

# Data Rescue PC<sup>3</sup> User Guide



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# Data Rescue PC<sup>3</sup>

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## Chapter 1 What can Data Rescue PC do for you?

### 1.1 Program Capabilities

Data Rescue PC recovers files when a file or file system has been altered, deleted, lost or damaged. Undelete Software cannot recover files when the file system has been altered, deleted, lost or damaged by Windows®, a virus, or another utility.

Unlike Windows® dependent data recovery software, Data Rescue PC does NOT require the Windows operating system to run. This means, NO software installation, computer disassembly or boot diskettes are required to set-up and run Data Rescue PC.

Data Rescue PC can be installed on a Windows® operating system to help recover data from a corrupt or failing external hard drive. Data Rescue PC helps provide immediate access to USB/Firewire connected devices without having to boot from CD.

Data Rescue PC guides you to scan the problem media, select the files to recover, and recover the files to an external USB / Firewire device (or hard disk drive).

#### Why choose Data Rescue PC?

Recover deleted, lost and damaged files:

- Word, My Documents, Excel, etc.
- Pictures, videos, and music
- Formatted drives, even after installing Windows
- Virus attacks, software crashes, power failure

Recover files from partition / file system problems:

- Lost or deleted partition: FDISK, etc.
- Damaged Partitions: MBR, MFT, Root, etc.
- Clone – extracts raw data from mechanically failing drives on any media or operating system, keeping drives out of the clean room. It also creates sector copy to another media or network for back up protection.

#### Expanded Features:

- Quick Scan for faster use
- Preview files before recovering
- Find specific files, filter files and file systems to refine results
- View file system information / changes
- Create file recovery reports
- Show detailed file system component changes
  - Plug-n-Play: Recover to USB / Firewire without hard drive installation
  - Raw Sector Scan now gives an option to rebuild files according to their file types

**Supports:**

- All Microsoft® Windows® versions (Vista, 2003, XP, 2000, NT, ME, 98, 95, 3.x and DOS) and file systems (NTFS, FAT32, FAT16, FAT12).
- Hard drives: (IDE, EIDE, SCSI, ATA, SATA), Zip / Jaz drives, Floppy diskettes, Firewire / USB devices: Compact Flash, Microdrive, Smart Media, MultiMedia, Secure Digital, Memory Sticks, XD-Picture Cards.

**1.2 Trial Version / Registered Version Capabilities**

The Trial Version of Data Rescue PC allows you to rebuild any DOS and Windows® file system so that you can see which files and folders can be recovered, before purchasing the program. Each file is given a specific “Status”, which determines the rate of recovery. The Registered Version of Data Rescue PC allows you to recover files and folders to another destination.

## **Chapter 2 Purchase, Registration, and Technical Support**

### **2.1 Purchase**

Purchase Data Rescue PC online:

[http://prosoftengineering.com/products/data\\_rescue\\_pc.php](http://prosoftengineering.com/products/data_rescue_pc.php)

### **2.2 Registration**

Online Registration: a serial number is sent via e-mail after your purchase.

Phone Registration: 1-800-4-PROSOFT (if you only have one computer).

Registration Hours: Monday – Friday 8:00 A.M. – 5:00 P.M. (P.S.T.)

### **2.3 Technical Support**

Support is available before and after you purchase any of our products. Visit our website for the most current Downloads, Manuals, and Frequently Asked Questions:

Website: <http://prosoftengineering.com/support>

Frequently Asked Questions (FAQ) – See Chapter 6.

Phone: 1-925-426-6306

Technical Support Hours: Monday – Friday 7:00 A.M. – 5:00 P.M. (P.S.T.).

### **2.4 ACR Data Recovery™ Services**

If Data Rescue PC cannot access or recover your data, your media has severe file corruption or is mechanically failing (software will not solve your problem at this point). This means your hard drive needs to be evaluated by professional data recovery personnel. Prosoft Engineering recommends contacting ACR Data Recovery™ for In-Lab Data Recovery Services. Please call or visit their website for more details:

Phone: 1-800-444-3225 or 1-770-925-4420

Email: [services@atl-datarecovery.com](mailto:services@atl-datarecovery.com)

Website: <http://www.atl-datarecovery.com>

## **Chapter 3 Computer Set-up**

### **3.1 System Requirements**

Emergency Boot CD Requirements:

PC with CD-ROM

64MB of RAM

Intel or AMD Processor 300MHz or greater

Monitor resolution 800 x 600

Application Requirements:

Windows® 2000, Windows ® XP, or Windows® Vista

Firewire, USB2.0, or secondary internal drive to recover data to.

### **3.2 Languages**

English is the standard interface language in Data Rescue PC.

Data Rescue PC may also run in German or Japanese by pressing F2 on the initial Select Resolution screen, then use the up and down arrows to select the appropriate language, and then press <ENTER> to continue. If you purchased the software in the German or Japanese markets, then the program will default to German or Japanese. You may also change the language when Data Rescue PC is running by clicking on [File > Preferences] from the menu bar, and selecting the language.

Files and folders can be viewed in English, German, Spanish, French, and Portuguese, without having to make any changes in the Language Set-up. To view files and folders in other languages, click [File > Preferences] from the Menu Bar, and then enter the appropriate Drive Local and Language.

### **3.3 BIOS Settings and Booting from CD**

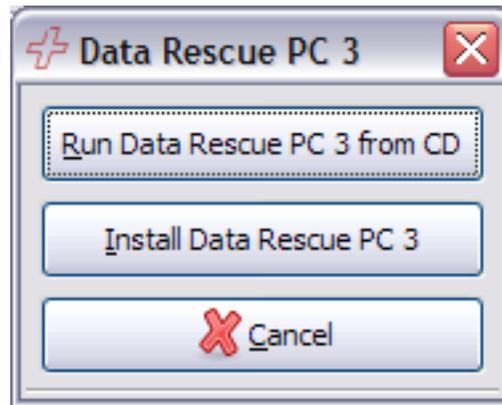
Data Rescue PC's emergency boot disk is designed to help recover data from a hard drive that is failing to boot, corrupted by a virus, or accidentally had data erased.

All computers have a BIOS to help computer software communicate with computer hardware. The computer BIOS must be set to boot from the CD Drive so that Data Rescue PC can communicate with the computer hardware. If you have problems setting the BIOS refer to your computer manual.

Once the BIOS settings are changed to boot from CD, insert the Data Rescue PC CD into the CD Drive and restart the machine to boot into the Data Rescue PC program.

### 3.4 Installation

Data Rescue PC does not need to be installed to scan a hard drive for data. Installing Data Rescue PC is ideal to help recover data from a corrupt secondary or external hard drive (such as an external USB connected hard drive). If you have accidentally deleted files from your computer, and do not already have Data Rescue PC installed, boot from the emergency boot CD to help you recover your data.



*Auto Start Selection Prompt*

If you want to install Data Rescue PC on your hard drive, insert the Data Rescue PC CD into your CD Drive while booted into your Windows® operating system. The CD's Auto start will prompt you to "Run Data Rescue PC 3 from CD" or "Install Data Rescue PC 3". Select "Install Data Rescue PC 3" and follow the instructions on screen to complete your installation of Data Rescue PC.

### 3.5 Updates

Updates for Data Rescue PC are available on Prosoft Engineering's website. Please visit the following link to acquire the latest version of Data Rescue PC:

[http://prosoftengineering.com/products/data\\_rescue\\_pc\\_update.php](http://prosoftengineering.com/products/data_rescue_pc_update.php)

## Chapter 4 Running Data Rescue PC

### 4.1 Launch the Program

Data Rescue PC can be launched by booting from the emergency boot CD or opening the installed application from the Windows® operating system. Each method has its own advantages to recover your data. Read chapters [4.1.1](#) and [4.1.2](#) to determine which launch process will help you recover your data.

#### 4.1.1 Booting from CD

Booting from the Data Rescue PC CD helps recover from hard drives that fail to boot properly, have been affected by a virus, or have accidentally deleted files on the boot hard drive. The emergency boot CD loads the Data Rescue PC program without using the Windows® operating system to recover your data.

Insert the Data Rescue PC CD as soon as the computer starts booting, so that the computer boots from the Data Rescue PC CD (If the computer has already been booted, insert the Data Rescue PC CD and then reboot the computer).



**Having problems booting into Data Rescue PC?** See 6, FAQ:

1. “What do you mean by setting the BIOS to boot from the CD Drive?” / p.[34](#)
2. “If I have a problem, is there technical support?” / p.[33](#)



**Language Set-up:** English is the interface language in Data Rescue PC.

However, files and folders can be viewed in English, German, Spanish, French, and Portuguese, without having to make changes to the Language Set-up. To view files and folders in other languages, click [File > Preferences] from the Menu Bar, and then enter the appropriate Drive Local and Language.

It is recommended you use the Clone feature if your drive is mechanically failing. (See Chapter [4.10/p.26](#))

#### 4.1.2 Running from Windows®

Data Rescue PC can be installed on the Windows® operating system to help scan for deleted files on the internal hard drive, or recover data from an external hard drive or media card.

After installing Data Rescue PC on your Windows® operating system (see Chapter [4.4/p.15](#)), click on the Start Menu, then browse your programs to locate “Data Rescue”.

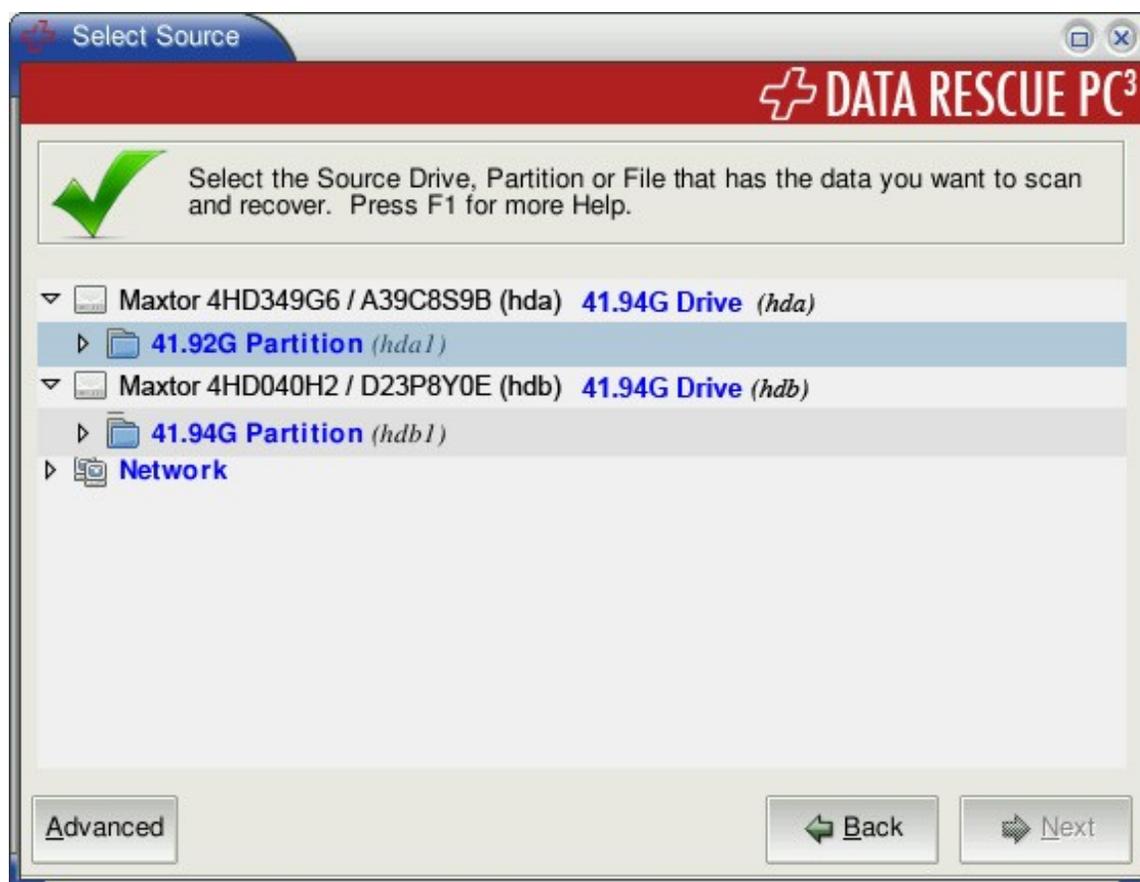


**Warning:** Quit all other programs before starting the recovery process. Any further writing done to the hard drive that is missing data may overwrite the data you are looking to recover. Do not use any other applications until Data Rescue PC is done recovering your data.



**Warning:** Disable System Standby/Hibernation before starting the recovery process. Allowing the system to be put on standby during the recovery process may cause the recovery to be interrupted.

## 4.2 Select Source Drive



*Select the drive or partition that has the data you want to recover.*

### Choosing Hard Drive or Partition

By default, the first available hard drive is selected as the Source Drive (the problem Drive). If the first available hard drive is not the Source Drive, click on the appropriate hard drive.

If your hard drive contains multiple partitions, you may consider scanning an individual partition instead of the whole hard drive. To select a partition, click the [>] icon next to the Source Drive and select the appropriate partition. Selecting a Partition gives the option to select optional scan modes, like [Quick Scan] or [Deep Scan] of the Partition, which could reduce the amount of time needed to recover data (See Chapter [4.5](#)/ p.19). If the results of a Partition Scan are not what you expect, restart the [> Wizard], and select the entire Source Drive to scan (not just the Partition).

Select the partition level if your hard drive:

- Does not boot
- Was hit by a virus
- Contains accidentally deleted files
- Is experiencing hardware problems

Select the hard drive level if your hard drive:

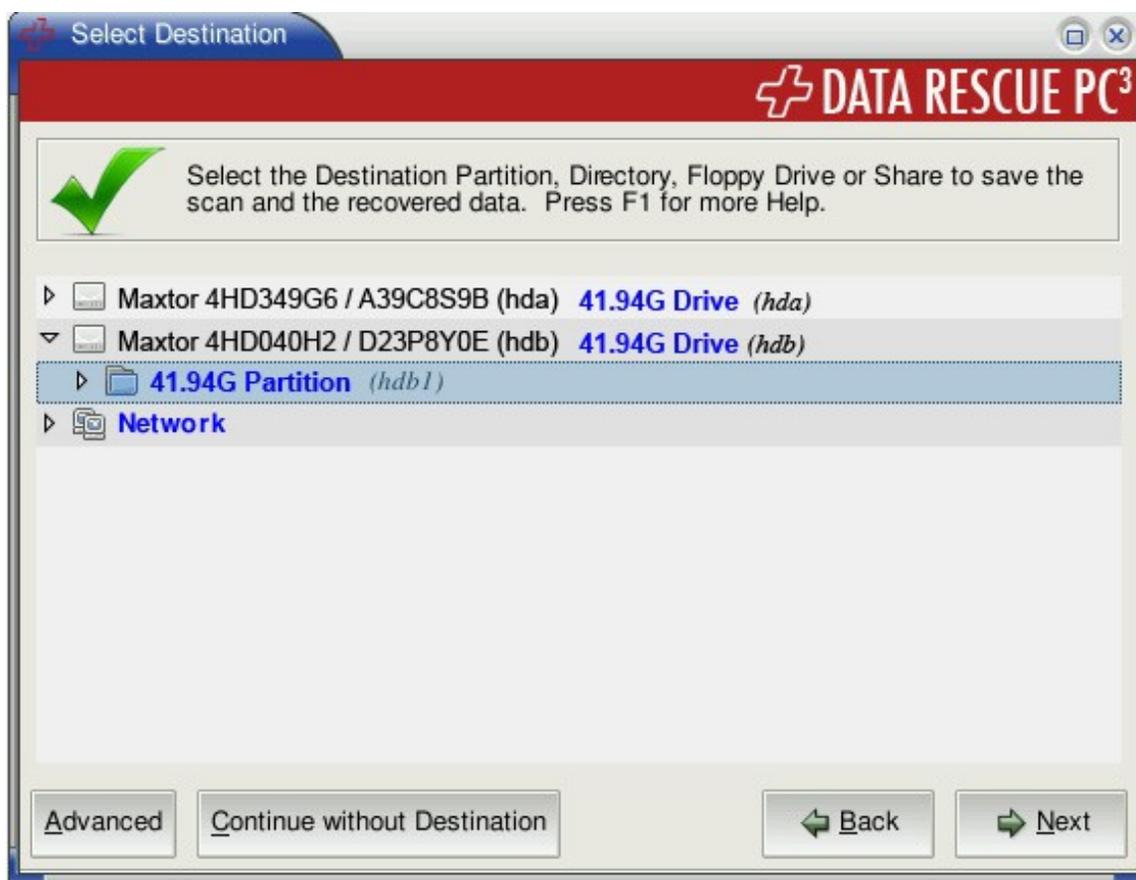
- Was accidentally formatted
- Was incorrectly repartitioned
- Does not show a partition

**Note:** Select a Partition only if you know that the data being recovered lies within that Partition. Otherwise, select the entire Source Drive to scan.

**If the Source Drive is not recognized, but is attached to the computer**

Check the Source Drive connections to make sure it is attached properly and then restart the program. If the Source Drive is still not recognized, contact Technical Support [Help -> Technical Support].

### 4.3 Select Destination Drive



*Select a FAT or NTFS Partition to save the scan file and the recover data.*

This program requires a Network Mapped Drive or a FAT/NTFS Partition on the LOCAL Destination Drive (the Drive to save the scan of the problem Drive and the recovered data). By default, the program selects the first available FAT/NTFS Partition as the Local Destination Drive. If the first available Drive is not the Destination Drive, click on the appropriate Drive. Click on the arrow next to Network Neighborhood to expand and see what network drives are available.



**When booted from CD, the “Select Destination” window appears after selecting the source drive.** This allows the user to save a scan file that can be reloaded at any time.

**When running the application from Windows®, the “Select Destination” window appears after selecting your files and clicking on the “Recover” button.**

#### Destination Drive Options

You can scan the Source Drive (the problem drive) to view what data can be recovered without having a Network Mapped Drive or FAT/NTFS Partition by clicking the [Continue without Destination] button. If you proceed without a destination, you will be able to attach an external hard drive any time after the scan process to recover your data without having to start over.

However, to save the scan of the Source Drive, or to recover data, select one of the following options:

**USB / Firewire Drive Options:** Select an existing external (USB or Firewire) Destination Drive that has a FAT/NTFS Partition, or that you will allow the program to reformat as FAT/NTFS.

**Internal Hard Drive Options:** Select an attached internal Drive (IDE, EIDE, SCSI, ATA, SATA) as the Destination Drive that has a FAT/NTFS Partition, or that you will allow the program to reformat as FAT/NTFS.



**Note:** If you do not have an attached internal drive, exit the program and shutdown the computer system. Then attach an internal drive (IDE, EIDE, SCSI, ATA, SATA) as the Destination Drive that has a FAT/NTFS Partition, or that you will allow the program to reformat as FAT/NTFS and restart the program.

**Network Neighborhood:** Click the arrow [->] next to Network Neighborhood to expand the available network drives. If the Network Neighborhood is “Empty”, click on the [Advanced] button and select [Network Setup] (See Chapter [4.4.2/ p.17](#)).

### How to Format your Destination Drive with a FAT/NTFS Partition

Select the Destination Drive where you want to save the scan and the recovered data. You must select the entire Destination Drive to format. You cannot select a Partition to format. Then, click the [Advanced] button, select [Format Drive], and then [Yes] to the question, "Do you want to format this drive now?"



**Warning:** Make sure there is no data on the drive you are choosing to reformat. If any data exists on the drive, it will be erased after the formatting.

## **If you forgot to attach your Destination Drive before starting the program**

If you have finished the scan of your source hard drive, you may attach the external (USB or Firewire) Destination Drive, and select [Tools->Select Destination].

**External USB / Firewire Drive:** Attach an external (USB or Firewire) Destination Drive. Click on the [Advanced] button and select [Refresh List]. At this point, you can select your External hard drive to continue with the recovery process.

**Internal Hard Disk Drive:** Exit the program and shutdown the computer system. Then, attach an internal (IDE, EIDE, SCSI, ATA, SATA) Destination Drive and reboot the computer system with the program in the CD Drive to restart the recovery process.

## 4.4 Advanced Options



The [Advanced] button is available in the Select Source/Destination window to provide a variety of additional options.

**Information** - View general Information on a selected file or partition.

**Refresh List** – Update the device list with any newly attached devices, such as USB or Firewire hard drives.

**Software Drivers** – Rebuild a damaged RAID configuration. (See Chapter [4.4.1](#)/ p.[16](#)).

**Network Setup** – Configure network settings to help recover data over a local area network. See Chapter [4.4.2](#)/p.[17](#).

**Format Drive** – Format a hard drive as a FAT32 or NTFS file system to prepare it as a destination for recovery. This option is only available when selecting a device.

**Create Directory** – Creates a directory on a partition to help organize any recovered files. This option is only available when selecting a partition.

**Create File** – Creates a blank file to be used with cloning a hard drive to a file. This option is only available when selecting a partition. (See Chapter [4.10](#)/ p.[26](#)).

#### 4.4.1 Software Drivers



*Drive Editor helps simulate RAID configurations*

This feature is intended for advanced users familiar with their hard drives' RAID configurations. In the case of a damaged RAID configuration, the Software Drivers window can help you simulate any connected individual hard drives as a RAID to help scan and recover files.

**ID** – Title of the configuration to display on the Source/Destination drive list.

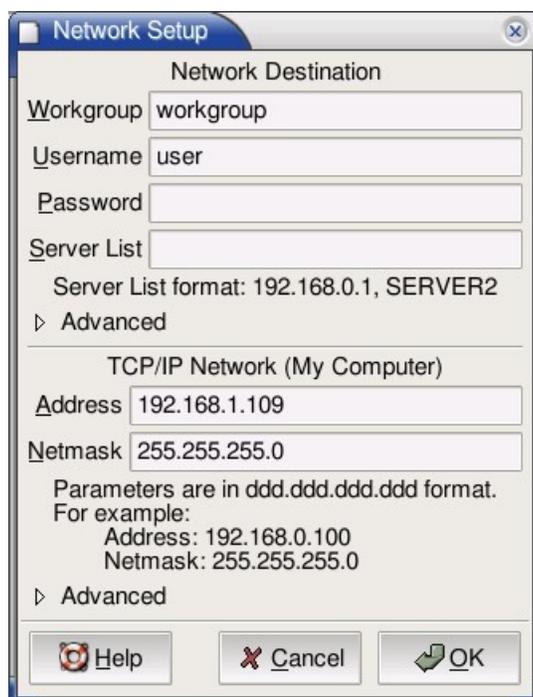
**Type** – Selections for the type of RAID configuration. Supported configurations include:

- *Range* – Select a specific area of a drive with an “Offset” and “Size”. Requires Offset and Size information.
- *JBOD* – “Just a Bunch Of Drives” concatenates components as a single device.
- *RAID0* – “Striped Set” recreates a structure that has data evenly split across multiple disks without parity information redundancy. Requires block size information for the RAID configuration.
- *RAID5* – Recreates block-level striping with parity data distributed across multiple disks. Requires block size information for the RAID configuration.

**Component IDs** – Lists any hard drives added for the software driver.

**Add Component** – Select any hard drives to add as part of RAID configuration. Only one hard drive can be selected at a time. Repeat add process as necessary to add multiple hard drives.

## 4.4.2 Network Setup



*Network Setup helps configure network volumes to be used as destinations*

### Network Setup

The Network Setup window will help you connect to a mapped network drive across your local area network. By default, the program will attempt to automatically fill in as much information as possible about your network connection when you open this window. If you are not sure of the values that need to be entered in the text boxes, please contact your network administrator. To access the Network Setup window, click on the [Advanced] button and select [Network Setup].

### Network Destination

**Workgroup** - if you know the workgroup name enter it in here. Some networks will ignore this field.

**Username** - this is your username to log into the network.

**Password** - this is your password to log into the network.

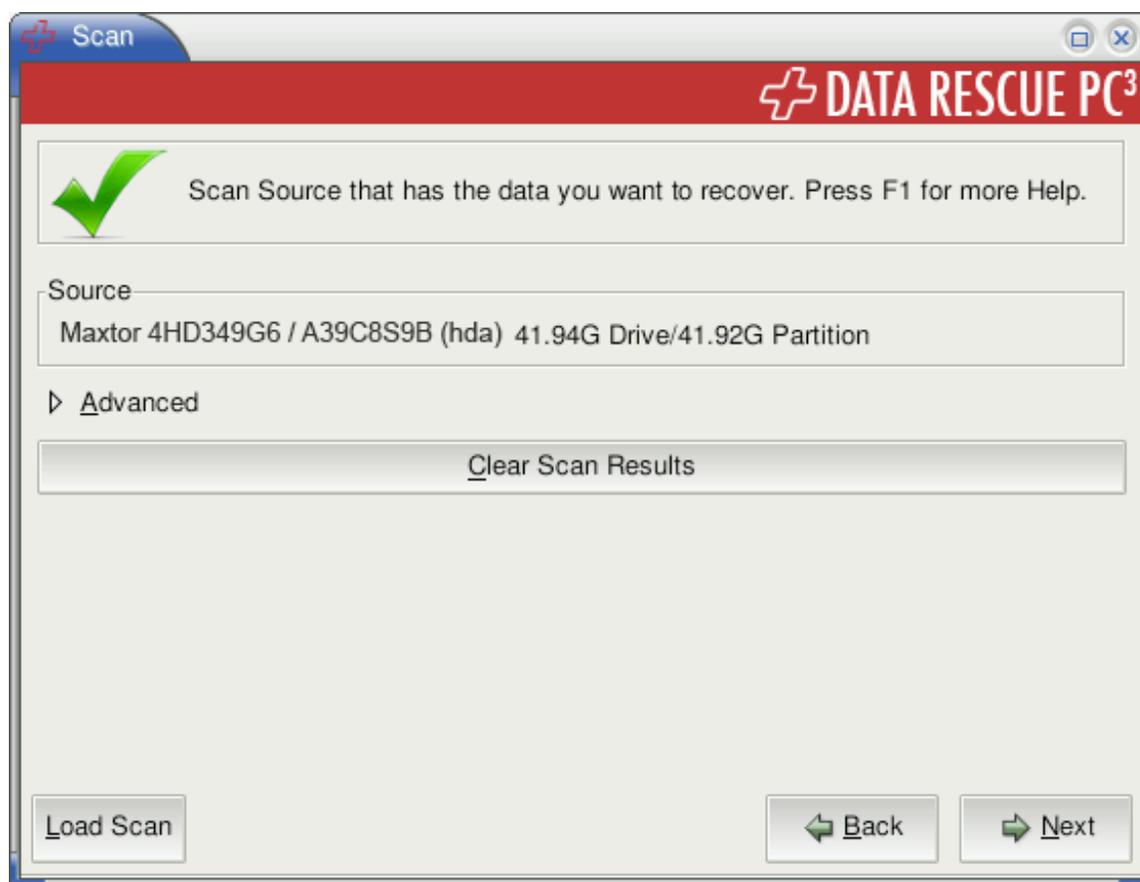
**Server List** - if you know the name of the destination server or the IP address of the destination server you can enter it in here. It is not necessary to enter anything in this field. The program will browse the network and display all of the available drives that can be mapped. This is a good option when you are not sure which drive is the one you want to map.

**Advanced - DOS Charset** - this is the character set (codepage) the network file server uses for filenames.

## **TCP/IP Network (My Computer)**

Address, Netmask and Advanced -> Gateway – these are the values that are assigned by DHCP to your local computer. It is very rare that you will ever need to change this. If your network doesn't have DHCP turned on this field will show up blank and you will need to manually enter the IP address here. You will need to contact your Network Administrator for the values.

## 4.5 Scan Source Drive



*Scan the chosen Source Drive that has the data you want to recover*

### Scan Source Drive

To recover data, a Drive or Partition must be scanned. The purpose of the scan is to find and rebuild the components within a file system, so that the data can be recovered and used again.

The Source Drive (the problem Drive) is the Drive or Partition you have chosen to scan.

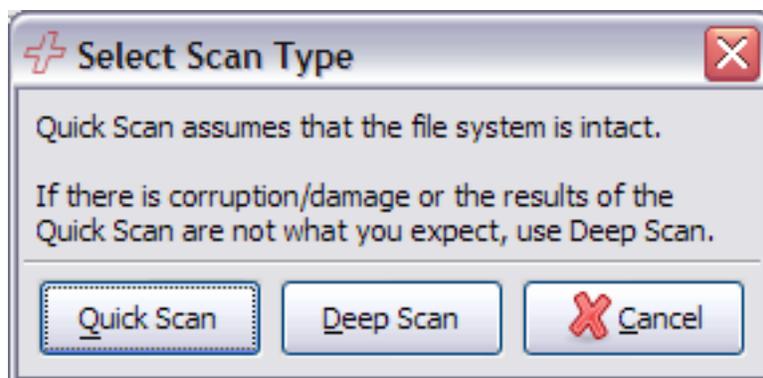
The Advanced section allows you to specify a starting point on the hard drive where the scan will begin, and the number of sectors to scan for data. This is helpful to skip bad sectors on a hard drive.

If you have chosen the wrong Source or Destination Drive, use the [< Back] button to return to the appropriate screen and change your selections.

### Load Scan button

If you would like to use a saved scan of the Source Drive click the [Load Scan] button, and then select the appropriate saved scan file. **Note:** If you have saved a Partition Scan and the results are not what you expected DO NOT [Load Scan]. Select the entire Source Drive to scan (not just the Partition).

## Select Scan



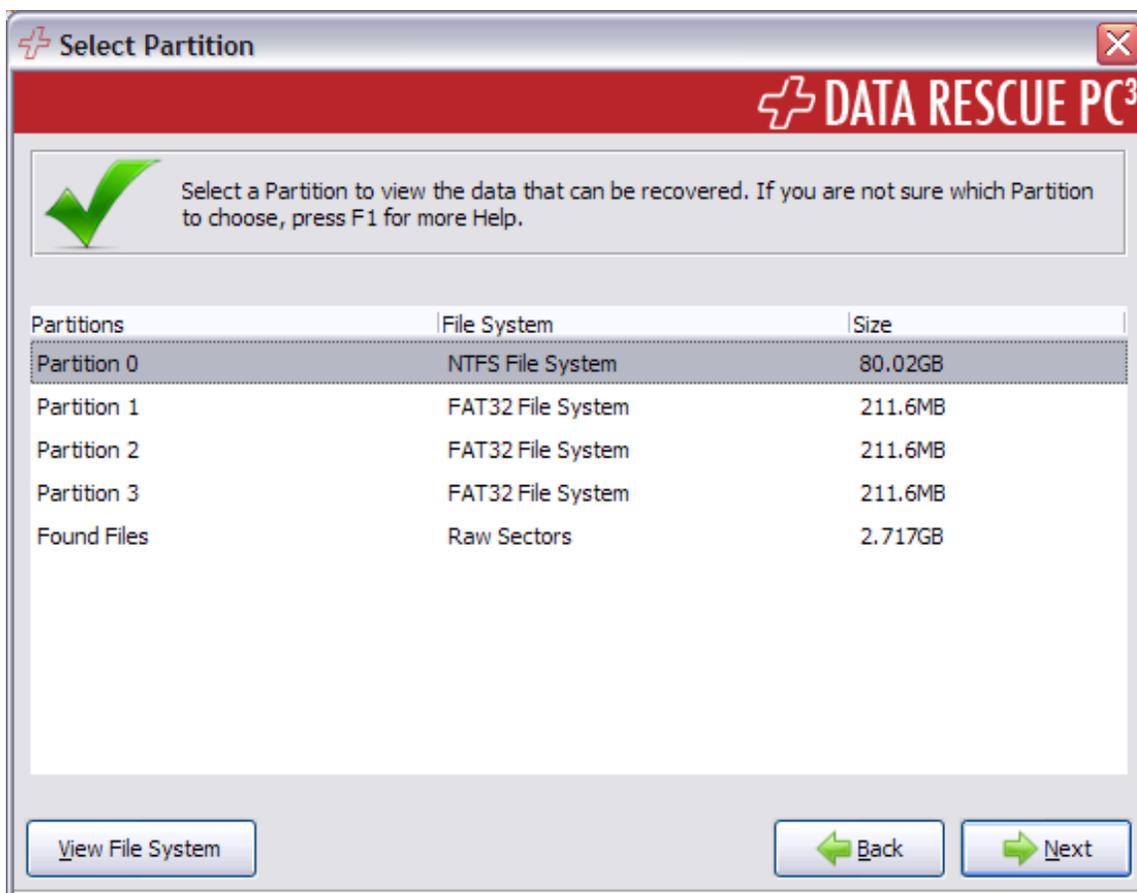
*Select Scan Type is only available when selecting a partition as the Source*

If you have selected a partition to scan, you will have the choice to select a [Quick Scan] or [Deep Scan].

A [Quick Scan] will provide results from boot sector and backup boot sector to rebuild the file system and access your files. This scan is ideal for a hard drive that is failing to boot to an operating system or has been corrupted by a virus. A [Deep Scan] will scan the entire partition to recover any files it recognizes from the raw sectors. This will provide the most comprehensive results from a partition or hard drive. This scan is ideal for a hard drive that has been reformatted. If a hard drive has been selected, a [Deep Scan] will be automatically selected and will then list any partitions that are found.

It is recommended to attempt a [Quick Scan] first for the fastest results of the files on the hard drive. If a [Quick Scan] fails to rebuild the file system, the [Deep Scan] will scan the entire drive and provide more detailed results for any remaining files on the hard drive. The [Quick Scan] may take several minutes to process, whereas the [Deep Scan] may take several hours to finish.

## 4.6 Select Partition



*Select a Partition to view the data that can be recovered*

### Select a Partition

To view the recovered data within a Partition, select the appropriate Partition. If you are not sure which Partition has the data you want to recover, select one Partition at a time to view the data.

### View File System

To view technical information about your hard drive or partition click on the [View File System] button. The [View File System] will report a variety of statistics about your hard drive to help you identify if a partition appears to be corrupt.

## 4.7 Raw Sector Recovery – Found Files

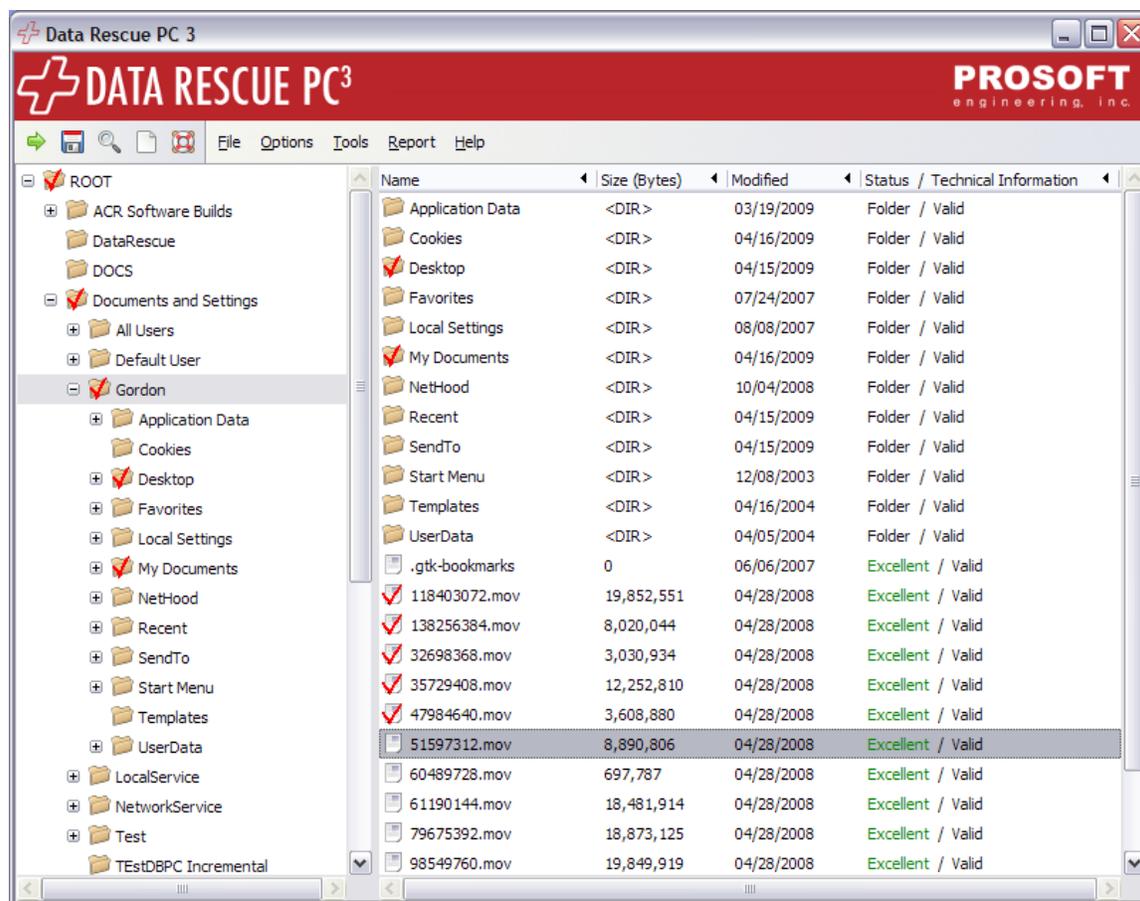
Data Rescue PC gives you the option to rebuild files according to their file types (ie. DOC, XLS, MP3, etc). There will be times when the damage to the hard drive's file system is so severe that files that you are looking for will not show up in one of the partitions that you select to rebuild. If this is the case you may find the file by selecting "Found Files - Raw Sectors".

Please note that while the "Found Files - Raw Sectors" selection will find more files than selecting the "Partition", the validity of the files is not as strong and sound as selecting the "Partition". So we suggest that you choose the "Partition" first before trying the "Found Files - Raw Sectors" option.

The following is a list of the file types that the "Found Files - Raw Sectors" option will find and where they will be seen after rebuilding:

Archives\ARJ Files: arj  
Archives\ZIP Files: zip  
Archives\RAR Files: rar  
Archives\Other Files: 7z gz bz2 ace bz cab cazip sit sqx sqz stf ufa zoo lha lza marc jar j6i cru dz hap hqx  
Pictures\BMP Images: bmp  
Pictures\GIF Images: gif  
Pictures\JPEG Images: jpeg  
Pictures\PNG Images: png  
Pictures\PSD Images: psd  
Pictures\TIFF Images: tiff  
Pictures\WMF Images: wmf  
Pictures\Other Images: cam cpt mrw pcx rgb pcd fp5 crw dpx msp nef  
Mail\EML Files: eml  
Mail\Other dbx pst wab snm db  
Documents\HTML Files: html  
Documents\Excel Files: xls  
Documents\Power Point Files: ppt  
Documents\PDF Files: pdf  
Documents\Quicken Files: qsd qdf  
Documents\QuickBooks Files: qbw  
Documents\Word Files: doc  
Documents\Other Files: rtf ai eps mny adx nsf fm3 fmt wk1 wk3 wk4 xml wri wpd ole qxd pm5 fla pub vsd mpp vsmacros msi rpt suo chm hlp mdb pwl  
Multimedia\AVI Files: avi  
Multimedia\MOV Files: mov  
Multimedia\MP3 Files: mp3  
Multimedia\WAV Files: wav  
Multimedia\WMA Files: wma  
Multimedia\WMV Files: wmv  
Multimedia\Other Files: rmi ani mid ra rm ogg riff dvm asf

## 4.8 Recovering Files and Folders



*Results window lists files and directories found*

The selection of files to recover is broken down into 6 steps:

### Step 1: Determining the "Status" of the files and folders to recover:

**Excellent** - indicates a file should have a successful recovery. Technically, the file has valid file chains, and is part of the existing file system.

**Good** - indicates a file should have a successful recovery a majority of the time. Technically, the file may have valid file chains, but is either not part of the existing file system, or has corruption within the file system.

**Possible** - indicates a file could have a successful recovery. Technically, "Possible" and "Good" are equal. However, a "Possible" file is less likely to be a valid file compared to a "Good" file, because of possible corruption to the file.

**Poor** - indicates a file has a poor chance of recovery. Technically, the file has invalid file chains.

**Important Note:** If a folder (not file) has been renamed "Found", the original name no longer exists. To determine if a file within a "Found" folder can be recovered, refer to the "Status" of the file. Technically, if a folder has been renamed "Found", it has been found during the scan, but is not part of the existing file system.

### **Step 2: Finding a specific file:**

To find a specific file select [Tools > Find File] from the Menu Bar or select the "Find File" icon from the tool bar.

Filtering files by "Status" allows you to refine the results of the file and folder listings. To find files by status, select [Tools > Filter files by Status].

### **Step 3: Previewing Files:**

Data Rescue PC will allow you to preview a variety of file types. To preview a file, double-click on a file from the list. A document or image viewer will appear and show you the contents of the file.

Data Rescue PC supports previewing for the following file types:

123, ani, as, bmp, csv, cur, dbf, dif, doc, gif, gnm, gnumeric, htm, html, ico, ini, jpe, jpeg, jpg, log, mps, oleo, pbm, pcx, pdf, pgm, pln, png, pnm, ppm, ppt, ras, rtf, sc, slk, sxc, targa, tga, tif, tiff, tsv, txt, wb1, wb2, wb3, wbmp, wk1, wks, xbm, xls, xlt, xlw, xpm, zip

File types that are not listed will open the file in a Hex-Viewer.

### **Step 4: Selecting files and folders to recover:**

A. To recover individual files, right-click on the file or highlight the file and press space bar. A red check-mark will appear, indicating the file has been tagged for recovery. Then, press the [Recover] button from the Menu Bar to start the recovery process.

B. To recover all files and folders, right-click on the "Root" folder (top left-hand column of folder listings). A red check-mark will appear, indicating all files have been tagged for recovery. Then, click the [Recover] button from the Menu Bar to start the recovery process. **Note:** If a file cannot be located, try searching in another Partition, if available (See [Step 6](#)).

C. To recover files by mask (to recover specific file types, like .txt files), select [Options > Select by Mask] from the Menu Bar and refer to the example.

### **Step 5: Selecting a Destination Drive to recover files and folders:**

After selecting the files you want to recover, click on the [Recover] button (shown as a diskette icon).

If you are running Data Rescue PC from the Windows® operating system, a new window will appear to ask you to select where to recover your files. By default, Data Rescue PC will create a folder named “Recover-YYYYMMDDHHmm” to represent the year, month, date, hour, and minute the recovery took place. You may select a new directory and create a new folder where you want your files to transfer.

If you booted from the Data Rescue PC CD, Data Rescue PC will use the location you have selected as the destination before the scan. Clicking on the [Recover] icon will immediately inform you of the number of files you have selected and the size of the data to recover.

If you have chosen to scan your hard drive without a destination, you may select your destination by clicking on [Options > Select Destination] (see Chapter [4.3/p.12](#)).

### **Step 6: Selecting a different partition to build a new file and folder listing:**

To select a different partition from the Select Partition Window to build a new file and folder listing, select [Options > Select Partition] from the Menu Bar.

## **4.9 Accessing the Recovered Data**

To view and use the recovered data, the Destination Drive should be attached to a working Windows® computer system.



**Warning:** Access and test the validity of the recovered data, before either discarding the source drive or continue writing on it.

## 4.10 Cloning a Hard Drive (Boot Disk Only)

Cloning is a powerful expert feature that is only available when booting from the Data Rescue PC emergency CD. Cloning allows you to make an exact byte-by-byte copy of your hard drive to an additional drive. Cloning is recommended when you have a drive that has begun to electronically or mechanically fail and is losing increasing amounts of data with every read/write access. Cloning makes a rapid, single end-to-end read pass on the drive and copies the data to an additional drive of the same or greater capacity.

The cloning process greatly minimizes the risk of additional data loss. Cloning makes an exact copy of the drive, copying any good, corrupt, and erased files and directories as-is. The clone process does not perform any data recovery processes on your damaged drive. Once the clone is created, you can disconnect your damaged drive, set it aside, and then begin the data recovery process on the freshly copied hard drive for professional-level data recovery results.

- A. To access the Clone feature you must first close the active window (i.e. Select Program Mode/Select Source Drive).
- B. Go to the Data Rescue PC menu bar and select Tool (Alt+T) then Clone (Alt+C).
- C. Choose your Source and Destination drive to begin the Clone process.

NOTE: The Destination Drive must be the same size or larger when using Clone. If it is not, only a partial clone will be made. Using the Clone feature will overwrite any data that exists on the Destination Drive. If necessary, ensure you have a backup of the information on your Destination Drive.

### 4.10.1 Cloning to File (Boot Disk Only)

Data Rescue PC allows you to clone a hard drive to a file. This file can be scanned instead of the original hard drive to help recover the data.

- A. Select the hard drive you want to clone from the Source selection window.
- B. Select the destination hard drive, click on the [Advanced] button and select "Create File".
- C. Enter a name for the file to be created.
- D. Click on the [>] of the hard drive and partition to select the file you have created. Click on [Next] to proceed with the Clone.

## 4.10.2 Scanning a Clone

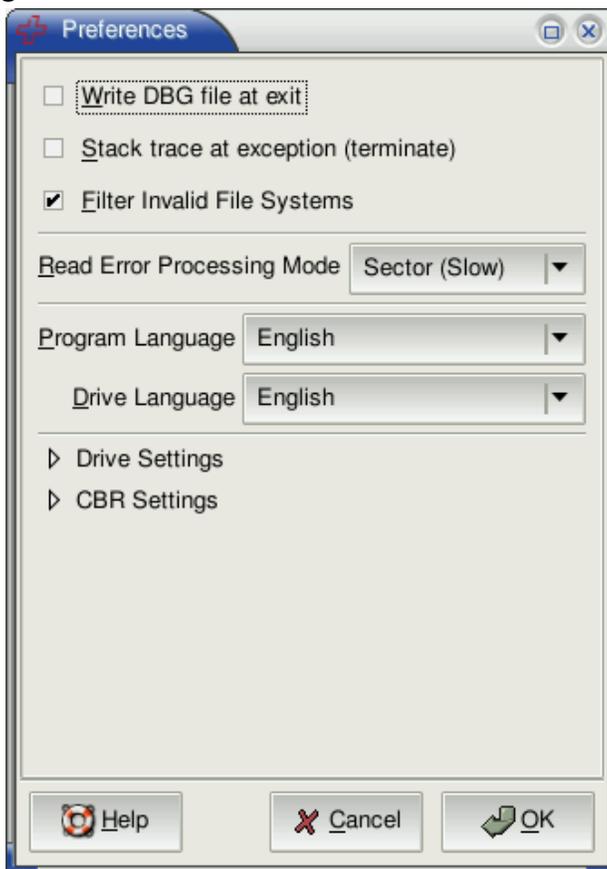
Scanning a cloned hard drive helps alleviate any physical problems such as slow scans due to bad sectors or a malfunctioning circuit board. Scanning the cloned hard drive yields the same results as the original hard drive.

- A. Select the hard drive that you have cloned from the Source selection window.
- B. Select the hard drive to recover to in the Destination window. Ensure you are not selecting the original hard drive that you have cloned from.
- C. Click [Next] to proceed with the scan.



**Scanning a Clone from File:** When the clone completes, you may select the created file to scan it individually for any files that can be recovered. In the Source selection window (step A), click on the [>] of the hard drive and partition that you have saved the file to. Select the file you have cloned to and proceed with the scan process.

## 4.11 Preferences



This window is designed for very advanced individuals and Technical Support. Typically, you will only need to be in this window when technical support indicates that it is necessary. You can access the Preferences window by going to the [File > Preferences] menu.

**Write DBG file at exit:** this will write a debug file to the selected destination drive on exit of the program. This will only be used if Tech Support indicates necessary.

**Filter Invalid File Systems:** by default this is selected. This will prevent any garbage file systems from displaying. If you want to see everything that was found from scanning the Source Drive, then click to remove the checkmark in the box.

**Read Error Processing Mode:** by default the program will run in a more exhaustive and highly reliable reading mode [Sector (slow)]. It will attempt to read every single sector of the Source Drive. The other alternative is to run the program in [Block (fast)] mode, but this is much less reliable. The [Block (fast)] mode was inserted because some inexperienced users were more concerned with speed than reliability.

**Program Language:** you have the choice of changing the interface language to one of three languages (English, German and Japanese). By default the program starts in English.

**Drive Language:** by default the program scans the Source Drive for English based file and folder names. Use the dropdown box to choose a different language character set to look for (ie. English, European, Japanese, Russian, Chinese).

**Drive Settings:** Contact Tech Support to determine if needed.

**Destination:** (The following options are for the Destination Drive)

**File Size Limit:** this specifies the largest file size a recovered file can be. By default, this value is set as 2GB to properly support recovery onto FAT32 formatted hard drives and various network servers. Files larger than 2GB will be split into 2GB chunks. The value may be set to "0" to have an unlimited file size for a recovered file. Recovering files larger than 2GB is only supported when recovering onto an NTFS formatted hard drive.

**Ask Recovery Path:** this will allow you to select where on the Destination Drive to write the recovered data.

**Ask Scan File Location:** this will allow you to select where on the Destination Drive to write information that was gathered during the scan. This will allow you to load this information the next time you start the program instead of scanning the drive all over again. This will save a tremendous amount of time.

**Recover Root - Recover:** this is the name of the default folder that will be created on the Destination Drive where all the recovered data will be written.

**Scan File Name - Scan:** this is the name of the default file that will be created on the Destination Drive.

## Chapter 5 Basics of Data Recovery

### 5.1 Recovery Tips

**Prevent writing to the hard drive.** Further writing to the hard drive may overwrite data that you are trying to recover. This includes creating new documents, browsing the Internet, or running disk repair utilities to attempt to fix the drive. The moment you are aware you have lost your data, shut down your machine to prevent any new data being written to the hard drive and run Data Rescue PC to search for your data.

**Evaluate the situation.** Every data recovery scenario is different and may require different approaches to recover the data. Read “*Basic Recovery Scenarios*” in Chapter [5.2/p.31](#) to determine the best method for recovering data in your situation.

**A second hard drive with adequate space is necessary to recover data.** If you have a second internal hard drive or external USB/Firewire hard drive attached to your computer, you may use it as a destination for your recovered files. Make sure you have enough free space on the destination hard drive to hold the data you wish to recover. For example, if you need to recover 25GB of data from the bad hard drive, you will need at least 25GB of free space on the destination hard drive to successfully recover all the data.

**Consider acquiring a replacement hard drive.** If you do not have a second hard drive to recover to, you may want to acquire a new hard drive. If your hard drive is physically failing, a replacement hard drive will be necessary to maintain your data. Not only will the new hard drive help you with your recovery immediately, but the new hard drive may also be used as a backup hard drive in the future when your recovery is complete.

**Be patient while scanning your hard drive.** The average scan time is 5 minutes per Gigabyte. Healthy drives tend to scan faster. Bad blocks on the hard drive may slow down Data Rescue PC’s progress momentarily. Once Data Rescue PC has overcome the bad blocks, the scan time will speed up to complete the scan.

**Use the Tools File Menu to search for specific files.** When viewing the list of files to recover, use “Find File” if you know the name of the files. “Select By Mask” will help select multiple files of any file types you are looking for in particular, such as docs or JPEG files. Use “Filter Files by Status” to help narrow down the results, by either showing only Deleted or Good files.

**Review the recovered files before taking action on the damaged hard drive.** Depending on how the hard drive is damaged, the files may not be recovered properly on the first attempt. Review the files to ensure they have been recovered properly. If the recovered files open properly, you may proceed with reformatting or reinstalling the operating system on the hard drive. In the case the recovered files do not open, you still have the opportunity to rescan the hard drive and attempt the recovery again.

## 5.2 Basic Recovery Scenarios

This section lists basic scenarios to recover data from and the steps to help with the recovery process with Data Rescue PC.

### **Operating system fails to boot or virus infected boot hard drive.**

- Boot from the Data Rescue PC CD.
- Select the Partition of the hard drive.
- Select your secondary hard drive as the destination.
- Select "Quick Scan" to search the partition.
- When scan completes, select "Partition 0". This will provide a list of all the files that currently exist on the hard drive.
- Alternative: Rescan using "Deep Scan" for more results.

### **Accidentally deleted files on internal hard drive.**

- Boot from the Data Rescue PC CD.
- Select the Partition of the hard drive.
- Select the secondary hard drive as the destination.
- Select "Deep Scan" to search the partition.
- When scan completes, select "Partition 0". This will provide a list of all the files that are on the hard drive.
- Change the "Filter Files by Status" to "Only Deleted Files".
- Alternative: Go to options and click on "Select Partition". Choose "Raw Sectors" and recover the category of files you are interested in.



**Note:** If the Data Rescue PC program is installed on the hard drive before the files were deleted, you may run the Data Rescue PC program directly from the Operating system to scan for files. Ensure you are recovering the files onto a second hard drive to prevent overwriting any lost data from the internal hard drive.

### **External hard drive is not recognized by operating system.**

- Install Data Rescue PC on the Windows® operating system.
- Select the external hard drive device.
- Select "Next" to begin scan.
- When scan completes, select "Partition 0". This will provide a list of all the files that currently exist on the hard drive.
- Alternative: Go to options and click on "Select Partition". Choose "Raw Sectors" and recover the category of files you are interested in. Original file names are not available.

### **External hard drive was accidentally reformatted.**

- Install Data Rescue PC on the Windows® operating system.
- Select the external hard drive device.
- Select "Next" to begin scan.
- When scan completes, select "Raw Sectors".
- Recover the category of files you are interested in. Original file names are not available.

### **Accidentally deleted files from external hard drive**

- Install Data Rescue PC on the Windows® operating system.
- Select the external hard drive device.
- Select "Next" to begin scan.
- When scan completes, select "Partition 0". This will provide a list of all the files that are on the hard drive.
- Change the "Filter Files by Status" to "Only Deleted Files".
- Alternative: Go to options and click on "Select Partition". Choose "Raw Sectors" and recover the category of files you are interested in.

## Chapter 6 Frequently Asked Questions (FAQ)

### 6.1 Standard FAQ

#### a. Will Data Rescue PC recover my Word documents? Excel? (Microsoft® Office)?

If you recently lost the file and it has not been over-written or damaged by other data, Data Rescue PC can recover it.

#### b. Can Data Rescue PC recover my digital pictures/music/videos?

If you recently formatted the media or deleted the pictures (music, and videos), and they have not been over-written or damaged by other data, Data Rescue PC can recover them.

#### c. I accidentally deleted a file.

If you recently deleted the file and it has not been over-written or damaged by other data, Data Rescue PC can recover it.

#### d. If I have a problem, is there Technical Support?

Yes. Support is available before and after you purchase any of our products. Visit our website for the most current Downloads, Manuals, and Frequently Asked Questions:

Website: <http://prosoftengineering.com/support>

Phone: 1-925-426-6306.

Technical Support Hours: Monday – Friday 8:00 A.M. – 5:00 P.M. (P.S.T.).

#### e. How do I burn a bootable CD?

To create the bootable CD, you will need a Windows® XP or Vista machine with a CD burner and a blank CD-R. Please follow these steps to create the latest boot CD:

- 1) Download the latest CD update from Prosoft Engineering:  
[http://prosoftengineering.com/products/data\\_rescue\\_pc\\_update.php](http://prosoftengineering.com/products/data_rescue_pc_update.php)
- 2) Insert a blank CD-R into the CD writer drive.
- 3) Double-click on the downloaded executable file.
- 4) In the main window, the default selections are prepared to help you create the disc. Click on “OK” to proceed with creating the Disc.
- 5) Allow up to 5 minutes for the CD writer to create the boot disc. The CD will eject once the writing process is complete.
- 6) Label the CD as “Data Rescue PC3” and reinsert the disc into your machine. Your boot disc is now ready to be used.

**f. What do you mean by setting the BIOS to boot from the CD Drive?**

All computers have a BIOS to help computer software communicate with computer hardware. The computer BIOS must be set to boot from the CD Drive so that Data Rescue PC can communicate with the computer hardware. If you have problems setting the BIOS contact Technical Support.

**g. How do I know that Data Rescue PC will recover my data?**

Each file is given a specific “Status” which determines the rate of recovery. Standard Mode Users can easily follow the color-coded “Status”, while Advanced Mode Users can read the “Technical Information”.

**h. How do I purchase Data Rescue PC?**

Data Rescue PC can be purchased online:  
[http://prosoftengineering.com/products/data\\_rescue\\_pc.php](http://prosoftengineering.com/products/data_rescue_pc.php)

**i. How do I register Data Rescue PC?**

The retail box of Data Rescue PC contains the serial number in the CD case. If you have downloaded Data Rescue PC, but need to register the product immediately, the following registration options are available:

Online Registration: a Registration Key is sent via e-mail after your purchase.  
Phone Registration: 1-800-4-PROSOFT (if you only have one computer).  
Registration Hours: Monday – Friday 8:00 A.M. – 5:00 P.M. (P.S.T.)

**j. Why can't I recover data to my problem Drive?**

Data cannot be recovered to the problem drive, because the data being recovered will over-write data that still needs to be recovered. Doing this can also cause corruption to the file system, making your data permanently unrecoverable.

**k. When I try to open a file, the content looks distorted.**

If the content of a file shows distorted, call Technical Support for additional options. The cause could be over-written data, fragmentation, viruses, etc.

## 6.2 Advanced FAQ

### a. I accidentally formatted my hard drive.

A Windows Quick Format can be recovered if the data has not been over-written or damaged. A Windows Full Format low-level formats every sector. Therefore, all data most likely will be destroyed (Exception: Windows 95, 98, and ME format function acts as a Quick Format. Therefore, it can be recovered if the data has not been over-written or damaged). See Chapter [5.2/p.31](#) for tips to recover from a reformatted hard drive.

### b. I used FDISK and can't access my data.

FDISK resets the partition and boot sectors, but does not affect the data. Therefore, Data Rescue PC can recover the data.

### c. I deleted a Partition using FDISK (Partition Magic®, etc).

FDISK (and other partitioning utilities) resets the partition and boot sectors, but does not affect the data. Therefore, Data Rescue PC can recover the data.

### d. I re-installed Windows and can't access my data.

If the data has not been over-written or damaged by re-installing Windows®, Data Rescue PC can recover it.

### e. I used Ghost and my data is gone.

If the data has not been over-written or damaged by restoring the hard drive image, Data Rescue PC can recover it.

### f. I got hit by a virus.

If the virus has not physically damaged the file, Data Rescue PC can recover it.

If you have one of these error messages when booting:

'INVALID DRIVE SPECIFICATION' or 'MISSING OPERATING SYSTEM',

a virus has probably infected the Boot Sector and/or Partition Table, while leaving the rest of your file system intact. Therefore, Data Rescue PC can recover the data. See Chapter [5.2/p.31](#) for tips to recover from a virus infected hard drive.

**g. BIOS does not recognize my drive.**

If Data Rescue PC cannot access or recover your data, your media has severe file corruption or is mechanically failing (software will not solve your problem at this point). This means that professional data recovery personnel should evaluate your drive. Prosoft Engineering recommends contacting ACR Data Recovery™ for In-Lab Data Recovery Services. Visit their website for more details: <http://www.atl-datarecovery.com>, or contact them by telephone: 1-800-444-3225 or 1-770-925-4420.

**h. What operating systems are supported?**

Data Rescue PC supports all Microsoft® Windows® operating systems.

**i. What types of media are supported?**

Data Rescue PC supports Firewire and USB Devices (Compact Flash Type I, II, Microdrives, Smart Media, Secure Digital Cards, Memory Sticks, XD-Picture Cards, etc.), Zip, Jaz, Floppy Diskettes, and hard disk drives (IDE, EIDE, SCSI, ATA, SATA).

**j. Can I recover over a network?**

Yes, Data Rescue PC can recover over a network. See Chapter [4.4/p.15](#) to setup your network through Data Rescue PC.

**k. Data Rescue PC splits big files in 2GB chunks/volumes. What do I do?**

Data Rescue PC sets the default maximum file size as 2GB to properly support recovery onto FAT32 formatted hard drives and various network servers. Any files larger than 2GB will be split into 2GB chunks.

You may adjust this default value in “Preferences->Drive Settings->Destination Drive-> File Size Limit”. You may set the value to “0” to have an unlimited file size for a recovered file. Recovering files larger than 2GB is only supported when recovering onto an NTFS formatted hard drive.

**l. I am receiving an error “Windows - No Disk”. What does this mean?**

The error “Windows - No Disk” is a non-critical error by the Windows Operating System, which means there is a removable media slot that is currently empty (such as Compact Flash, SD, XD, Memory Stick, ect). This error occurs when selecting a source or destination while running the installed Data Rescue PC application on Windows. This error may repeat multiple times for each empty media slot you have available. Clicking on “Continue” in the error message will proceed past this message.

### m. Data Rescue PC is not booting on my computer. What do I do?

If the text “Cannot find KNOPPIX filesystem” is displayed while booting, this most likely means the CD is bad (scratched or downloaded with errors), or the CD Drive is unsupported (for example, newer SATA DVD drives). You may consider:

- 1) Downloading and recreating the Data Rescue PC bootable CD
- 2) Try booting the CD from a Standard IDE CD Drive

Data Rescue PC has additional options you can enable while at the Resolution Selection screen. Press F3 to enable “Other Options”, which will display a text field at the top of the screen. By default this line will display “**Boot Options** *usplash noudev quiet*”.

You may view more verbose output about the boot process, by modifying the boot options to “**Boot Options** *noudev*”. This will help display any possible issues while booting. If you are contacting technical support regarding a boot issue, please forward any information from the verbose output to help troubleshoot your issue.

If you are familiar with your system’s video card and need to override auto-detected video drivers, add “*xmodule=drv*” into Boot Options (where “*drv*” is the driver name including: *ati, fbdev, i810, mga, nv, radeon, savage, s3, radeon, svga, or vesa*).

## **ACR Data Recovery™ Services**

If Data Rescue PC cannot access or recover your data, your media has severe file corruption or is mechanically failing (software will not solve your problem at this point). This means your hard drive needs to be evaluated by professional data recovery personnel. Prosoft Engineering recommends contacting ACR Data Recovery™ for In-Lab Data Recovery Services. Please call or visit their website for more details:

Phone: 1-800-444-3225 or 1-770-925-4420  
Email: [services@atl-datarecovery.com](mailto:services@atl-datarecovery.com)  
Website: <http://www.atl-datarecovery.com>

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## Glossary

**ATA (PATA)** – Acronym for AT Attachment. An interface standard for connecting devices, such as hard drives and CD-ROM drives.

**Basic Input/Output System (BIOS)** – A system used that allows the software to interact with the hardware. Necessary to choose which drive you want to start the computer from.

**Bootling** – A process that starts loading an operating system when the computer is turned on.

**Byte** – File sizes are represented in basic units of measurements known as Bytes. Common prefixes Kilo- (K), Mega- (M), Giga- (G), and Tera- (T) will represent the size value. The following are value conversions for Byte sizes:

1024 Bytes	=	1 KB
1024 KB	=	1 MB
1024 MB	=	1 GB
1024 GB	=	1 TB

**Clone** - The process of copying a hard drive sector by sector onto another hard drive. The clone will copy the partition structure, file system format, files and free space of the original hard drive to another device.

**Deep Scan** – A scan method of Data Rescue PC that searches for any and all possible files on the hard drive. Results include any found partitions/file systems and Raw Sector results. Deep Scans may be done on the hard drive or the individual partition.

**Destination Drive** – The location where the data is being transferred. The destination drive should not be the same as the source drive to prevent overwriting data. Specifying a Destination Drive while booted from the Data Rescue PC CD will store a Scan File when the scan is completed.

**FAT32** – A common file system for Windows® formatted hard drives. Commonly used on external hard drives and memory cards. Supports file sizes up to 4GB (Gigabytes).

**FDISK** – A command-line utility used for disk partitioning. The FDISK command resets the partitions and boot sectors.

**File System** – The method in which data is stored or organized on a partition. Data Rescue PC supports FAT12, FAT16, FAT32, and NTFS file systems.

**FireWire (IEEE1394)** – A high-speed device interface commonly used for hard drives.

**Format** – The process of preparing a hard drive for use by setting up an empty file system.

**NTFS** – A common file system for Windows® formatted hard drives. Commonly used on internal hard drives. Allows storage of files greater than 4GB.

**OS** – Acronym for Operating System.

**Partition** - A Partition divides storage space on any media into isolated sections, like desks isolate working sections within an office. A hard drive can have more than one partition.

**Quick Scan** – A scan method of Data Rescue PC that searches for any data existing on an available file system. Results will include the original file names, directory structure, and date created/modified information for any files existing on the file system.

**RAID** – Acronym for Redundant Array of Inexpensive Disks. A configuration for hard drives to divide or replicate data across multiple hard drives.

**Raw Sector Scan** – A scan process that is a part of the Deep Scan Method to rebuild files based on file patterns. Results will be listed by category with generic filenames to reconstruct data. This process is ideal for recovering files that have been deleted or hard drives that have been reformatted.

**SATA** – Serial ATA computer bus is a standard high-speed hard drive interface.

**Source Drive** – The location where the files are missing.

**USB (Universal Serial Bus)** – A serial bus standard to connect various devices to a computer, including external hard drives.

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