTS.**

Avanquest USA reserves all rights not expressly granted to Licensee by this EULA. The rights granted to Licensee are limited to Avanquest USA's intellectual property rights, and to the intellectual property rights of third parties licensed by Avanquest USA, and do not include any intellectual property rights.

## **COMPLETE AGREEMENT.**

This EULA constitutes the entire agreement between the Licensee and Avanquest USA relating to the Licensed Software, and it supersedes all prior or contemporaneous representations, discussions, undertakings, communications, agreements, arrangements, advertisements, and understandings regulating to the Licensed Software.

## **MODIFICATION.**

This EULA may only be modified or amended by a writing signed by an authorized officer of Avanquest USA.

## **SEVERABILITY.**

If any provision of this EULA is determined by a court of competent jurisdiction to be contrary to law, that provision will be enforced to the maximum extent permissible, and the remaining provisions of this EULA will remain in full force and effect.

## **WAIVER.**

No failure or delay by Avanquest USA in exercising its rights or remedies shall operate as a waiver unless made by specific written notice. No single or partial exercise of any right or remedy of Avanquest USA shall operate as a waiver or preclude any other, or further, exercise of that, or any other right, or remedy.

## **U.S. GOVERNMENT USERS.**

The Licensed Software and Documentation are “Commercial Items,” as that term is defined at 48 CFR §2.101, consisting of “Commercial Computer Software” and “Commercial Computer Software Documentation,” as such terms are used in 48 CFR §12.212 or 48 CFR §227.7202, as applicable. Consistent with 48 CFR §12.212 or 48 CFR §§227.7202-1 through 227.7202-4, as applicable, the Commercial Computer Software and Commercial Computer Software Documentation are being licensed to U.S. Government end users:

- (1) only as Commercial Items; and
- (2) with only those rights as are granted to all other end users pursuant to the terms and conditions herein.

Unpublished-rights reserved under the copyright laws of the United States. Avanquest Publishing USA, Inc.; 3132 Dwight Road, Suite 500; Elk Grove, CA 95758-6469, USA.

For U.S. Government End Users, Avanquest USA agrees to comply with all applicable equal opportunity laws including, if appropriate, the provisions of Executive Order 11246, as amended, Section 402 of the Vietnam Era Veterans Readjustment Assistance Act of 1974 (38 USC 4212), and Section 503 of the Rehabilitation Act of 1973, as amended, and the regulations at 41 CFR Parts 60-1 through 60-60, 60-250, and 60-741. The affirmative action clause and regulations contained in the preceding sentence shall be incorporated by reference in this EULA.

## **PROOF OF COMPLIANCE.**

Within 30 calendar days after request from Avanquest USA, or Avanquest USA's authorized representative, Licensee will provide full documentation, and certify under penalty of perjury, that Licensee's use of any and all Licensed Software is in conformity with this EULA.

## **TERMINATION.**

If Licensee breaches this EULA, and fails to cure any breach within 30 calendar days after request from Avanquest USA, or Avanquest USA's authorized representative, Avanquest USA may terminate this EULA, whereupon all rights granted to Licensee shall immediately cease. Furthermore, upon termination, Licensee shall return to Avanquest USA all copies of the Licensed Software, or verify in writing that all copies of the Licensed Software have been destroyed.

# Contents

---

<b>Emergency Response Manual</b>	<b>1</b>
<b>Your Computer is in Trouble</b>	<b>11</b>
Overview.....	11
Getting Started if Your Computer is in Trouble.....	11
Getting Started in Windows 2000/XP.....	13
<b>Dealing with Other Common Problems</b>	<b>17</b>
Overview.....	17
Stability Issues .....	17
Performance Issues .....	19
<b>Troubleshooting</b>	<b>23</b>
Overview.....	23
<b>Bootting from a Rescue Disk</b>	<b>25</b>
Overview.....	25
Bootting from the Rescue Disk.....	26
Viewing the Rescue Disk Menu.....	26
Learning about the Start Menu Commands .....	27

## Recovering From a Data Disaster 29

Overview .....	29
What if There is Serious Physical Damage? .....	30
Help, My Disk is Dead.....	31
Recovering Data Remotely .....	32
In-Lab Data Recovery .....	33
Disaster Recovery .....	33

## Index 37

# Your Computer is in Trouble

---

## Overview

Fix-It Utilities works best as preventive maintenance. That is, you'll find that running the tools regularly on your computer keeps you out of most trouble that computer users find themselves getting into.

That said, not everyone has the luxury of buying "just in case" software. Sometimes your computer goes down, you panic and look for something that will get you out of whatever trouble you're in.

Fix-It Utilities can, in many cases, get you out of your temporary jam—and then help keep you out of trouble for years to come.

If you can't start Windows, but don't have Fix-It Utilities installed, there is information here to help you use this product and the tools included with your operating system to diagnose the problem with specific instructions for your Windows version.

We can't fix every problem known to keep you from starting, such as hardware failures. If your hard drive has suffered serious damage, see ["Recovering From a Data Disaster" on page 29](#) for help in recovering data that might otherwise be lost.

---

## Getting Started if Your Computer is in Trouble

If you have a computer that has crashed and won't start up, or if you suspect a virus has infected it, you can't install Fix-It Utilities on your computer until the problem has been fixed.

Your most important priority at this point is probably to clean your computer (if there is a virus), to get back up and running as quickly as possible, and to make sure you haven't lost any data. You might want to save data to a diskette or other removable media. Then, you need to make sure your computer is able to start.

## Starting from a Rescue Disk

Turn on your computer and insert the bootable Rescue CD (either the installation CD or a Rescue CD).

For full instructions on how to make a Rescue CD, see “[Making a Rescue CD](#)” on page 205.



**NOTE:** If you believe you have been infected by a virus, you will need to create and start from an AVRescue disk set instead of the Rescue CD. From another computer with Internet access, go to <http://www.v-com.com/virusinfo/rescue.html> and follow the instructions there to create this rescue set. You will need multiple diskettes.

---

Restart your computer so the computer can start from the Rescue CD.



**NOTE:** Eject all removable media from other drives to ensure that only the Rescue CD is accessed during restart.

---

If your system won't start from the CD, refer to instructions that came with your computer to change the System BIOS.

Your computer uses the Rescue CD (or installation CD) as its boot disk. A graphical menu appears after the computer starts, with a number of options. The Rescue Disk Help can assist you with the various Rescue Disk options.

**If your mouse doesn't work:** The Rescue CD installs a generic mouse driver that allows most users access to their mouse. If your mouse doesn't seem to be working, it might be that the driver is incompatible with it. In this case, you will have to use only keyboard commands. Notice that each button also has its keyboard option on the button label.

- Consult “[Troubleshooting](#)” on page 23 and “[Dealing with Other Common Problems](#)” on page 17 for advice on how to resolve your problem. Use the available options to recover your data and diagnose your computer. See “[Booting from a Rescue Disk](#)” on page 25 for detailed information about the Rescue Disk tools.
- Some problems can't be fixed by even the best rescue programs. If the problem is caused by a hardware malfunction, you might need to have the computer serviced by a technician. If your computer remains unable to start, go to “[Recovering From a Data Disaster](#)” on page 29 for information on other options.

Install Fix-It Utilities after the computer starts normally.

---

## Getting Started in Windows 2000/XP

### Recovery Commander

VCOM's Recovery Commander, included with Fix-It Utilities, will often be the quickest and easiest way to recover from startup problems. Best yet, Recovery Commander can even restore a Windows restore checkpoint, even if you never installed the Windows Recovery Console or Recovery Commander.

Recovery Commander's saved checkpoints can also recover from a number of serious problems that Windows' Recovery Console can't solve. Unlike the Windows Recovery Console that drops you to a command line interface, Recovery Commander will quickly walk you through restoring a checkpoint. For more information, see ["Recovery Commander Overview" on page 215](#) "Recovery Commander Overview" in the online help or in the user's guide on the CD.

### Windows Recovery Console

You can start into Safe Mode and use the Recovery Console to repair some problems if you had previously installed it. It's not installed as part of the default Windows installation.

For Windows XP, you will use the Windows installation CD to access the recovery console if it hasn't been installed. Using the CD is the safest way to use this tool, since none of the files can be tampered with, such as by a virus.

To create or update an Emergency Repair Disk (ERD) in Windows 2000, use the Backup utility:

**Start > Programs > Accessories > System Tools > Backup**

The Emergency Repair Disk isn't bootable. To use the ERD to repair your computer, you must first start using Disk 1 of the 4-disk Windows 2000 Setup set. You might be prompted to change to Disk 2 before seeing the Setup menu. Select **Repair** from the **Setup** menu. Select to use either the Recovery Console or ERD to handle the repair.

## Starting in Safe Mode

If you've just installed a new program or hardware driver and now can't start, getting into Safe Mode can be your lifesaver. Safe Mode loads a barebones version of Windows with only the hardware drivers the operating system needs to run.



**NOTE:** You must be able to log in as Administrator to successfully start Windows 2000/XP Safe Mode. You will be asked for the Administrator password at the end of the start process.

---

As the start process begins (before the Windows startup screen appears), press and hold the F8 key to get to the startup menu. If you are dual-booting, press F8 when the boot menu appears. There are several choices: **Safe Mode** is the standard option. **Safe Mode with Networking** gives you access to your network volumes (and possibly your system-state backup). **Safe Mode with Command Prompt** doesn't load your desktop, but gives you a command prompt instead. You can also use this menu to start to the **Last Known Good Configuration**.



Windows XP safe mode

Be aware that starting in Safe Mode takes longer to start than normal. When the process is ready (and after you have logged in as Administrator), Windows will put up a message briefly explaining what Safe Mode is. Click **OK** to clear this message and begin working.

You can use the **Add/Remove Programs** utility in Control Panel to uninstall the program or driver that caused the problem.

## Using the Windows Emergency Repair Disk

If you are not an advanced user, you should choose the **Fast Repair** option from the Emergency Repair Disk (ERD) menu. This option will work by itself, automatically checking and, if possible, repairing problems with the registry, system files, the partition boot sector, and startup environment. If the problem was in the registry, Fast Repair will restore the section from the backup registry created at setup. If you want to restore from a later backup, you should use the Recovery Console instead. See the next section for information on the Recovery Console.

The **Manual Repair** option should be used by advanced users and administrators. This functions much like the Windows ERD, but doesn't give you access to the registry. Use the Recovery Console to repair registry files.

## Using the Recovery Console

The Windows Recovery Console offers advanced users command-prompt access to their computer, with a number of commands available to fix startup problems. You can use Recovery Console to perform many tasks without starting Windows, including: starting and stopping services, reading and writing information on a local disk drive (including NTFS file system drives), formatting drives, etc. Recovery Console is particularly useful if you need to repair your computer by copying a file from a diskette or CD to your hard drive, or if you need to modify a service that prevents your computer from starting properly.

If you haven't already installed Recovery Console as a startup option, you should start your computer from your Windows 2000/XP installation CD or Windows 2000 setup disk. To use the Recovery Console to repair your computer. Be aware this process is quite slow, often taking 2-5 minutes to get to the Welcome screen.

## To Start using Recovery Console

1. At the **Welcome to Setup**, press F10, or press R to repair, and then C to start the Recovery Console.

You are asked to identify the Windows installation to logon to.

2. Enter the Administrator password for the correct installation to enter the Recovery Console.
3. Recovery Console offers access to only these folders:

- The root folder (C:\)
- The SystemRoot folder (usually C:\WINNT) of the installation you are logged into, and its subfolders
- The Cmdcons folder
- Removable media (CD, DVD, Zip, etc.) drives

4. Type `help` to see all the commands available to you.

In addition to many standard DOS commands, some of the more useful Recovery Console Commands are:

- **Enable/Disable services:** type `listsvc` to get a list of all services and drivers. The `enable` and `disable (servicename)` commands turn services on and off, respectively.
- **Disk partitioning:** `Diskpart` is similar to the `FDisk` command in DOS. Get information on your existing partitions, delete damaged partitions and add new ones.



**CAUTION:** Changing hard drive partitions with this tool will destroy all data on your disk. This is only to be used on new hard drives that haven't been formatted, and on older drives that have completely failed and can't be fixed any other way.

---

- **Repair boot sectors:** `Fixboot` writes a new Windows boot sector. `Fixmbr` is similar to the `fdisk /mbr` DOS command and rewrites the master boot record on the disk. If these sectors have been infected by a virus, or otherwise corrupted, these commands will help. They don't change the partitioning of the drive.

A list of all Recovery Console commands and switches can be found in the Microsoft Knowledge Base: Article Q229716.

When you have completed your repairs, type `exit` to quit the Recovery Console and restart your computer.

# Dealing with Other Common Problems

---

## Overview

Not every emergency is catastrophic. You might be able to start up fine. Yet there can be panic-stricken moments when things seem to be going wrong at all times. Fix-It Utilities can handle these problems most effectively, but there are occasionally other ways to solve these problems. This chapter will help you sort out some of these more common and aggravating problems.

---

## Stability Issues

Does your computer crash frequently? Does the “Blue Screen of Death” rear its ugly head a lot? Does Windows freeze or hang up? Do you restart the computer several times a day to get things back to normal? These are the stability issues many computer users have to deal with. However, there are ways to resolve these problems.

## General Practices

**Run Windows Update.** Microsoft releases updates to Windows regularly. These updates can be fixes to security and stability problems to the latest Media Player version. You can even set up your computer to check for “critical updates” when you sign on to the Internet. If stability is your concern, however, don’t download any software labeled “beta.” By definition, these pieces are not ready for prime time. They are likely to promote instability, not lessen it.

**Keep multimedia and other hardware drivers current.** If you install a new game or other software and your sound or graphics start going haywire, it might be time to update your video-display or sound card driver. Contact your computer manufacturer, or the maker of your card (if you bought it elsewhere). Drivers are software that allows your operating system to communicate with the other pieces of hardware on your computer). They are generally available (at no charge) on the manufacturer’s website.

New drivers are usually written to resolve a particular problem, often interactions with a changed operating system or widely used program. While new drivers can often bring new features, the old rule of thumb “If it ain’t broke, don’t fix it” applies here.

**Have enough random access memory (RAM) to do what you want with your computer.** If you like to run a lot of different programs at the same time, pay attention to the system requirements of those common programs. If you regularly work in your word processor while connected to the Internet, with your web browser, email program open, and your anti-virus program is running in the background, this uses up a lot of RAM. Windows itself will be using a lot of that memory as well. It adds up. If the above describes your typical computing behavior, you want at least 128 MB of RAM on your computer, 256 MB or more is even better.

If you have Fix-It Utilities, the SystemMonitors can track your RAM usage. If you find yourself running out of resources frequently, an upgrade might be in your future.

**Maintain your File Allocation Table.** Running Windows 2000/XP ChkDsk or DiskFixer in Fix-It Utilities regularly will help keep your disk structure in shape. These tools make sure your computer can find the files it needs, and protect you against data loss from bad clusters.

## Crashing and Blue Screens

**Keep applications updated.** Software developers are constantly finding and fixing problems that inevitably occur with use in the “real world.” Many software bugs are fixed in free updates from the software developer.

**Watch for interactions between programs that lead to trouble.** If your computer becomes problematic whenever Program A and Program B are running at the same time, contact technical support for both programs. There might already be a fix or a work-around available.

When you get a crash, or illegal operation, message from Windows, click the **Details** button. You will usually see a message that “Program A caused a general protection fault in Module B,” or something similar. This can help you identify software conflicts.

**Regularly remove temporary files.** Programs often create temporary files on your computer. These are usually files with a .tmp extension that help the program run. When you exit the program normally, these files disappear, not to be heard from again. If a program crashes, or otherwise doesn’t close properly, these temporary files stay on your computer. One day, the program will try to create a temporary file with the same name as a file that is already present, and suddenly the program crashes again.

The Fix-It Utilities DiskCleaner can be scheduled to remove all these types of files on a frequency you decide (see “Cleaning Your Hard Drive” in the online help or in the user’s guide on the CD). Using Windows’ file finder to locate and remove \*.tmp files can also help remove some of these temporary files.

---

## Performance Issues

Computers are not like people. They don’t get tired and they don’t need sleep. Yet, sometimes it can seem to take forever for Windows to start up, or for a program to load.

There are a couple of general causes for slow performance: a lack of system optimization or a lack of disk space.

## Optimization

**Keep your hard drive defragmented.** As you read from the hard drive and write to it, your computer has built-in processes that allocate and de-allocate hard drive space as needed. When you write a new file to the disk, space is allocated for the new file. If there isn't a chunk of space big enough, the file might use several non-contiguous smaller chunks of space. When you delete a file, the space the file used is returned to the computer as free space.

As time goes by and you add and delete files from the hard drive, the available disk space becomes more and more fragmented. Files can become scattered across the disk. This makes the reading and writing of files take longer, potentially shortening the life of the hard drive motor. Running JETDefrag can keep your drive organized in the best way possible.

**Install and maintain an anti-virus and anti-spam program.** If you suddenly begin to get strange and erratic behavior from your computer, you could be infected with a virus. VirusScanner can give you solid protection against these undesirables.

If you think you already have a virus, but don't have an anti-virus program on your computer, there is hope. Trend Micro's HouseCall service (housecall.com) will scan your computer over the Internet free of charge.

**Have enough random access memory (RAM) to do what you want with your computer.** As mentioned in [“Stability Issues” on page 17](#), things can slow down tremendously if Windows regularly has to dip into “virtual memory” to keep the computer up. Virtual memory, also called the swap file, is hard drive space reserved by the operating system to be used if too much RAM is being used.

## Low Disk Space

**Keep at least 20 percent of your C: drive free at all times.** Windows needs a lot of breathing space to operate properly. It creates temporary files, stores the Internet Explorer cache and history files and maintains the swap file (virtual memory) all on its install drive. If Windows or some other program has to search high and low for empty sectors on the drive, it will slow the computer down.

You can use the Fix-It Utilities Cleanup tools to remove unnecessary files from your drive.

**Use the best file system for your operating system.** Users of Windows 2000/XP users can choose between FAT32 and NTFS. VCOM's Partition Commander (an optional purchase) can safely convert partitions between the various formats and back.

**Watch out for multiple software installations.** Sometimes when you upgrade a program from an earlier version, the new one installs to a new folder. This leaves the old version intact and taking up space on your drive. If, for example, you open Windows Explorer and find folders labeled AOL70, AOL80 and AOL90 on your hard drive, you can safely uninstall the earlier versions and delete all the files in those folders.

These tips and resources should help you recover from your emergency, and keep you out of trouble in the future.



# Troubleshooting

---

## Overview

Check this chart for tips to common computer problems and solutions.

Problem/Symptoms	Possible Causes	What to Do
The computer won't start up.	Missing or corrupted system file(s). Crash during software or driver install. Corrupted registry. Potential hardware problem.	See <a href="#">“Your Computer is in Trouble” on page 11</a> . Check the section for your operating system for troubleshooting hints.  Data recovery experts might be able to help if you can't retrieve your important data.
Computer seems slow, sluggish.	The hard drive is either very fragmented, or getting full. The program you were running needs more RAM than your computer has.	See <a href="#">“Optimization” on page 20</a> .  Run SpeedUp, CleanUp, or Comprehensive Wizard to clean and optimize. You might also want to run DiskFixer to locate and fix any problems on the hard disk. Run JETDefrag to optimize the hard drive.  Check to see that you aren't trying to start up too many programs when you start your computer.
The computer is exhibiting erratic, unpredictable behavior.	Possible virus. Possible corrupted file allocation table.	Run Comprehensive Wizard with all options. This will fix system files and check for viruses.
Computer freezes or hangs. No mouse or keyboard control.	The program you were running encountered an internal error. The program you were running needs more RAM than your computer has.	See <a href="#">“Crashing and Blue Screens” on page 19</a> .  Press CTRL-ALT-DEL to bring up the Task Manager. Select the <b>Applications</b> tab and close <b>End Task</b> on the problem program. If you have an older computer, you might need to install more RAM.

<b>Problem/Symptoms</b>	<b>Possible Causes</b>	<b>What to Do</b>
The “blue screen of death” appears, with the message that your program crashed.	Usually caused by a fault in a driver file.	See <a href="#">“Stability Issues” on page 17.</a>  This is a Windows crash, which you usually have to restart your computer.
Your disk drive is making an unusual grinding noise.	The drive bearings or other part of the drive might be going bad.	Run SMARTDiskCheck. Back up everything important to removable media NOW, and then turn off the computer. Get the computer checked out by a good hardware technician. You might have to replace the hard drive.
Your Word files are being saved as .dot files.	This is a known virus.	Run VirusScanner.
Your program crashes frequently, especially when trying to use a particular feature.	Program might be trying to create a temporary file leftover on your computer from an earlier crash.	See <a href="#">“Crashing and Blue Screens” on page 19.</a>  Run DiskCleaner to remove all *.tmp files.
Your program crashes a lot, especially when certain graphics are displayed.	You might have the wrong driver for your video card. You might have the right driver, but the wrong settings for the type of monitor.	See <a href="#">“General Practices” on page 18.</a>  Contact your computer (or video card) manufacturer and get the latest video driver (these are usually downloadable from the Web). Make sure your settings are correct.
You try running a program that you have run before, but the computer can’t find it.	Did you move the program to a new location? Possible invalid registry link.	Run RegistryFixer. You might need to delete program files and reinstall the program.
Not enough room to install new software	Low disk space.	See <a href="#">“Low Disk Space” on page 21.</a> Run Fix-It Utilities DiskCleaner.
Not enough room for programs that write to temp files to run successfully	Low disk space.	See <a href="#">“Low Disk Space” on page 21.</a> Run Fix-It Utilities DiskCleaner.
Files left over on disk after uninstalling a program	The program’s uninstall program didn’t completely remove all files.	Run Fix-It Utilities DiskCleaner to remove unused/temporary files.
Unwanted files in the cache after a web browsing session	normal operation	Run Fix-It Utilities DiskCleaner to remove unused/temporary files
Old files, especially intermediate files, left over when changing to a new directory or project.	normal operation	Run Fix-It Utilities DiskCleaner to remove unused/temporary files.
Old files that are no longer needed or wanted accumulate because they are forgotten, buried in non-accessed folders	normal operation	Run Fix-It Utilities DiskCleaner to remove unused/temporary files
Duplicate files accumulated when programs are moved or reinstalled	normal operation	See <a href="#">“Low Disk Space” on page 21.</a>  Run Fix-It Utilities DiskCleaner to remove unused/temporary files

# Booting from a Rescue Disk

---

## Overview

The Rescue CD is primarily intended for use if you can't start your computer into Windows Safe mode.

If your computer refuses to start up, it might have any of a number of problems. The Rescue Disk can fix some of these; others might require the services of a computer technician. In any case, the Rescue Disk might help you recover important files and restore system files.

The Rescue Disk program is designed to do everything possible to help you restore your computer so you can start it up normally again. For more information, see [“Recovery Commander” on page 213](#).



**NOTE:** If you haven't made a Rescue Disk, you might be able to access the tools directly from the Fix-It Utilities CD. You must have your system BIOS configured to allow you to start from the CD, however. Check with your computer manufacturer to see how to do this.

---

---

## Booting from the Rescue Disk

The Rescue Disk installs a generic mouse driver that allows most users access to their mouse. If your mouse doesn't seem to be working, it might be that the driver is incompatible with it. In this case, you will have to use only keyboard commands.

1. Turn on the computer and the monitor.
2. Insert the Rescue CD (or installation CD) into the drive.



**NOTE:** You might need to restart your computer to start from the CD

---

A graphical menu with several options appears.

3. Click the **Help** button to view a complete document describing the features of the Rescue Disk.

Each button also has its keyboard option on the button label.

---

## Viewing the Rescue Disk Menu

When starting from the Rescue CD, the Rescue Disk Wizard first displays with the following options:

- **Recovery Commander**
- **BootFixer - Fixes BOOT.INI**
- **Manual Partitioning**

### Recovery Commander

Recovery Commander allows you to restore functionality to your computer by restoring both Recovery Commander and System Restore checkpoints.

### BootFixer

The BootFixer utility scans your computer's installation for updating/repairing the BOOT.INI file.

## Manual Partitioning

This program lets you create or delete partitions on your hard drive.



---

**CAUTION:** Deleting or Formatting Partitions will destroy all data within the partition. This is only to be used on new hard drives that haven't been formatted, and on older drives that have completely failed and can't be fixed any other way.

---

---

## Learning about the Start Menu Commands

Rescue Disk, much like Windows, has a Start menu. A list of the commands located on the Start menu is explained below.

- **Partitioning** opens the Manual Partitioning tool. (see [“Manually Partitioning Your Disks” on page 231](#)).
- **Recovery Commander** opens the main Recovery Commander Wizard. (see [“Restoring Computer Functionality” on page 221](#)).
- **Rescue Disk Wizard** opens the main Rescue Disk Wizard. (see [“Viewing the Rescue Disk Wizard” on page 218](#)).
- The **Settings** option contains two choices:
  - **Settings** opens the Settings dialog to make changes in the way Manual Partitioning functions (see [“Changing Manual Partition Settings” on page 237](#)).
  - **Regional Settings** allows you to select the time zone and the language of your operating system.
- **View** allows you to view the computer boot files.
- **Help** opens a dialog for information about using Recovery Commander.
- **Exit** restarts your computer.



# Recovering From a Data Disaster

---

## Overview

Even if you've had the worst possible disaster happen to your computer, you might still be able to get the data from it. There are companies with experience recovering data resulting from severe software corruption, hard drive failures, viruses, user error, and natural disasters including floods, fires, and earthquakes. So if you're reading this chapter because your computer is in real trouble, the first thing to remember is *Don't panic*. Even in the worst of circumstances, data can often be recovered from a damaged disk.

Of course, making regular backups of your critical data is very important. Even with JETDefrag, DiskCleaner, and the other tools that clean, optimize, and reorganize your disk, a computer can be subjected to unforeseen and uncontrollable events. If you back up your data regularly, you might lose only a few hours to a few days' worth of work, in the worst case. However, even if the worst should happen, there are tools and services that can help you recover from your data loss situation.

## Levels of Recovery

There are two levels of data rescue and recovery:

- **Level 1: Recovery Commander™.** This advanced recovery tool can restore critical system files from a prior saved checkpoint. It support all Windows file systems including NTFS.
- **Level 2: Data Recovery Services.** There are several companies that offer data recovery services both Remotely and In-Lab.
  - **Remote Services:** Many software-related data loss situations can be solved remotely. This includes situations where the computer's operating system doesn't even start. Through an Internet or modem connection, a professional data recovery engineer will diagnose and repair severe data loss corruption.
  - **Lab Services.** This service is the right choice for the toughest, most intensive data recovery problems, including hard drives that have suffered from mechanical failure. This also includes severe software corruption, water damage, and fire damage.

---

## What if There is Serious Physical Damage?

If you ever find your computer's hard drive making unusual noises, submerged in water, buried under rubble (say from an earthquake), sitting amongst the wreckage of a fire, or otherwise physically compromised, the first course of action should be to contact a professional data recovery service. Never assume that lost data is unrecoverable, because in most cases it can be retrieved.

---

## Help, My Disk is Dead

“Now what do I do? I can’t afford to have my computer down, or worse yet, lose all the information on my computer.”

You might be surprised to learn that when a hard drive isn’t working or your computer won’t start, you still have a good chance of at least recovering your data. This chapter, is a tutorial on data recovery and how to go about it. Your data might still be recoverable, and we’ll step you through the various data recovery methods.

### Evaluate the level of damage

There are varying levels of data recovery situations, from accidentally deleting an important file, to losing critical disk information, such as a NTFS Master File Table, all the way to severe physical disk damage.

If you seem to have lost data or even your operating system, but the disk itself seems to be spinning correctly (no strange noises when the computer is running), the chances of recovering data at a minimum of cost are very good.

On the other hand, if your disk has obvious physical damage, then you must send the disk into a data recovery service that has cleanroom facilities to clean the disk and can recover as much data as possible.

### Create a Plan of Action

You should have some viable options. We suggest that if you have a choice, you begin with the least expensive option that meets your needs.

---

## Recovering Data Remotely

For critical situations the expertise of an engineer is required. Recovering Data Remotely allows specialized engineers to perform data recovery services modem-to-modem or over your Internet connection. The cost of this type of service depends on the nature and severity of your data loss situation. With remote services, users often get their data back within a few hours.

### When Would I use a Remote Recovery Service?

The following is a list of situations in which you might consider a Remote Recovery Service. Don't forget that VCOM's Recovery Commander and the Fix-It Utilities Rescue Disk can also recover lost data in some of these situations.

- Unbootable operating system
- Deleted files
- Reformats/repartitions
- Invalid boot sectors
- Invalid volume tables/definitions
- Deleted partitions
- Virus damage
- FDISKed drives
- Damaged file tables (File Allocation Table, Master File Table)
- Drives damaged by software

### How Does it Work?

Armed with a suite of advanced tools and techniques, a Remote Service engineer can repair damaged data on your disk drive through a modem or Internet connection. You can use this service even if you can't start your computer. The only requirement is that the computer and hard disk drive are not damaged or malfunctioning.

---

## In-Lab Data Recovery

In the most serious of data loss situations, you might need to send the hard drive into a data recovery lab. Hard drives that are malfunctioning, physically damaged, or have been exposed to a disaster (flood, fire, power surges/spikes) would require this level of service. Severe software damage that can't be solved using other levels of service would also qualify for in-lab data recovery.

After the hard drive has been sent in for a data recovery, engineers will use the most advanced software and hardware tools available to recover the data.



**NOTE:** You can take your computer to a standard computer repair shop, which can probably fix the hardware; however, repair shops generally don't guarantee the safety of your data. If the data is critical, you should use a data recovery service before having the computer repaired.

---

---

## Disaster Recovery

Catastrophes happen—no doubt about it. When they happen to you, one of your priorities is probably to get back to normal as soon as possible.

Whether it's a serious data loss situation, or physical damage from flood, fire, or earthquake, we can help recover your important data.

### Flood Damage

Computer data storage media submerged in water suffers not as much from the water itself as from all of the impurities found in the water. If it is suspected that computer equipment has been contaminated with water, the data must be recovered in a clean room, where the contaminants can be removed by a data recovery professional in a particle-free environment. After the media is completely cleaned the data recovery process can begin.

If your data has been damaged by water, it is important to get your media into the hands of professionals as quickly as possible.

## **Fire and Smoke Damage**

Fire damages data storage media when the internal components are contaminated with airborne smoke particles. Storage media can be further damaged by the water used to extinguish the fire.

If it is suspected that computer equipment has been contaminated, the data must be recovered in a clean room, where the contaminants can be removed by a data recovery professional in a particle-free environment. After the media is completely cleaned the data recovery process begins.

## **Earthquake Damage**

Earthquakes can not only shake computer data storage media components out of alignment, they can trigger additional disasters as well, including fire and water-related damage. When water or smoke particles find their way into data storage devices and contaminate the surface the data is stored on, data integrity can be compromised.

If it is suspected that computer equipment has been contaminated, the data must be recovered in a clean room, where the contaminants can be removed by a data recovery professional in a particle-free environment. After the media is completely cleaned the data recovery process begins.

## **Lightning/Electrical Damage**

Electrical storms can cause considerable damage when lightning strikes result in electrical surge. If the electrical surge reaches a computer terminal, it can wipe out the internal electronics of the computer data storage media. If this happens, and the computer is subsequently powered up, the media can malfunction and render data inaccessible. Lightning can also trigger other catastrophic events such as fire, the smoke particles from which can reach the inside of a computer and contaminate the area where the data is stored.

If it is suspected that computer equipment has been contaminated the data must be recovered in a clean room, where the contaminants can be removed by a data recovery professional in a particle-free environment. After the media is completely cleaned the data recovery process begins.

## Cleanup Tips

The following tips have been put together by data recovery professionals to assist you in the recovery of damaged media:

- Never assume the data is unrecoverable, no matter what it has been through.
- Send the media to a professional data recovery facility as soon as possible.
- Don't attempt to power up your computer if you suspect there was an electrical surge, as internal or external electronic failures could result in data storage device malfunction.
- Don't use storage media that might have been exposed to heat, moisture or soot. The media might be irreversibly damaged if not treated and recovered in an air- and static-controlled room by data recovery professionals.
- Don't shake the media, or in the case of hard disk drives, remove the cover of the assembly.
- Don't attempt to dry water-damaged media by opening it or exposing it to heat.
- Don't attempt to freeze dry media.
- Don't attempt to operate visibly damaged media, or media that has been exposed to water. Caution: waiting for the media to dry out and then operating it on your own can cause irreversible damage.
- Don't attempt to clean the media yourself without using proper solutions applied in a clean room environment. Contaminated media requires immediate and thorough cleaning. In fact, professionals prefer to receive media in the clean room before it has had a chance to dry out.
- Don't attempt to recover severely damaged data with commonly available software utility programs.
- Hard drives flooded in salt water require special treatment. Because data can be damaged quicker due to salt oxidizing on the media, the drive should be express-shipped in an airtight container to a professional data recovery facility. To reduce the risk of further damage, drives can be "bathed" in distilled or fresh water, although they should not be agitated.



# Index

---

## C

crashed computer 11  
Crisis Center 29

## D

damage to a hard drive 30  
data recovery 35  
    in-lab 33  
diagnosing problems 23  
disaster cleanup 35  
disaster recovery 33  
disk damage 30  
disk, rescue  
    see system rescue disk 11

## E

earthquake damage 34  
Emergency Repair Disk  
    Windows 2000/XP 13, 15

## F

Fast Repair, in Windows 2000/XP ERD 15  
fire damage 34  
flood damage 33

## G

getting started 11

## H

HouseCall 20

## I

in-lab data recovery 33  
installation 11

## L

lightning damage 34

## M

memory 18, 20

## P

partition  
    tools on system rescue disk 27  
PCs  
    diagnosing 23  
    problems 23  
    troubleshooting 23

## R

RAM 18, 20  
recovering from disaster 33  
Recovery Commander 13  
Remote Data Recovery 32  
rescue disk  
    see also system rescue disk 11

## **S**

safe mode

Windows 2000/XP [14](#)

system rescue disk [11](#), [25](#)

## **T**

temporary files [19](#)

Trend Micro HouseCall [20](#)

troubleshooting [23](#)

## **V**

VirusScanner [20](#)

## **W**

Windows Update [18](#)

Windows 2000/XP

Emergency Repair Disk [13](#), [15](#)

safe mode [14](#)