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Introduction

What is Drive Image?

PowerQuest® Drive Image® 7.0 is a disaster recovery and backup solution. Wizards guide you through creating an exact copy, or *backup image*, of your hard drive.

Drive Image also makes it easy to copy everything from your hard drive to a new hard drive when you upgrade the hardware in your computer.

What Are the Benefits of Using Drive Image?

If you back up your computer, you can restore it after having a failure. Drive Image protects your valuable documents, pictures, financial records—and everything else you have on your computer. So if you have a catastrophic failure, instead of just getting some files back, you get the operating system, applications, and your data files from the drive. Having a good backup also lets you restore individual files and folders if necessary.

Using Drive Image protects you from the following problems:

- Virus attack
- Poorly performing software
- Faulty Internet downloads
- Hard drive failure
- Files accidentally deleted or overwritten
- Corrupted files
- Accidentally emptied the recycle bin
- Damaged hard drive partitions
- Partitions deleted by FDISK

Glossary

backup image – A file that includes all the data (including the operating system, applications, and user data) selected for backup.

backup location – Area where an image is saved. Drive Image can save images to a partition on the hard drive, a local USB or FireWire drive, a network directory, or external media such as a CD or DVD.

create – The process of saving the files that make up the operating system, applications, and data on a hard drive into an image, which can be compressed and stored in a separate location for backup.

drive – A partition on your hard drive or on a network that has been assigned a drive letter, such as C:\.

PQRE – The PowerQuest Recovery Environment, used for recovering data when Windows is not operable on the backed up machine.

restore – The process of converting an image into files that make up the operating system, applications, and data on a hard drive.

See the glossary in the Drive Image user guide (UserGuide.pdf) on the Drive Image CD for more glossary definitions.

Troubleshooting

The Drive Image online help includes troubleshooting information. Click **Help > Contents** to display the online help.

The knowledge base at the PowerQuest web site, www.powerquest.com/support, also includes helpful troubleshooting information.

Getting More Information

This quick start guide is only a brief overview of the features available in Drive Image. For details beyond what is included in this manual, refer to the online help (**Help > Contents**) or the manual that is in PDF format in the \English\Docs folder on the Drive Image CD.

Drive Image for Windows 2000, Windows XP

Getting Started

How Does Drive Image Work?

You do not have to choose individual files or folders to include in a backup image. Instead, you choose a drive to back up; Drive Image copies the contents of that drive into a file called a backup image.

You can save the backup image to a hard drive, a local USB or FireWire drive, a network drive, or to removable media.

When you experience a problem with your computer or if you need to recover a file or folder for any reason, you can restore a file, folder, or an entire drive from your existing backups.

What's New in Version 7.0?

- **Improved network support** – Previous versions of Drive Image required the use of Boot Disk Builder to save some backups to a network. In Drive Image 7.0, network support is built in, with no additional setup needed. Drive Image 7.0 also supports saving backup images to a shared network drive on a peer-to-peer network.

- **Hot backups** – Previous versions of Drive Image sometimes used DOS to create the actual backup images. Drive Image 7.0 creates backups “hot,” without leaving Windows.
- **Ability to save backups to USB and FireWire drives and to DVD** – With Drive Image 7.0, you can save backups to USB and FireWire drives and to DVD—as well as to a local drive, network drive, or other removable media (such as CD-R, CD-R/W, Zip, or Jaz drives).
- **ImageExplorer renamed** – With version 7.0, ImageExplorer has been redesigned and renamed Backup Image Browser.

System Requirements

Operating system	Windows 2000 Professional, Windows XP Home, Windows XP Professional For other operating systems, see “Drive Image for Windows 95, 98, Me, NT 4.0 Workstation” on page 19.
Processor	Pentium 150 MHz or faster
RAM	256 MB
Hard drive free space	45 MB for program files Storage space for your backup images, unless you choose to store them to a network or on removable media (The amount of space required for backups depends on the amount and type of files you back up.)

CD or DVD drive

To see a list of supported drives, go to www.powerquest.com/driveimage.

To run the PQRE, you must be able to boot your machine from the CD or DVD drive, which usually requires making a change to BIOS settings. See the Drive Image online help for instructions on making the CD or DVD drive bootable.

Software

When you install Drive Image, you will be prompted to install the Microsoft .NET Framework if it has not already been installed. (Requires 40 MB of hard drive space)

Installing Drive Image

- 1** Insert the Drive Image CD. If the CD browser screen does not appear automatically, browse the CD and double-click **AUTORUN.EXE**.
- 2** *(If prompted)* Install the Microsoft .NET Framework.
- 3** From the CD browser screen, click **Install**.
- 4** At the welcome screen, click **Next**.
- 5** Read the license agreement. Select **I accept the terms in the license agreement**, then click **Next**.
- 6** *(Optional)* Click **Change** if you want to change the default location for the Drive Image program files.
- 7** Click **Next**.

- 8** Click **Yes** or **No** to specify whether you will use Drive Image with a network.
- 9** If you have a network, the **Agent Setup** screen appears. Type a user name, domain or computer name, and password that will give Drive Image read-write access to the network for saving and restoring backups. Then click **Next**.

The user information you provide must have administrative rights to the machine where the backup images will be stored.

- 10** Review the summary information, then click **Install**.

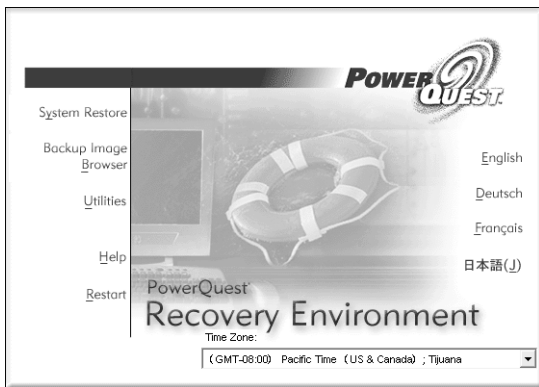
A progress screen shows the status of the installation.

- 11** Click **Finish** when the install is complete.

Testing the PQRE

As part of the installation process, you should test the PQRE to ensure it runs properly on your system. To test the PQRE, insert the Drive Image CD and boot your computer. (See the Drive Image online help for instructions on making your computer boot from a CD.)

The PQRE should run, displaying the following menu.



If the PQRE does not run as expected, you can take action early to fix the problems. Then if your backed up machine experiences a catastrophic failure later, you'll be assured that you can run the PQRE to recover the system or your data.

The Drive Image online help and PDF user guide include PQRE troubleshooting information.

Activating Drive Image

You must activate Drive Image. Otherwise, the software will expire in 30 days.

- 1 From the Drive Image main screen, click **Help > Activate Product**.

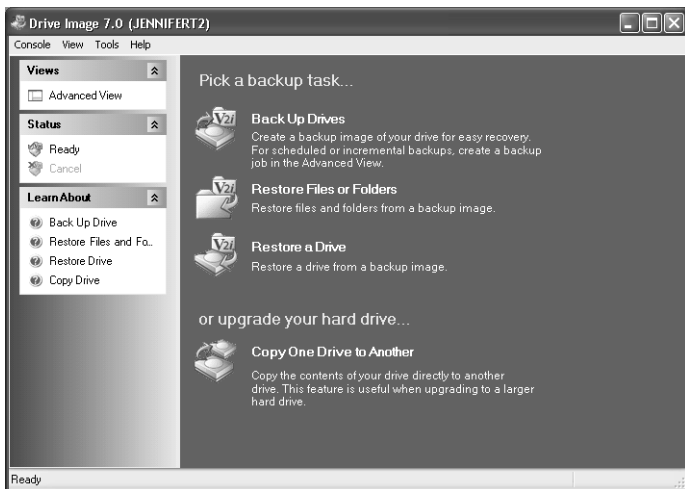


- 2 Read the license agreement, then select **Accept license agreement** to indicate that you accept the terms of the license agreement.
- 3 If you do not have a serial number for Drive Image (because you have not purchased the software), click **Buy Now** to pay for the software and receive a serial number.
- 4 Type the Drive Image serial number from the DVD case or from the e-mail message you received from PowerQuest.
- 5 Click **OK**.

The licensor distinguishes your computer from others without storing information about you or your computer's hardware and software. Activating your software may trigger an optional registration. Registration data is generally used for demographic purposes and is not resold. You can opt out of marketing-oriented uses of your data as part of registration.

Starting Drive Image

1 Click Start > Programs > PowerQuest Drive Image 7.0.

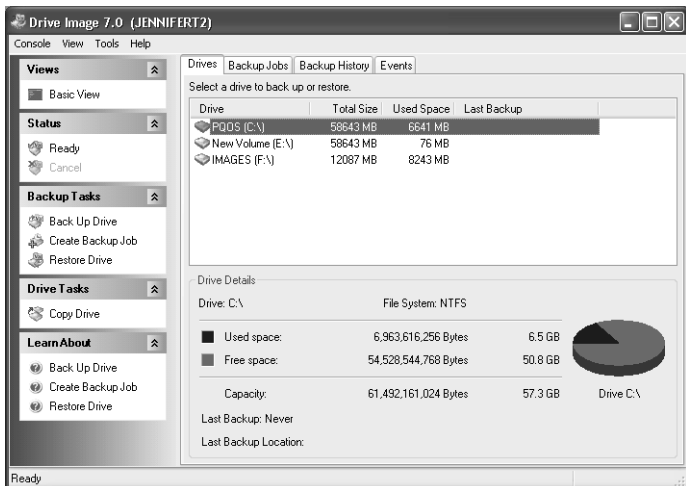


Basic and Advanced Views

Drive Image includes two views. The basic view (shown above) is the default. It includes a menu bar, icons for common tasks in the right pane, and shortcuts for switching views and doing tasks in the left pane.

The basic view provides quick, easy access to the most commonly used features.

From the basic view, you can click **View > Advanced** to display the advanced view.



The advanced view provides a quick overview of the drives on the machine, backup jobs you have created, the backup history for each drive, and Drive Image-related event messages.

From the basic view, you can choose to back up a drive immediately. The advanced view lets you create backup *jobs* to schedule backups for the future and choose a regular schedule to repeat backups.

PowerQuest Backup Image Browser

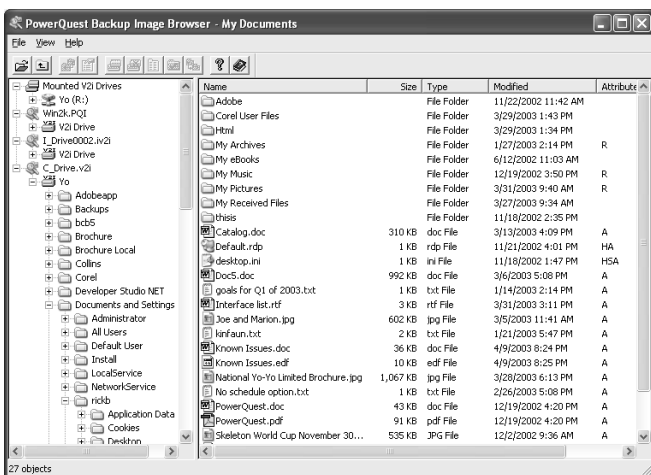
The Backup Image Browser, included with Drive Image, simplifies the management and maintenance of your backup image files. Working within a single screen, you can view backup image file

contents, restore individual program and data files from the backup image, or you can mount a selected volume and share it across a network.

Opening the PowerQuest Backup Image Browser

- 1 From the Windows Start menu, click **Programs > PowerQuest Drive Image > Backup Image Browser**.

All the features of Backup Image Browser are accessed from the main program screen or by right-clicking anywhere in the tree pane.



Tree pane – Shows a hierarchical tree view of all the backup image files that you have opened in the Backup Image Browser. From the left pane, you can:

- Mount or dismount a volume inside a backup image.
- Verify that the selected backup image file is valid.
- Browse folders inside a backup image.

- View the properties of a selected backup image file.
- Open or close backup image files.

Content pane – Shows the contents of the selected drive, folder, backup image file, or volume. From the content pane, you can:

- Restore selected files and folders from a backup image file.
- Mount or dismount a volume inside a backup image.
- View the contents of a selected file.
- View the properties of a selected volume.

Where Do I Go From Here?

Here's a list of the things you can do with Drive Image, along with pointers on how to get started.

What can I do?	How do I get there?
Back up a drive now.	From the right panel of the basic view, click Back Up Drives .
Back up a drive later.	From the left panel of the advanced view, click Create Backup Job .
Back up a whole drive on a regular schedule.	From the left panel of the advanced view, click Create Backup Job .
See the backups I have scheduled.	From the advanced view, click the Backup Jobs tab.
Restore a file or folder from a backup image.	From the right panel of the basic view, click Restore Files or Folders .

What can I do?	How do I get there?
Restore a backup image from within Windows.	From the right panel of the basic view, click Restore a Drive .
Restore a backup to recover a crashed machine.	Boot from the Drive Image CD to run the PowerQuest Recovery Environment.
See the history of backups done on a drive.	From the advanced view, click the Backup History tab.
Set a default location for backup images.	From the menu bar, click Tools > Options .
Copy the contents of my hard drive to a new hard drive.	From the right panel of the basic view, click Copy One Drive to Another .
Check to see if my backups are working the way they are supposed to.	From the advanced view, click the Events tab.
Send e-mail if backups do not work as planned.	From the menu bar, click Tools > Options , then click the Notifications tab.

Creating Backup Images

When you create a backup, Drive Image takes a snapshot of your hard drive at a single point-in-time and saves it as a backup image (a *.V2i file).

You may want to read “Deciding Where to Store Backups” on page 15 before you back up your drives.

Creating a Single Backup

It is useful to create a backup if you are about to install a new product, some critical files have changed, or many file changes have occurred in a session, and you want to create a backup immediately.

- 1 From the basic view, click **Back Up Drives**.



- 2 Follow the instructions in the wizard. If you want more detailed instructions, see the Drive Image online help or the Drive Image user guide.

Scheduling Backups

You can create backups at regular intervals you specify, such as every week or every month. You do so by creating backup jobs.

- 1 From the advanced view, click the **Drives** tab, then click **Tools > Create Backup Job**.

- 2** Complete the wizard, choosing the type of backup you want to create, where you want to save the backup image files, the schedule for creating backups, and other options.

Deciding Where to Store Backups

You can save backup images to a local hard drive, local removable media, a network drive, or local USB or FireWire drives. Each option has advantages and disadvantages.

	Advantages	Disadvantages
Hard drive	Fast create and restore	Uses valuable drive space
	Can schedule unattended backups	Vulnerable to loss if the hard drive fails
	Inexpensive because drive space can be overwritten repeatedly	
Removable media (local)	Protection from hard drive failure	Cannot create unattended backups; process is manual
	Ideal for off-site storage	Media can be expensive
	Reserves hard drive space for other uses	Restore can be slower than from other locations, especially for individual files and folders

	Advantages	Disadvantages
USB/FireWire drive (local)	Fast create and restore	Additional expense for the drive itself
	Can schedule unattended backups	Must have supported storage device
	Drive space can be overwritten repeatedly	drivers to restore from the PQRE; could require additional media along with the
	Off-site storage is possible	PowerQuest recovery CD
	Reserves hard drive space for other uses	
Network drive	Fast create and restore	Must have supported NIC drivers to restore from the PQRE
	Can schedule unattended backups	Must understand and assign the
	Inexpensive because drive space can be overwritten repeatedly	appropriate rights for backups and restores
	Protection from local hard drive failure	

Restoring Backups

You can restore an entire backup, or you can restore files and folders from a backup. The following chart is an overview of the restore options and how to perform each type of restore.

Problem	How to restore needed backup
You can run Windows, but you have lost data, programs, or hardware files on a drive.	From the basic view, click Restore Files or Folders to start the Backup Image Browser. See “Using Backup Image Browser” on page 18.
You cannot run Windows and you have lost data, programs, or hardware files on a drive.	Boot your machine using the Drive Image CD to start the PowerQuest Recovery Environment (PQRE). From the PQRE menu, select Backup Image Browser . See “PQRE Troubleshooting” on page 18.
You can run Windows, but you want to restore your machine to a point in time contained in a backup image.	From the basic view, click Restore a Drive . Complete the wizard to restore one of your backups.
Your machine has suffered a catastrophic failure. You cannot run Windows, and you need to restore a backup.	Boot your machine using the Drive Image CD to start the PQRE. From the PQRE menu, select System Restore . Complete the wizard to restore one of your backups.

PQRE Troubleshooting

The PQRE can take a while to start up, so do not be alarmed if that is the case.

If you cannot boot your machine from the Drive Image CD to run the PQRE, you may need to modify your system BIOS to make the CD or DVD a bootable drive.

When you start the PQRE, you may not see your storage device or network drives. You may need to load the appropriate drivers as you boot to the PQRE.

See the “PQRE Troubleshooting” section of the Drive Image online help or user guide for information about solving any PQRE issues.

Using Backup Image Browser

You can restore files and folders from a backup image using Backup Image Browser.

- 1** In the left pane, browse to the backup image (*.V2i).
- 2** Double-click the backup image in the left pane to display the available folders and files.
- 3** To display files, double-click folders in the backup image.
- 4** Select the file or folder you want to restore, then click **File > Restore**.

Copying Drives

You can use Drive Image to copy the operating system, applications, and data from one hard drive to another. This is especially useful if you are upgrading to a larger hard drive.

You can also use this feature to create a backup that is not compressed and saved as a backup image (*.V2i file).

You must have your hardware configured correctly before you can copy data from one drive to another. The Drive Image user guide and online help include additional information about preparing to copy drives.

- 1 From the basic view, click **Copy One Drive to Another**.
- 2 The wizard will guide you through selecting the right drive to copy, the destination drive, and the options for copying the data from one drive to another.

Copying drives is like a create and restore operation combined. Drive Image copies all the data from one hard drive to another without creating an image file (*.V2i) in the process.

Drive Image for Windows 95, 98, Me, NT 4.0 Workstation

Drive Image 7.0 does not run under Windows 9x, Windows Me, or Windows NT 4.0 Workstation. If you have one of these operating systems, use the Drive Image CD that is marked for your operating system.

Getting Started

System Requirements

Under these operating systems, Drive Image requires a Pentium-compatible processor or higher, 32 MB RAM, 35 MB of hard drive space, a CD drive (any speed), and a high-density floppy disk drive.

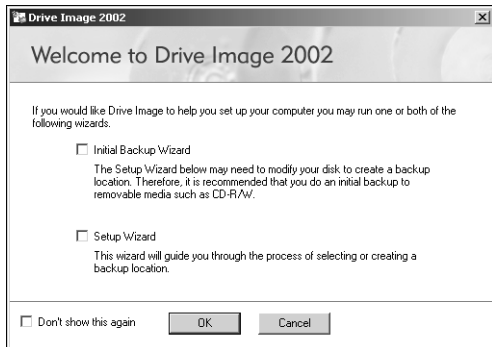
Installing Drive Image

- 1 Insert the appropriate Drive Image CD into your CD drive.
- 2 If CD auto-run is enabled, the CD browser is displayed automatically when you place the Drive Image CD in your CD drive. If the CD auto-run is not enabled, insert the CD, click **Start > Run**, then type `drive:\AUTORUN` (where *drive* is the drive letter of your CD drive), then click **OK**.
- 3 Choose the option that matches what you want to do.

You will be presented with an option to install Iomega, SCSI, and Fujitsu drivers. You do not need these drivers unless you have Iomega, SCSI, or Fujitsu hardware that requires them.

Using Drive Image the First Time

When you use Drive Image the first time, you are prompted to run one of two wizards.



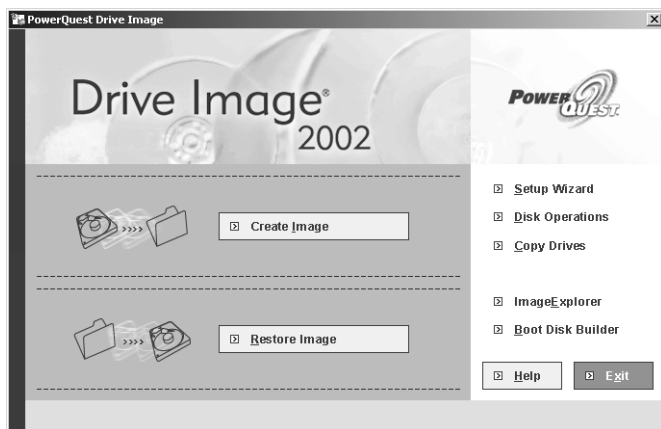
- Run the Initial Backup wizard if you want to create a backup to CD-R or CD-R/W. (Check www.powerquest.com/driveimage to see that your CD drive is supported.)

- Run the Setup wizard if you want to make a special area (partition) on your hard drive for backups. The setup wizard will divide your hard drive, so some will be used for your existing data and some will be reserved for backup images.

Click **Cancel** if you do not want to run either wizard.

Creating Backup Images

- 1 Close all applications except Drive Image.
- 2 Click **Start > Programs > PowerQuest > PowerQuest Drive Image 2002 > Drive Image 2002**.



- 3 Click **Create Image**.

Shortcut: If you have created a backup image previously, the overview screen displays the settings that you used before. You can click **Finish** to create another image using the same settings.

- 4** Click **Select Drives** to select the drives that you want to include in the backup image. Click the checkbox to the left of the drives you want to back up.
- 5** Click **Select Destination** to choose where the image will be saved.
- 6** Click a drive in the **Select location for image file** box, or click **Browse** to select a filename and location for the image.

To save a backup to a network drive, you must create Drive Image network boot diskettes using Boot Disk Builder, then use those diskettes to create the backup image. The network diskettes enable Drive Image to see the network drive from DOS boot mode. See “Using Drive Image 2002 with Network Drives” in the Drive Image quick start guide (DM2002.pdf in the \English\Docs folder on the Drive Image CD).

- 7** *(Optional)* Click **Options** to select the compression level for the image, add a password to the image, split the image into multiple files, check for file system errors before creating the image, verify disk writes when creating the image, or verify image contents after creating the image.

For details about these options, click **Help** from the Options screen.

- 8** *(Optional)* Click **Schedule** to set a time for the image to be created if you do not want to create it immediately.
- 9** Click **Finish**.
- 10** If you are creating a backup image of the drive that includes your operating system or a drive that includes open files, click **Yes** to reboot the machine so Drive Image can create the image in boot mode.

If you save an image to removable media, Drive Image will automatically span it across media as needed. The first segment of the image will have a PQI extension. Subsequent segments will be named with .001, .002, and so forth. For example, if your image spans two CDs, it might be named MyBackup.pqi and MyBackup.001.

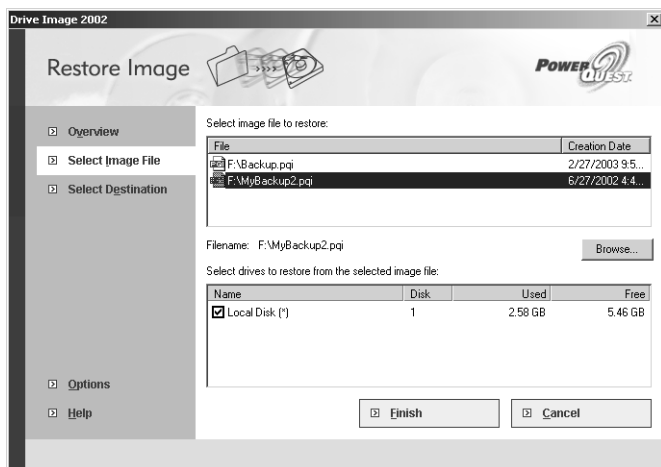
Restoring Backups

If your computer is not performing well, you can restore a backup image to return the computer to the state it was in when you created the backup image. Any changes you made on your computer after creating the backup image (such as installing applications or saving data files) are lost when you restore the image.

If you only want to restore files or folders from a backup, see “Restoring Files and Folders” on page 25.

- 1 From the Drive Image main screen, click **Restore Image**. The currently selected settings appear on the Overview screen.
- 2 Click **Select Image File**.

- 3** Select an image from the list, or click **Browse** to find the image.



- 4** Click the checkboxes for the drives you want to restore.
- 5** Click **Select Destination**, and click the partition or unallocated space where you want the image to be restored. If you select a partition, it will be deleted before the backup image is restored.
- 6** (Optional) Click the **Restore to original locations** checkbox if you want to restore the partitions to the location they were created from.
- 7** (Optional) To free up space for restoring partitions, click the checkbox for a partition, then click **Delete Partition**. This operation can be undone by clicking **Undo Delete**.

- 8** (Optional) Click **Options** to change settings that affect how the image is restored, whether drives are hidden after they are restored, and whether drives should be restored as primary/logical drives or just logical drives. Click **Help** at the Options screen to display information about these settings.
- 9** Click **Finish**.
- 10** If your machine is set to boot from the CD drive first, remove the CD from the drive after you click Finish.

When Drive Image is ready to pull the image from the CD, you will be prompted to reinsert it. If you do not remove the CD, Drive Image DOS will boot from the CD, prompting you to choose the image and destination again. (If your computer is not set to boot from the CD drive first, this step is unnecessary.)
- 11** After restoring an image from a CD, remove the CD from the drive.

Restoring Files and Folders

ImageExplorer allows you to browse your backup images and restore files and folders from backups.

- 1** Click **Start > Programs > PowerQuest > PowerQuest Drive Image 2002 > ImageExplorer**, or click **ImageExplorer** from the Drive Image main screen.

ImageExplorer works much like Backup Image Browser for restoring files and folders from a backup. See “Using Backup Image Browser” on page 18. You will browse to the *.PQI file instead of a *V2i file.

Copying Drives

You can use Drive Image to copy the operating system, applications, and data from one hard drive to another. This is especially useful if you are upgrading to a larger hard drive.

You can also use this feature to create a backup that is not compressed and saved as a backup image (*.PQI file).

You must have your hardware configured correctly before you can copy data from one drive to another. The CopyDrives.pdf file in the \English\Docs folder on the Drive Image CD gives instructions for copying drives, including the hardware setup required for upgrading to a new hard drive.

PowerQuest Technical Support

You must furnish your product license (serial) number when you contact PowerQuest for technical support.

Technical support for PowerQuest products is available beginning with the release of the product and ending six months after the release of the next major version of the product or after PowerQuest discontinues the product line.

Complimentary Technical Support

PowerQuest's complimentary technical support consists of self-help support tools that are available at www.powerquest.com/support (in English only).

- An easy-to-use, powerful knowledge base that helps you find answers to the most frequently asked product questions, as well as “how-to” procedures and technical information about all PowerQuest products.

- Easy-to-use video clips that step you through product features.

E-Mail Support

Requests for e-mail support in North America are processed 8:00 am to 5:00 pm MST, Monday through Friday. To obtain e-mail technical support for specific technical questions, fill out the form at www.powerquest.com/support/emsupport.cfm. You can choose an English, German, or French form from the **Language** drop-down list.

Fee-Based Support

PowerQuest's fee-based technical support program consists of live telephone support during regular business hours (8:00 a.m. to 5:00 p.m. MST, Monday through Friday). Step-by-step consultations on product features and functionality fall under the fee-based support program.

Language	Location	Telephone Number and Fee
English	U.S.A.	800-757-5049 at \$30.00 USD per incident, charged to a credit card
English	U.K.	+44 (0)20 7341 5517 at \$30.00 USD or €34.50 (Euros) per incident, charged to a credit card
French	France	+33 (0)1 69 32 49 30 at \$30.00 USD or €34.50 (Euros) per incident, charged to a credit card
German	Germany	+49 (0)69 66 568 516 at \$30.00 USD or €34.50 (Euros) per incident, charged to a credit card

Fee-Based After-Hours Support

PowerQuest offers fee-based after-hours support by telephone only. After-hours support is designed for anyone who requires support outside of regular business hours (8:00 a.m. to 5:00 p.m. MST, Monday through Friday). The price is \$95.00 USD per incident.

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