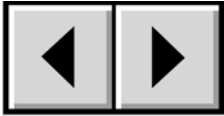
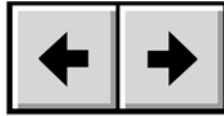


## How To Use This Manual

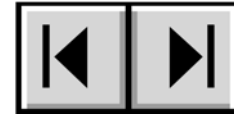
### In the toolbar:



Previous Page / Next Page



Go to Previous View / Go to Next View



Go to Contents Page / Go to Precautions Page

### On the page:

Click on the text within the Contents page to jump to information on that topic.

Click on any **red text** to automatically jump to more information about that topic.

### Printing:

While optimized for onscreen viewing, the pages of this manual are formatted for printing on 8 1/2" x 11" and A4 sized paper, giving you the option to print the entire manual or just a specific page or section.

### To Exit:

From the Menu bar at the top of your screen, select: File > Quit.

## Icons Used In This Manual

Italicized paragraphs feature an icon describing the type of information being given.



**Important Info:** *This icon refers to an important step that must be followed.*



**Tech Note:** *This icon refers to tips to help maximize performance.*



**Caution!** *This icon indicates a potential hazard, and gives tips on how to avoid them.*

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### Changes

The material in this document is for information only and subject to change without notice. While reasonable efforts have been made in the preparation of this document to assure its accuracy, LaCie assumes no liability resulting from errors or omissions in this document, or from the use of the information contained herein. LaCie reserves the right to make changes or revisions in the product design or the product manual without reservation and without obligation to notify any person of such revisions and changes.

### FCC Statement:



**Caution!** *Modifications not authorized by the manufacturer may void the user's authority to operate this device.*

NOTE: This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

LaCie Data Bank



Tested To Comply  
With FCC standards

FOR HOME OR OFFICE USE

NOTE: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try and correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

### **Canada Compliance Statement**

This Class A digital apparatus meets all requirements of the Canadian Interference-Causing Equipment Regulations.

### **Manufacturer's Declaration for CE Certification**

We, LaCie, solemnly declare that this product conforms to the following European standards:

Class B EN60950, EN55022, EN50082-1, EN61000-3-2



With reference to the following conditions:

73/23/EEC Low Voltage Directive

89/336/EEC EMC Directive

## Health And Safety Precautions

Only qualified persons are authorized to carry out maintenance on this device.

- Read this User's Guide carefully, and follow the correct procedure when setting up the device.
- Do not open your hard drive or attempt to disassemble or modify it. Never insert any metallic object into the drive to avoid any risk of electrical shock, fire, short-circuiting or dangerous emissions. Your hard drive contains no user-serviceable parts. If it appears to be malfunctioning, have it inspected by a qualified LaCie Technical Support representative.
- Never expose your device to rain, or use it near water, or in damp or wet conditions. Never place objects containing liquids on the drive, as they may spill into its openings. Doing so increases the risk of electrical shock, short-circuiting, fire or personal injury.

### General Use Precautions:

- Do not expose the hard drive to temperatures outside the range of 5° C to 45° C (41° F to 104° F). Doing so may damage the drive or disfigure its casing. Avoid placing your drive near a source of heat or exposing it to sunlight (even through a window). Inversely, placing your drive in an environment that is too cold or humid may damage the unit.
- Always unplug the hard drive from the electrical outlet if there is a risk of lightning or if it will be unused for an extended period of time. Otherwise, there is an increased risk of electrical shock, short-circuiting or fire.
- Do not use the hard drive near other electrical appliances such as televisions, radios or speakers. Doing so may cause interference which will adversely affect the operation of the other products.
- Do not place the drive near sources of magnetic interference, such as computer displays, televisions or speakers. Magnetic interference can affect the operation and stability of your hard drive.
- Do not place heavy objects on top of the drive or use excessive force on it.
- Never use excessive force on your drive. If you detect a problem, consult the "Troubleshooting" section in this manual.
- Protect your hard drive from excessive exposure to dust during use or storage. Dust can build up inside the device, increasing the risk of damage or malfunction.
- Never use benzene, paint thinners, detergent or other chemical products to clean the outside of the drive. Such products will disfigure and discolor the casing. Instead, use a soft, dry cloth to wipe the device.



**Caution!** *The drive's warranty may be void as a result of the failure to respect the precautions listed above.*

## 1. Introduction

Since our inception over fifteen years ago, LaCie's engineers have followed a design philosophy of merging superior performance, technological perfection and style. The LaCie Data Bank represents the synthesis of this effort.

A new interpretation of personal and work luxury for portable computing, no longer will you be forced to carry multiple cables, power supplies or heavy devices. The LaCie Data Bank is powered by your computer\* — simply attach the drive to your computer's available USB port and begin computing immediately.



The LaCie Data Bank offers you unparalleled compactness and unheralded portability. Handsomely crafted out of molded magnesium, the LaCie Data Bank offers plug and play connectivity and a generous storage capacity in a drive that fits easily in a small pocket.

We are confident that you will find the LaCie Data Bank Hard Drive to be a well-appointed drive, capable of meeting all of your personal and business computing needs.



**Tech Note:** \*The LaCie Data Bank does not require a power supply for computers equipped with a standard bus-powered USB port. Some USB hubs or boards are not powered; please contact your reseller or LaCie Technical Support for more information.

### 1.1. What Your LaCie Drive Can Do

- Connects to all of the USB standard interfaces.
- Travel with important files and presentations.
- Store and exchange data between several computers.

## 2. Your LaCie Drive

### 2.1. Minimum System Requirements



#### Windows Users

##### Hardware Requirements:

- Pentium II or higher -compatible processor, with a USB powered port
- 32MB RAM or greater

##### System Requirements:

- Windows 98 SE, Windows Me, Windows 2000, and Windows XP



#### Mac Users

##### Hardware Requirements:

- G3 or greater, with a USB powered port

##### System Requirements:

- OS 9.x (Apple USB support 1.3.5 and greater) and 10.x

### 2.2. Package Contents And Views Of The Drive

#### 2.2.1. Package Contents

- 1 LaCie Data Bank
- 2 Hi-Speed USB 2.0 cable (about 60cm)
- 3 Hi-Speed USB 2.0 cable (about 12cm)
- 4 LaCie Storage Utilities CD-ROM



### 2.2.2. Views Of The Drive

- 1 **Activity LED** – This light shows you that the drive is powered on and also shows when the disk is being accessed for read-write operations.
- 2 **Hi-Speed USB 2.0 Port** – This is where you plug in the Hi-Speed USB 2.0 cable shipped with your drive. Please see section [3.1. Connecting The Drive To Your Computer](#) for more information.
- 3 **Optional Power Supply Port** – This is where you plug in the optional USB Power Sharing Cable. Please see section [3.2. Connecting The Optional Power Sharing Cable](#) for more information. (This cable is sold separately)



## 2.3. Cables and Connectors

### USB

USB is a serial input/output technology for connecting peripheral devices to a computer or to each other. Hi-Speed USB 2.0 is the latest implementation of this standard, and it provides the necessary bandwidth and data transfer rates to support high-speed devices such as hard drives, CD/DVD drives and digital cameras.

Benefits of the USB standard include:

- Backwards compatibility: Hi-Speed USB 2.0 works with the original USB specifications.
- Hot-swappable: no need to shut down or restart your computer when adding or removing devices.

Please see [USB Questions And Answers](#) for a more detailed discussion of USB's uses and capabilities.

### USB Icons

These icons will help you easily identify the USB interfaces. They appear on USB cables and next to the USB port connectors on certain computers.



USB 1.1 icon



USB 2.0 icon

### USB Cables

Your LaCie drive is shipped with a Hi-Speed USB 2.0 cable, to ensure maximum data transfer performance when connected to a Hi-Speed USB 2.0 port. The cable will also work when connected to a USB port, but drive performance will be limited to USB 1.1 transfer rates.



**Hi-Speed USB 2.0 cable:** Connects USB devices to USB ports.



## 3. Installing Your LaCie Drive

Follow these steps to quickly get your LaCie Drive powered on and connected to your computer. Click on a step to get started!

### [3.1. Connecting The LaCie Drive To Your Computer](#)

Once you've gotten the drive connected to your computer, move on to section [4. Using Your LaCie Drive](#) for important information on how to format and utilize your drive.



**Tech Note:** *\*The LaCie Data Bank does not require a power supply for computers equipped with a standard bus-powered USB port. Some USB hubs or boards are not powered; if your computer's USB hub or bus does not provide the necessary power to operate your drive, use an optional power sharing cable to turn on your drive. See section [3.2 Connecting the Optional Power Sharing Cable](#) for instructions. (This cable is sold separately)*

### Windows 98 SE and Windows Me Users!

### Mac OS 9.x Users!

Before following the rest of the installation steps, first install this important software to help you configure and manage your LaCie drive.

- Windows 98 SE and Windows Me Users, click [here](#)
- Mac OS 9.x Users, click [here](#)

## Windows 98 SE and Windows Me Users

To use your new LaCie Hard Drive, first install the necessary driver software and then Silverlining 98. Follow the steps below to install the necessary drivers and software to configure your drive. Then move on to [3.1. Connecting Your LaCie Drive To Your Computer](#).

### Silverlining 98 and USB 2.0 Driver Installation

#### Step 1

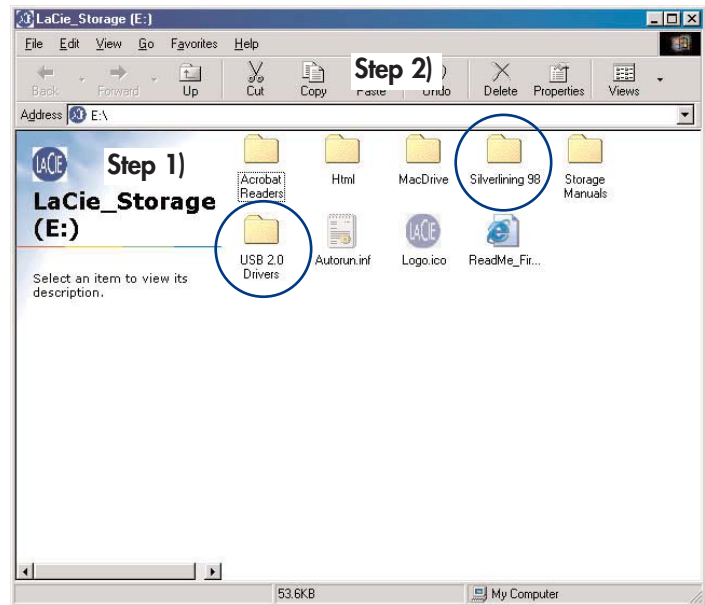
Insert the LaCie Storage Utilities CD-ROM in your computer's internal CD/DVD drive and open the disc.

- A) Double-click the **USB 2.0 Drivers Install** folder.
- B) Double-click on the **LaCie\_USB\_Driver\_Install.exe** icon. The **LaCie USB2 Storage Driver** screen will appear. Click on **Next**.
- C) Installation will finish automatically.

#### Step 2

Re-open the LaCie Storage Utilities CD-ROM.

- A) Double-click the **Silverlining 98** folder.
- B) Double-click the **Silverlining98\_Install.EXE** icon.
- C) Silverlining 98 will then initialize the install screen.
- D) The "Welcome" screen will appear. Click **Next**.
- E) The "Destination Location" screen will appear. To alter the location where the software is installed on your system, click the **Browse** button. If you do not want to change the location, do not click on the **Browse** button, and allow the software to be installed in its default location. Click **Next** to continue.
- F) Next is the "Start Installation" screen. Click **Next**.
- G) The software installation will begin, and you will see the installation screens.
- H) Finally, you will see the "Silverlining 98 has been installed correctly" screen. Click **Finish** to complete the installation.

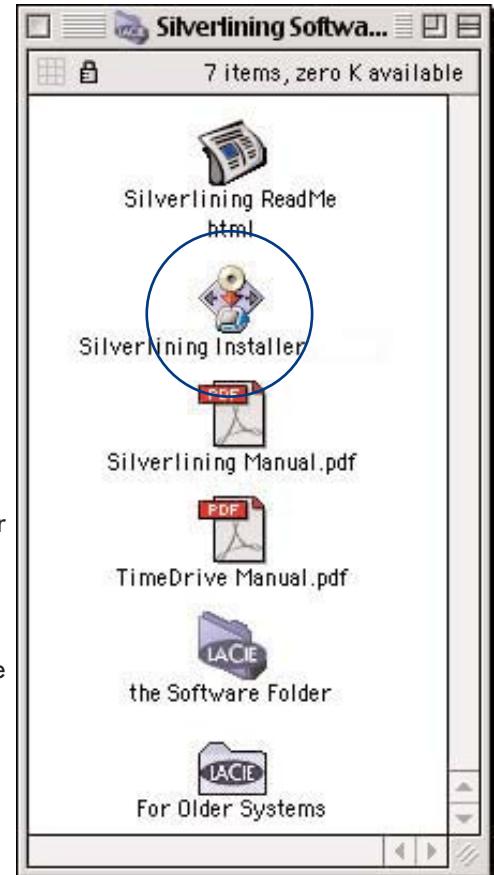


## Mac OS 9.x Users


Before connecting the power supply and USB cable to your drive, you will need to install Silverlining Pro, which will help you manage your drive. Follow the steps below to install the necessary drivers and software to configure your drive. Then move on to [3.1. Connecting Your LaCie Drive To Your Computer](#).

### Silverlining Pro Installation


- 1) Insert the LaCie Storage Utilities CD-ROM in your computer's internal CD/DVD drive.
- 2) Open the CD icon and double-click on the **Silverlining Software** folder.
- 3) Click on the Silverlining Installer icon.
- 4) The **Silverlining Utilities** screen appears. Click on **Continue**.
- 5) The "Silverlining Read Me" screen appears. Read the following information and click on **Continue**.
- 6) The "License Agreement" screen appears. Click on **Agree**.
- 7) The "Installation" screen appears. Choose either Easy Install, Custom Install or Uninstall from the pull-down menu in the upper left-hand side of the "Installation" screen. Once you've made your choice, click on **Install**.
- 8) A message appears to confirm that the installation was successful. Now move on to [3.1. Connecting Your LaCie Drive To Your Computer](#).



### 3.1. Connecting The LaCie Drive To Your Computer

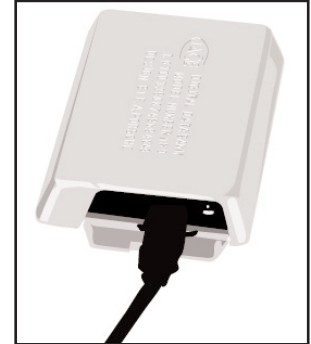
 **Tech Note:** \*The LaCie Data Bank does not require a power supply for computers equipped with a standard bus-powered USB port. Some USB hubs or boards are not powered; if your computer's USB hub or bus does not provide the necessary power to operate your drive, use the optional power sharing cable to turn on your drive. See section [3.2 Connecting the Optional Power Sharing Cable](#) for instructions.


1 Connect the Hi-Speed USB 2.0 cable into the Hi-Speed USB 2.0 port on the back of the LaCie Data Bank.

 **Tech Note:** For more information about USB, please see sections:

- [2.3.1. USB](#)
- [5.3. Optimizing Data Transfers](#)
- [6. USB Questions & Answers](#)

2 Connect the other end of the Hi-Speed USB 2.0 cable into an available USB port\* on your computer. The LaCie Data Bank's Activity LED should now light on; if it does not, use the optional USB Power Sharing Cable.



 **Tech Note:** To achieve Hi-Speed USB 2.0 transfer rates, you have to be connected to a Hi-Speed USB 2.0 port on your computer. Otherwise, you will be limited to USB 1.1 data transfer rates.

3 **Windows Users**  
Go to **My Computer** and look for your drive. It may take a few seconds for your computer to recognize the drive and assign it a letter.

**Mac Users**  
An icon for your drive should appear on your computer's desktop. It may take a few seconds for your computer to recognize the drive.

Your LaCie Drive will now be ready for use. Now you will be able to format and partition the drive to suit your needs. Please see [4.1. Formatting And Partitioning Your LaCie Drive](#) for more information.

### 3.2. Connecting an optional Power Sharing Cable (sold separately)

In the event that the USB bus on your computer does not provide the necessary power to operate your drive, a power supply adapter cable (sold separately) will derive the necessary power to operate the drive.

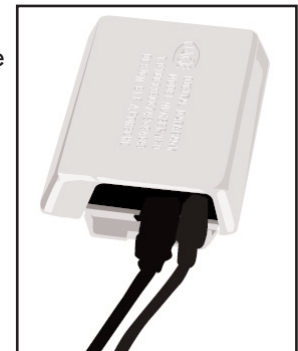
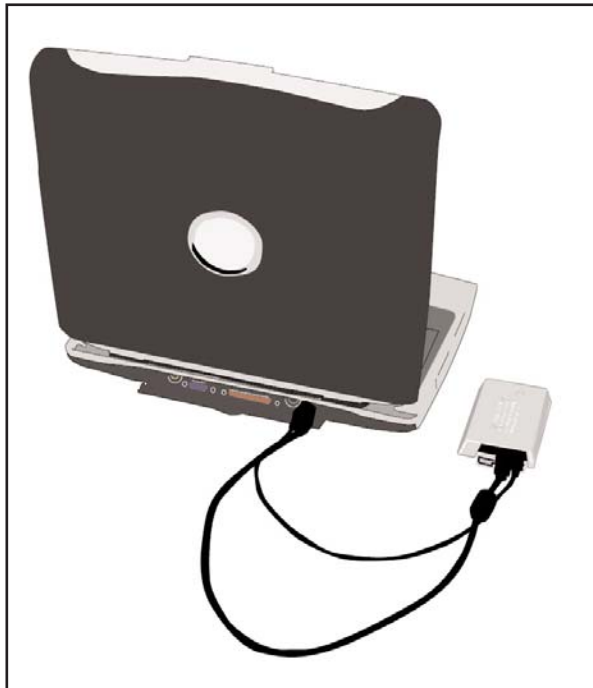
The USB power supply adapter cable connects to an available USB port on your computer.

In case neither of these options work with your specific computer configuration, LaCie offers an optional power supply, sold separately. Please contact your LaCie reseller or LaCie Customer Service for more information.

#### USB Power Sharing Cable

The USB ports (either USB 2.0 or USB 1.1) on your computer will help provide power to your LaCie drive in the instance that your bus does not supply the necessary power to operate your drive.

- 1 Attach the small end of the USB Power Sharing Cable to the back of your LaCie drive.
- 2 Attach the USB end of the USB Power Sharing Cable to an available USB port on your computer.



### 3.3. Connecting Multiple Devices

Technically, you can connect up to 127 individual USB peripherals at one time. However, you probably will not use more than 6 to 8 peripherals on your USB system. Most computers only have two USB ports, so you would need a hub to connect more than two peripheral drives. The hub regenerates the signals, generally providing between 4 to 7 connections. To add even more drives, connect a new hub to a connector of the original hub, creating a new series of peripherals, etc. But the hub slows down the transfer rate by lengthening the path of the signal. To optimize performance, connect your drive directly to one of the built-in ports in your computer.

### 3.4. Disconnecting Your LaCie Drive

USB external devices feature "plug & play" connectivity, which means that your drive can be connected and disconnected while the computer is running. To prevent failures, it is important you follow these steps when disconnecting your USB peripheral device.



**Caution!** Do not disconnect the USB cable when the drive is reading or writing. Disconnecting while the drive is operating could cause the loss of data. Make sure that your drive is not reading or writing and that the activity LED is off before disconnecting the USB cable.



#### 3.4.1. Windows Users

- 1) From the **System Tray** (located in the lower right-hand side of your screen), click on the **Eject** icon (a small green arrow over a hardware image).
- 2) A message will appear, detailing the devices that the Eject icon controls, i.e. "Safely remove..." Click on this prompt.
- 3) You will then be given the following message: "Safe to Remove Hardware" (or similar). It is now safe to disconnect the device.

#### 3.4.2. Mac Users

You must unmount the hard drive system before disconnecting it or powering it down.

Either:

- Drag the hard drive icon to the trash.
- Launch Silverlining Pro, highlight the hard drive and select "Unmount."

The drive can now be disconnected.



## 4. Using Your LaCie Drive

Once you've connected your drive and it is recognized by your operating system (i.e. Windows 98SE, Me, 2000, XP or Mac OS 9.x or 10.x), you are ready to format and partition the drive. In order to store information on a hard drive, it must have a file system and be divided into sections that will contain the data that you wish to store. This process is called formatting.

In order to utilize a hard disk drive, it has to be formatted first. Formatting a disk consists of the following: the operating system erases all of the bookkeeping information on the disk, tests the disk to make sure that all of the sectors are reliable, marks bad sectors (i.e., those that are scratched) and creates internal address tables that it later uses to locate information. Once formatted, the actual available storage capacity varies, depending on operating environment, and is generally about 10% less than the non-formatted capacity.



**Tech Note:** *In order to ensure maximum compatibility, all LaCie Hard Drives are originally formatted in FAT 32. If you want to use another file system, you will need to re-format the hard drive.*

After you've formatted the drive, you will have the opportunity to divide the hard drive into sections, called Partitioning. A partition is a section of the hard drive's storage capacity that is created to contain files and data. For instance, you could create three partitions on your drive: one partition for your word documents, one for your spreadsheets and one for your multi-media files.

### File System Formats

There are essentially three different file system formats: FAT 32, NTFS, and Mac OS Extended (HFS+).

Use FAT 32 if:

- you will be using your drive between both Windows and Mac OS 9.x or 10.x; or sharing the drive between Windows 98 SE, Me, 2000 or XP

Use NTFS if:

- you will be using the drive only under Windows 2000 or Windows XP; performance will be generally greater when compared to FAT 32

Use HFS+ if:

- you will be using the drive on Macs only; performance will be generally greater when compared to FAT 32

For more information, please refer to section [5.1 File System Formats](#).

## 4.1. Formatting And Partitioning Your LaCie Hard Drive

Once you have set-up your LaCie Hard Drive, you can reformat or partition it to suit your needs.

### 4.1.1. Windows Users

- Windows 98 SE and Me – Install and use LaCie Silverlining 98, which is included with your drive.
- Windows 2000 and XP – Use the Disk Management Utility, which is native to the operating system.

For instructions on installing and using Silverlining 98, please refer to the Silverlining 98 manual, located on your LaCie Storage Utilities CD, in PDF format.

### Formatting And Partitioning Using Windows 2000 And Windows XP

The process of formatting and partitioning a drive on a computer running Windows 2000 or Windows XP consists of two steps: (1) installing a signature on the drive, and (2) partitioning/formatting the drive. These steps will erase anything that is on the disk.

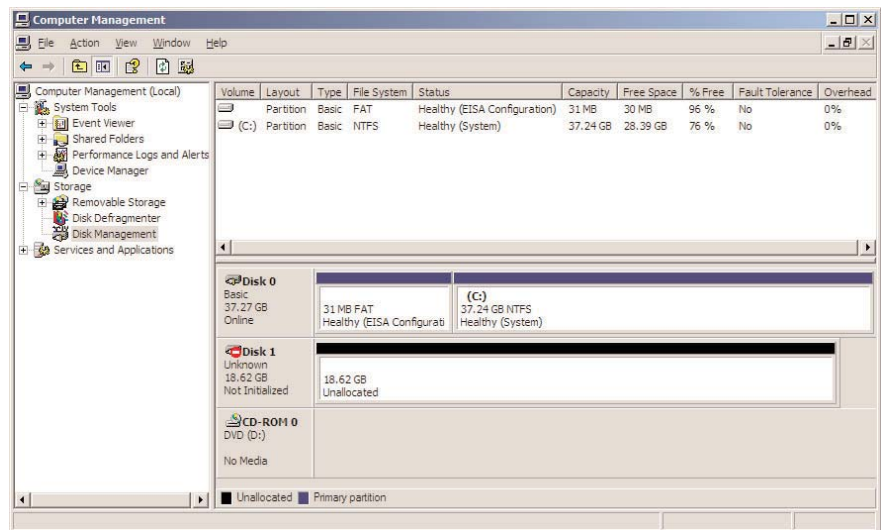
- 1) Connect the drive to the computer via the USB interface port.
- 2) Right-click **My Computer** and click **Manage**.
- 3) From the **Computer Management** window, select **Disk Management** (located below the **Storage** group).

4) If this is the first time the drive is being formatted, Windows 2000 will launch the **Write Signature Wizard (Write Initialize Wizard)** in Windows XP). Click **Next**.

5) Windows will list the new drive(s) attached. If you are formatting a single drive, only one drive should be visible. Select the checkbox next to the drive and click **Next**.

6) Click **Finish** to exit the Wizard.

7) Now, with the disk management window open, a new drive will be visible. Right-click on the available space and select **Create Partition...**





8) This will bring up the **Create Partition Wizard**. Click **Next**.

9) Select **Primary Partition**. Click **Next**.

10). Here you must specify partition size. It is recommended that you leave the partition set to the maximum available size, unless you want multiple partitions on the same drive. Click **Next**.

11) Select **Assign drive letter** and select the desired letter for the drive. Click **Next**.

12) Select **Format this partition...** and then select a file system:

### FAT32

FAT32 is a file system that is compatible with Windows 98 SE, Windows Me, Windows 2000 and Windows XP; however, it has limitations. In Windows 2000 and Windows XP, you will not be able to create a partition greater than 32GB.

### NTFS

NTFS is a newer file system that is compatible only with Windows NT, Windows 2000 and Windows XP. It has fewer limitations than FAT 32 and will enable a partition to be created that is larger than 32GB.

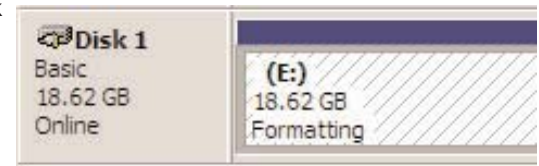
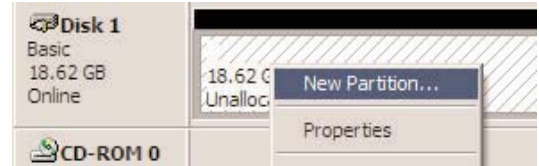


**Tech Note:** Please refer to section [5.1.1. File System Formats – Windows Users](#), for a more detailed discussion on the differences between the two systems.

13) Click **Next**.

14) Click **Finish**.

15) **Disk Management** will create the partition and begin formatting the drive. Once completed, close **Disk Management** and your new drive will be ready to use.



## 4.2. Mac Users

- Mac OS 9.x – Install and use LaCie Silverlining Pro, which is included with your drive.
- Mac OS 10.x – Use the **Apple Disk Utility** application, which is native to the operating system.

For instructions on installing and using Silverlining Pro, please refer to the Silverlining manual, located on your LaCie Storage Utilities CD, in PDF format.

For instructions on using the Mac OS 10.x Apple Disk Utility application, please refer to the section below.

### Formatting And Partitioning Using Mac OS 10.x

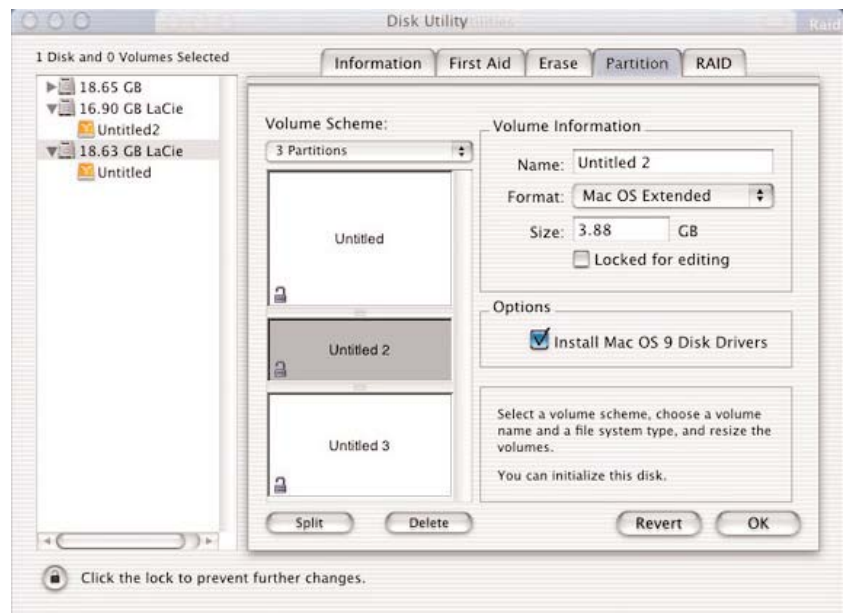


**Caution!** Following these steps will erase anything that is on the hard drive. Therefore, if you have information that you want to protect or continue to use, backup this information before performing these steps.

- 1) Connect the drive to the computer via the USB interface port.
- 2) Once the drive mounts onto the desktop, go to the **Menu Bar**, and open **Go**.
- 3) From the **Go** menu, click on **Applications**.
- 4) In the **Applications** menu, open the **Utilities** folder, and then double-click **Disc Utility** from the **Utilities** folder.
- 5) The **Disc Utility** window will open. In the left side of the window will be a list of the available hard disk drives. You should see a volume that represents your internal hard drive, and one that reads **LaCie**.

- 6) Select the **LaCie** drive, and then click on the **Partition** tab.

- 7) From the **Volume Scheme:** button, choose the number of partitions you want to divide the drive into by clicking on the pull down menu starting with **Current** (Mac OS 10.x gives you the option of dividing the drive into at most 8 partitions). You can customize the size of the partitions by using the slide bar between the partitions in the **Volume Scheme:** area.



8) In the **Volume Information** section, create a name for each partition, choose the volume format (Mac OS Extended, Mac OS Standard or UNIX File System) and the volume size.



**Tech Note:** Please refer to section [5.1.2. File System Formats – Mac Users](#), for a more detailed discussion on the differences between the two systems.



**Tech Note:** Apple recommends that unless you have a specific reason to use the UNIX File System (UFS), you should use the Mac OS Extended format since it provides a more familiar experience to Macintosh users.

9) In the **Options** section, click the **Install Mac OS 9 Disk Drivers** box if you plan on sharing the drive between the Mac OS 9.x and Mac OS 10.x.

10) Once you have finalized the volume format, number of partitions, size and options, click OK. The following message will appear: "Warning! Saving the new volume will erase all existing volumes. This can NOT be undone. Are you sure you want to do that?" Click **Partition** to continue.

11) Mac OS 10.x will automatically setup the disk with the partitions and volume format you selected, and your new drive will be available for use.

## 5. Tech Tips

### 5.1 File System Formats

#### 5.1.1. Windows Users

There are basically two file system formats for Windows: FAT 32 and NTFS. The following information will hopefully make choosing one or the other a little easier.

##### **FAT 32**

FAT is an acronym for File Allocation Table, which dates back to the beginnings of DOS programming. Originally, FAT was only 16 bits, but after the second release of Windows 95 it was upgraded to 32 bits, hence the name FAT 32. In theory, FAT 32 volume sizes can range from less than 1MB all the way to 2TB. It is the native file system of Windows 98 and Windows Me, and is supported by Windows 2000 and XP. When FAT 32 is used with Windows 2000 and XP, though, volume size is limited to 32GB (by the Windows partition utility, i.e. Disk Manager), and the individual file size is limited to 4GB.

##### **NTFS**

This acronym stands for New Technology Filing System, and it is the native file system for Windows NT, Windows 2000 and XP. NTFS offers several features that are not available with FAT 32; i.e. file compression, encryption, permissions, and auditing, as well as the ability to mirror drives and RAID 5 capabilities. The minimum supported volume size for NTFS is 10MB, with a maximum of 2TB, with no limit to file size. Volumes created in NTFS can only be directly accessed (not through shares) by Windows NT, Windows 2000 and XP, without resorting to help from third-party products.

### Guidelines For Choosing FAT 32 Or NTFS

Use FAT 32 if:

- You want to access your data on any Operating System - FAT 32 is compatible with Windows 98 SE, Me, 2000, XP, NT, Mac OS 9.x and Mac OS 10.x.
- You will be dual booting with an Operating System other than Windows NT or Windows 2000.
- You may need the ability to dual boot down the line. Once you have converted a volume from FAT 32 to NTFS, there is no going back. You can convert from FAT 32 to NTFS, but not the other way around.

Use NTFS if:

- You want to optimize drive performance under Windows 2000 or XP.
- You want to encrypt files, assign permissions to files, or want to audit files for access.
- You will be formatting partitions larger than 32GB.
- You need to store individual files that are larger than 4GB.
- You need a filing system that can be mirrored or structured like a RAID 5 configuration.

## 5.1.2. Mac Users

### Mac OS 9.x Users:

You will be able to format the drive in one of two formats, using Silverlining Pro (for specific instructions, please refer to the Silverlining User's Manual, in the Silverlining folder): HFS (Mac OS Standard) or HFS+ (Mac OS Extended).



**Important Info:** *If you will be sharing the hard drive between Macs and Windows operating environments, you will want to leave the drive formatted in FAT 32.*

### Mac OS 10.x Users:

You have the option of formatting the drive in one of four formats: Mac OS Standard (HFS), Mac OS Extended (HFS+), MS-DOS File System and UNIX File System (UFS).

#### HFS - Mac OS Standard

Mac OS Standard refers to the file system used by Mac OS 8.0 and earlier. This is no longer a modern file system specification, and Mac OS Extended is more efficient. Only use this file system if you are creating a volume smaller than 32MB, using a Mac with a 680X0 processor, or you are creating a file structure that will be need to be used by Macs using Mac OS 8.0 or earlier.

#### HFS+ - Mac OS Extended

Mac OS Extended refers to the file system used by Mac OS 8.1 and later. HFS+ represents an optimization of the older HFS file system by using hard disk space more efficiently. Building off of HFS, they increased the number of blocks from 65,536 to 4.29 billion. With HFS+, you are no longer limited by block size.

#### MS-DOS File System

This is the Microsoft file system, more typically known as FAT 32. This is the file system to use if you are going to be using your LaCie hard drive between Macs and Windows operating systems.

#### UNIX File System

This is the file system based on UNIX, and is preferable for users developing UNIX-based applications within Mac OS 10.x. Unless you have a specific reason to use the UNIX File System, you should instead format your drive using Mac OS Extended (HFS+), because it provides Mac users with a more familiar operating experience.

## 5.2. Available Storage Capacity

A gigabyte (GB) means 1,000,000,000 bytes. In order to utilize a hard disk drive, it has to be formatted first. Formatting a disk consists of the following: the operating system erases all of the bookkeeping information on the disk, tests the disk to make sure that all of the sectors are reliable, marks bad sectors (i.e., those that are scratched) and creates internal address tables that it later uses to locate information. Once formatted, the actual available storage capacity varies, depending on operating environment, and is generally about 10% less than the non-formatted capacity.

## 5.3. Optimizing Data Transfers

Data transfers are the flow of data that accomplishes a task, usually related to moving data from storage to computer RAM, or between storage devices. With external drives, such as the LaCie Hard Drive, the data is transferred from the drive to the computer via the USB interface. The data is fed from the drive through the USB port on the drive, and passes to the computer through either the USB host-bus adapter interface.

The USB interface specifies certain requirements, filed under the OHCI (Open Host Controller Interface) standards. All LaCie drives comply to OHCI standards and have been rigorously tested on computers that have host bus adapters that also comply to OHCI standards. Unfortunately, not all manufacturers respect these guidelines, and anomalies may arise with computers that have host bus adapters that do not conform to OHCI standards.

For the best performance, connect your LaCie Hard Drive directly to a native USB port on your computer, and avoid using hubs\*. During data transfers, it's best to wait before launching other applications that will be using the same port.

If you do not have a native USB port, LaCie offers USB host bus adapter cards, also known as PCI or PC/PCMCIA cards, that have been tested and comply with LaCie drives. Please contact your reseller or LaCie Customer Support for more information.



**Tech Note:** For more information on the USB interface, please see [USB Questions and Answers](#).



**Tech Note:** Please see [3.3 Connecting Multiple Devices](#) for more information.

## Hi-Speed USB 2.0 Host Bus Adapters And Performance

To utilize the enhanced Hi-Speed USB 2.0 performance, your computer must be equipped with a Hi-Speed USB 2.0 host bus adapter card, either sold separately, or integrated by your computer's manufacturer) and the appropriate drivers. These host bus adapter cards, which include one or more USB ports, are shipped with special Hi-Speed USB 2.0 drivers that enable the computer to control the card. These drivers must be installed in order for USB 2.0 devices connected to the port to work at their correct speeds.

Computers running Windows 2000 and Windows XP automatically manage Hi-Speed USB 2.0 devices and drivers, while Windows 98 SE and Windows Me will require that drivers be installed before a Hi-Speed USB 2.0 device is attached.

Mac OS 9.x does not support Hi-Speed USB 2.0 functionality, and all Hi-Speed USB 2.0 devices will only operate at the

original USB specifications. Mac OS 10.x does support Hi-Speed USB 2.0, but you will have to purchase a third-party PCI or PC Card and appropriate drivers.

Contact your LaCie reseller or LaCie Customer Support for information about Hi-Speed USB 2.0 PCI or PC Cards, or visit our Web site: [www.lacie.com](http://www.lacie.com).

## 6. USB Questions & Answers

### What Are The Benefits Of The USB Interfaces?

- Cross-platform: Use your USB peripherals on both Mac and Windows platforms.
- "Hot Swappable": No need to shut down or restart your computer when adding or removing a USB device. Plug it in and its ready.
- Automatic configuration: Once your device is connected, your computer recognizes the device and automatically configures the necessary software.
- Daisy-Chaining: with USB ports on your computer, you can connect up to 127 peripherals using hubs.
- Easy Installation: One standardized port and plug combination makes it simple to connect.

### What Is The Difference Between USB And Hi-Speed USB 2.0?

The main difference is speed. The original version of the interface is capable of throughput up to 12Mb/s. Hi-Speed USB 2.0 supports data speeds up to 480 Mb/s, making it 40 times faster than its predecessor. This increased bandwidth translates into higher performance in demanding applications requiring high transfer rates.

### What Are The Ideal Uses For USB?

USB is perfect for more traditional connections such as keyboards, mice, joysticks and scanners. These types of devices don't require fast data transfer rates, and operate very successfully at the slower speeds.

### What Are The Ideal Applications For Hi-Speed USB 2.0?

Digital cameras, CD/DVD drives, hard drives and scanners will all benefit from the added bandwidth and performance gains of the new implementation of the USB standard. Hi-Speed USB 2.0 provides the necessary fast data transfer rates that today's devices require, and combines the earlier specifications so older devices that operated under the original USB standards will still work with Hi-Speed USB 2.0.

### Will USB Devices Run Faster When Connected To A Hi-Speed USB 2.0 Bus?

Unfortunately, no. The Hi-Speed USB 2.0 specification is specifically written to allow developers to design higher speed peripherals that can take advantage of the extra bandwidth. USB devices, though, will still operate at 12Mb/s at full-speed and 1.5Mb/s at low-speed on a Hi-Speed USB 2.0 bus. Even though USB devices won't run any faster, they can work alongside Hi-Speed USB 2.0 devices on the same bus. However, if you plug in a Hi-Speed USB 2.0 device to a USB bus, the speed of the Hi-Speed USB 2.0 device will decrease to 12Mb/s.



## What Is A USB Hub?

Technically, you can connect up to 127 devices to a single USB bus. For more than two devices, though, you must make new connections using a peripheral called a "hub." A hub, which you hook up directly to a USB connector on your computer, usually has 4 or 7 output connections enabling you to connect the same number of peripherals. One of the hub's main functions is to regenerate signals that lose part of their strength as they are transmitted via the USB cable. By connecting yet another hub to a connector on the existing hub, you can then plug in a new set of peripherals and so on, up to a maximum of 127.

Some hubs have no power supply and others are self-powered. When you choose a hub, opt for the self-powered variety, as they have their own AC adapter. The most powerful hubs provide 0.5A of power to each port.

If you buy a hub, make sure that it supports per-port switching. This function prevents the entire chain of peripherals from freezing up if one of them is not working properly or is down.

## Will Hi-Speed USB 2.0 Devices Work On USB Hubs And Vice Versa?

You can use your Hi-Speed USB 2.0 devices with USB hubs, but the peripherals will be limited to USB performance levels. There are Hi-Speed USB 2.0 hubs that are able to communicate in three modes: high-speed (480Mb/s), full-speed (12Mb/s), and low-speed (1.5Mb/s). Hi-Speed USB 2.0 is backwards compatible, so you will be able to connect USB devices to Hi-Speed USB 2.0 hubs; however, the USB devices will still maintain their normal performance levels (i.e. 12 Mb/s).

In order to achieve the fast data transfer rates of Hi-Speed USB 2.0, you must connect your Hi-Speed USB 2.0 device directly to a Hi-Speed USB 2.0 port on either a computer or hub.



### Tech Note:

- *Avoid using USB connectors found on certain peripherals such as keyboards. These are passive (or pass-through) connectors that lead to power loss and unstable operation.*
- *Only use USB cables shorter than 5 meters (approximately 15 feet). Using longer cables may cause the peripherals to malfunction due to excessive reduction in electrical signal strength.*

For more information about the USB interface, please visit:

[www.lacie.com/technologies](http://www.lacie.com/technologies)

## 7. Troubleshooting

In the event that your LaCie Data Bank is not working correctly, please refer to the following checklist to find out where the problem is coming from. If you have gone through all of the points on the checklist and your drive is still not working correctly, please have a look at the FAQs that are regularly published on our Web site – [www.lacie.com](http://www.lacie.com). One of these FAQs may provide an answer to your specific question. You can also visit the drivers pages, where the most recent software updates will be available.

If you need further assistance, please contact your LaCie reseller or LaCie Technical Support (see [8. Contacting Customer Service](#) for details).

### Manual Updates

LaCie is constantly striving to give you the most up-to-date, comprehensive User's Manuals available on the market. It is our goal to provide you with a friendly, easy-to-use format that will help you quickly install and utilize the many functions of your new device.

If your manual does not reflect the configurations of the product that you purchased, please check our Web site for the most current version available.

These Troubleshooting tips are divided up by operating system:



[Windows Users – click here](#)



[Mac Users – click here](#)

## 7.1. Windows Users

The Problem	Questions to Ask	Possible Solutions
The drive is not recognized by the computer.	Is there an icon for the drive in <b>My Computer</b> ?	Go into <b>My Computer</b> and look for an icon and drive letter assigned to the LaCie drive. If the drive does not appear, follow the rest of the Troubleshooting tips to isolate the problem.
	Does your computer's configuration meet the minimum system requirements for use with this drive?	Check section <a href="#">2.1. Minimum System Requirements – 2.1.1. Windows Users</a> for more information.
	Did you follow the correct installation steps for the specific interface and operating system.	Review the installation steps under <a href="#">3.1. Connecting The Drive To Your Computer</a> .
	Are both ends of the USB cables firmly attached?	Check both ends of the USB cables and make sure that they are fully seated in their respective ports. Try disconnecting the cables, waiting 10 seconds, and then reconnecting them. If the drive is still not recognized, restart your computer and try again.
	Is the drive's Activity LED lit?	If both ends of the USB cable are firmly attached and the drive's Activity LED (for the exact location of the LED, see section <a href="#">2.2.2. Views Of The Drive</a> ) does not appear, try using the optional USB Power Sharing Cable ( <a href="#">3.2. Connecting The Optional Power Sharing Cable</a> ). (sold separately)

The Problem	Questions to Ask	Possible Solutions	
<p>The drive is not recognized by the computer.</p>	<p>Have the USB drivers been installed correctly and enabled?</p>	<p><b>Windows 98 SE and Windows Me Users:</b> Go to <b>Start &gt; Settings &gt; Control Panel &gt; System &gt; Device Manager &gt; USB Controller</b>. Click on the + sign next to the controller icon, and you should see your device listed.</p> <p><b>Windows 2000 Users:</b> Go to <b>Start &gt; Settings &gt; Control Panel &gt; System &gt; Hardware</b> tab &gt; <b>Device Manager</b> button &gt; <b>USB Controller</b>. Click on the + sign next to the controller icon, and you should see your device listed.</p> <p><b>Windows XP Users:</b> Go to <b>Start &gt; Control Panel &gt; Performance and Maintenance &gt; System &gt; Hardware</b> tab &gt; <b>Device Manager</b> button &gt; <b>USB Controller</b>. Click on the + sign next to the controller icon, and you should see your device listed.</p> <p>If you still can't see your device, recheck the cables and try the other troubleshooting tips listed here.</p>	
	<p>Is there a conflict with other device drivers or extensions?</p>	<p>Contact <a href="#">LaCie Technical Support</a> for help.</p>	
	<p>The drive is not recognized by the computer.</p>	<p>Has the drive been formatted?</p>	<p>Make sure that the drive has been formatted properly. Please see sections <a href="#">4.1. Formatting And Partitioning Your LaCie Drive</a> and <a href="#">5.1. File System Formats</a> for more information.</p>
	<p>Does your computer's operating system support the file system?</p>	<p>Check your computer's documentation and see sections <a href="#">4.1. Formatting And Partitioning Your LaCie Drive</a> and <a href="#">5.1. File System Formats</a> for more information.</p>	
	<p>Was the drive originally formatted as a removable disk?</p>	<p>If the drive is configured as a removable disk drive under Windows 98 SE or Windows Me, the removable setting will need to be re-checked each time that the drive is taken to a new system. To do this, go the <b>Device Manager (Start &gt; Settings &gt; Control Panel &gt; System &gt; Device Manager)</b> and click on the <b>Drives Settings</b> tab.</p>	

### The Problem

The drive is working slowly.

The drive is not running noticeably faster when connected via Hi-Speed USB 2.0.

### Questions to Ask

Are there other USB devices connected to the same port or hub?

Is the drive connected to a USB 1.1 port on your computer, or to a USB 1.1 hub?

Is the drive connected to a Hi-Speed USB 2.0 port on your computer?

Does your computer or operating system support Hi-Speed USB 2.0?

Are you using a certified Hi-Speed USB 2.0 cable to connect your drive?

### Possible Solutions

Disconnect any other USB devices and see if the drive's performance increases.

If your drive is connected to a USB 1.1 port or hub, this is normal. A Hi-Speed USB 2.0 device can only operate at Hi-Speed USB 2.0 performance levels when it is connected directly to a Hi-Speed USB 2.0 port or hub. Otherwise, the Hi-Speed USB 2.0 device will operate at the slower USB 1.1 transfer rates. For more information, please see sections [5.3. Optimizing Data Transfers](#) and [6. USB Questions And Answers](#).

Check to see that the Hi-Speed USB 2.0 drivers for both your host bus adapter and device have been installed correctly. If in doubt, un-install the drivers and re-install them.

See sections [2.1. Minimum System Requirements – 2.1.1. Windows Users](#) and [5.3. Optimizing Data Transfers](#) for more information.

Ensure that the cable you are using has been properly certified. The Hi-Speed USB 2.0 cable that was shipped with your LaCie drive has been properly certified and tested to comply with USB standards.

## 7.2. Mac Users

The Problem	Questions to Ask	Possible Solutions
<p>The drive is not recognized by the computer.</p>	<p>Is there an icon for the drive appear on the desktop?</p>	<p>There should be an icon for the LaCie drive on the desktop. If the drive does not appear, follow the rest of the Troubleshooting tips to isolate the problem.</p>
	<p>Does your computer's configuration meet the minimum system requirements for use with this drive?</p>	<p>Check section <a href="#">2.1. Minimum System Requirements – 2.1.2. Mac Users</a> for more information.</p>
	<p>Did you follow the correct installation steps for the specific interface and operating system.</p>	<p>Review the installation steps under <a href="#">3.1. Connecting The Drive To Your Computer</a>.</p>
	<p>Are both ends of the USB cables firmly attached?</p>	<p>Check both ends of the USB cables and make sure that they are fully seated in their respective ports. Try disconnecting the cables, waiting 10 seconds, and then reconnecting them. If the drive is still not recognized, restart your computer and try again.</p>
	<p>Is the drive's Activity LED lit?</p>	<p>If both ends of the USB cable are firmly attached and the drive's Activity LED (for the exact location of the LED, see section <a href="#">2.2.2. Views Of The Drive</a>) does not appear, try using the optional USB Power Sharing Cable (<a href="#">3.2. Connecting The Optional Power Sharing Cable</a>).</p>

The Problem	Questions to Ask	Possible Solutions
<p>The drive is not recognized by the computer.</p>	<p>Have the USB or FireWire drivers been installed correctly and enabled?</p>	<p><b>Mac Users:</b> Open <b>Apple System Profiler</b> and click on the <b>Devices and Volumes</b> tab. If your device is not listed, recheck the cables and try the other troubleshooting tips listed here.</p>
	<p>Is there a conflict with other device drivers or extensions?</p>	<p>Contact <a href="#">LaCie Technical Support</a> for help.</p>
	<p>Has the drive been formatted?</p>	<p>Make sure that the drive has been formatted properly. Please see sections <a href="#">4.1. Formatting And Partitioning Your LaCie Drive</a> and <a href="#">5.1. File System Formats</a> for more information.</p>
	<p>Does your computer's operating system support the file system?</p>	<p>Check your computer's documentation and see sections <a href="#">4.1. Formatting And Partitioning Your LaCie Drive</a> and <a href="#">5.1. File System Formats</a> for more information.</p>
<p>Error messages under Mac OS 10.x.</p>	<p>Did you get an "Error -50" message while copying to a FAT 32 volume?</p>	<p>When copying files or folders from Mac OS 10.x to a FAT 32 volume, certain characters cannot be copied. These characters include, but are not limited to: ? &lt; &gt; / \ : Check your files and folders to ensure that these types of characters are not being used.</p>
	<p>Did you get an error message telling you that the drive has been disconnected when coming out of sleep mode?</p>	<p>Simply ignore this message. The drive will remount to the desktop. LaCie drives conserve power by spinning down when you set your computer to sleep mode, and when the computer is "woken" from sleep, it does not give the drive enough time to spin-up from its sleep mode.</p>

The Problem	Questions to Ask	Possible Solutions
The drive is working slowly.	Are there other USB devices connected to the same port or hub?	Disconnect any other USB devices and see if the drive's performance increases.
The drive is not running noticeably faster when connected via Hi-Speed USB 2.0.	Are you operating in Mac OS 9.x?	Apple does not support the Hi-Speed USB 2.0 standard under Mac OS 9.x. You will be limited to the slower transfer rates of the original USB standard. For more information, please see <a href="#">5.3. Optimizing Data Transfers</a> .
	Are you operating in Mac OS 10.x?	Apple has only recently begun incorporating native Hi-Speed USB 2.0 ports in their computers. To achieve Hi-Speed USB 2.0 transfer rates, you will need to add a Hi-Speed USB 2.0 PCI or PC card to your computer. For more information, please see <a href="#">5.3. Optimizing Data Transfers</a> .
	Is the drive connected to a USB port on your computer, or to a USB hub?	If your drive is connected to a USB port or hub, this is normal. A Hi-Speed USB 2.0 device can only operate at Hi-Speed USB 2.0 performance levels when it is connected directly to a Hi-Speed USB 2.0 port or hub. Otherwise, the Hi-Speed USB 2.0 device will operate at the slower USB transfer rates. For more information, please see sections <a href="#">5.3. Optimizing Data Transfers</a> and <a href="#">6. USB Questions And Answers</a> .
	Is the drive connected to a Hi-Speed USB 2.0 port on your computer?	Check to see that the Hi-Speed USB 2.0 drivers for both your host bus adapter and device have been installed correctly. If in doubt, un-install the drivers and re-install them.
	Does your computer or operating system support Hi-Speed USB 2.0?	See sections <a href="#">2.1. Minimum System Requirements – 2.1.1. Windows Users</a> and <a href="#">5.3. Optimizing Data Transfers</a> for more information.



## 8. Contacting Customer Support

### Before You Contact Technical Support

1) Read the manuals and review the [Troubleshooting](#) section.

2) Try to isolate the problem. If possible, make the drive the only external device on the CPU, and make sure that all of the cables are correctly and firmly attached.

If you have asked yourself all of the pertinent questions in the troubleshooting checklist, and you still can't get your LaCie drive to work properly, contact us via the provided Web link. Before contacting us, make sure that you are in front of your computer and that you have the following information on hand:

- Your LaCie drive's serial number
- Operating system(Mac OS or Windows) and version
- Computer brand and model
- Names of CD or DVD drives installed on your computer
- Amount of memory installed
- Names of any other devices installed on your computer

## LaCie Technical Support

### LaCie Australia

Contact Us At:  
<http://www.lacie.com/au/contact/>

### LaCie Canada

Contact Us At:  
<http://www.lacie.com/caen/contact/> (English)

### LaCie Finland

Contact Us At:  
<http://www.lacie.com/fi/contact>

### LaCie Germany

Contact Us At:  
<http://www.lacie.com/de/contact/>

### LaCie Japan

Contact Us At:  
<http://www.lacie.co.jp>

### LaCie Norway

Contact Us At:  
<http://www.lacie.com/no/contact/>

### LaCie Sweden

Contact Us At:  
<http://www.lacie.com/se/contact/>

### LaCie United Kingdom & Ireland

Contact Us At:  
<http://www.lacie.com/uk/support/request>

### LaCie Grand Export

Contact Us At:  
<http://www.lacie.com/intl/contact/>

### LaCie Belgium

Contact Us At:  
<http://www.lacie.com/be/contact/>

### LaCie Denmark

Contact Us At:  
<http://www.lacie.com/dk/contact/>

### LaCie France

Contact Us At:  
<http://www.lacie.com/fr/contact/>

### LaCie Italy

Contact Us At:  
<http://www.lacie.com/it/contact/>

### LaCie Netherlands

Contact Us At:  
<http://www.lacie.com/nl/contact/>

### LaCie Spain

Contact Us At:  
<http://www.lacie.com/es/support/request>

### LaCie Switzerland

Contact Us At:  
<http://www.lacie.com/chfr/contact>

### LaCie USA

Contact Us At:  
<http://www.lacie.com/contact/>

## 9. Warranty

LaCie warrants your drive against any defect in material and workmanship, under normal use, for the period designated on your warranty certificate. In the event this product is found to be defective within the warranty period, LaCie will, at its option, repair or replace the defective drive.

This warranty is void if:

- The drive was operated/stored in abnormal use or maintenance conditions;
- The drive is repaired, modified or altered, unless such repair, modification or alteration is expressly authorized in writing by LaCie;
- The drive was subjected to abuse, neglect, lightning strike, electrical fault, improper packaging or accident;
- The drive was installed improperly;
- The serial number of the drive is defaced or missing;
- The broken part is a replacement part such as a pickup tray, etc.
- The tamper seal on the drive casing is broken.

LaCie and its suppliers accept no liability for any loss of data during the use of this device, or for any of the problems caused as a result.

LaCie will not, under any circumstances, be liable for direct, special or consequential damages such as, but not limited to, damage or loss of property or equipment, loss of profits or revenues, cost of replacement goods, or expense or inconvenience caused by service interruptions.

Any loss, corruption or destruction of data while using a LaCie drive is the sole responsibility of the user, and under no circumstances will LaCie be held liable for the recovery or restoration of this data.

Under no circumstances will any person be entitled to any sum greater than the purchase price paid for the drive.

To obtain warranty service, contact LaCie Technical Support. You will be asked to provide your LaCie product's serial number, and you may be asked to furnish proof of purchase to confirm that the drive is still under warranty.

All drives returned to LaCie must be securely packaged in their original box and shipped with postage prepaid.



**Important Info:** Register online for free technical support: [www.lacie.com/register](http://www.lacie.com/register)

## Glossary

**Asynchronous** – Data transfer method where the data is transferred independently of other processes. With this transfer method, the intervals between transmissions can vary, and data can be resent if it is initially missed.

**Backup** – (1) The act of creating at least one additional copy of data onto a different (and safe) storage device from where it can be retrieved at a later time if needed. (2) A copy of a file, directory, or volume on a separate storage device from the original, for the purposes of retrieval in case the original is erased, damaged, or destroyed.

**Bit** – The smallest measure of computerized data, either a 1 or a 0. Eight bits equal one byte, or one character.

**Block** – A very small section of the storage media comprised of one or more sectors. A block is the smallest amount of space allocated on a drive for data storage. By default, a sector of data consists of 512 bytes.

**Buffer** – RAM cache that is faster than the data that is being delivered. Buffers are used so data may be stored and delivered to the receiving item as it is needed.

**Bus** – Electronic links that enable data to flow between the processor, RAM and extension cables (peripherals).

**Byte** – A sequence of adjacent binary digits, or bits, considered as a unit, 8 bits in length. There are 8 bits in 1 byte. See also MB (Megabyte) or GB (Gigabyte).

**Cache, -ing** – This is an area of electronic storage (usually RAM) set aside to store frequently used data from electro-mechanical storage (hard drives, floppy disks, CD/DVD-ROM, tape cartridges, etc.) Therefore, storing frequently used data in RAM can enhance your system's overall response to disk-intensive operations significantly.

**Configuration** – When talking about a PC, configuration is understood to be the sum of the internal and external components of the system, including memory, disk drives, the keyboard, the video subsystem and other peripherals, such as the mouse, modem or printer. The configuration also implies software: the operating system and various device managers (drivers), as well as hardware settings and options set by the user via configuration files.

**Controller** – This is a component or an electronic card (referred to in this case as a "controller card," such as PCI or PCMCIA cards) that enables a computer to communicate with or manage certain peripherals. The controller manages the operation of the peripheral associated with it, and links the PC bus to the peripheral via a ribbon cable inside the PC. An external controller is an expansion card which fills one of the free slots inside your PC and which enables a peripheral (CD-ROM drive, scanner or printer, for instance) to be connected to the computer.

**Cross-platform** – Term that refers to a device that is able to be operated by both Mac and Windows operating systems.

**Data Stream** – The flow of data that accomplishes a task, usually related to moving data from storage to computer RAM or between storage devices.

**Digital** – Discrete information that can be broken down to zero or one bits.

**Driver (peripheral manager)** – A software component that enables the computer system to communicate with a peripheral. Most peripherals will not operate correctly – if at all – if the appropriate drivers are not installed on the system.

**File System** – Links the physical map of a disc to its logical structure. Thanks to the file system, users and computers can easily display path, directories and files recorded onto the disc.

**Firmware** – Permanent or semi-permanent instructions and data programmed directly into the circuitry of a programmable read-only memory or an electronically-erasable, programmable read-only memory chip. Used for controlling the operation of the computer or tape drive. Distinct from the software, which is stored in random access memory and can be altered.

**Folder** – A list created on a disk to store files. Creating folders and sub-folders enables you to organize the storage of your files in a logical, hierarchical manner so that you can find and manage them more easily.

**Format, -ting, -ted** – This is a process where a device is prepared to record data. In this process, the hard disk writes special information onto its own recording surfaces into areas (blocks) that are ready to accept user data. Since this operation causes all current user data stored on the hard disk to be lost, this is an infrequent operation that usually only happens at the factory that created the hard disk. It is unusual for something to happen to a hard disk that requires the end-user to initially perform this operation.

**GB (GigaByte)** – This value is normally associated with data storage capacity. Basically, it means a thousand million or a billion bytes. In fact, it equals 1,073,741,824 bytes (or 1,024 x 1,024 x 1,024).

**Hardware** – Physical components of a computer system, including the computer itself and peripherals such as printers, modems, mice, etc.

**Host Bus Adapter (HBA)** – A printed circuit board that installs in a standard microcomputer and an interface between the device controller and the computer. Also called a controller.

**Initialize, -ed, Initialization** – After a hard drive (or other storage device) is formatted and partitioned, some special data needs to be written to it that helps the Mac and Windows create files and save data. The process is called initialization. This process, like formatting, causes all user data on the storage device to be lost.

**Interface** – The protocol data transmitters, data receivers, logic and wiring that link one piece of computer equipment to another, such as a hard drive to an adapter or an adapter to a system bus. Protocol means a set of rules for operating the physical interface, such as: do not read or write before the drive is ready.

**I/O (Input/Output)** – Refers to an operation, program or device whose purpose is to enter data into or to extract data from a computer.

**Isochronous** – Data transfer method that ensures that data flows continuously and at a steady rate. These transfers provide guaranteed transmission opportunities at defined intervals.

**Kb (Kilobit)** – Equivalent to 1,000 bits.

**Kb/s** – Kilobits per second. 480Kb/s is equal to 60KB/s.

**KB (KiloByte)** – Basically, this means 1,000 bytes, but it is actually 1,024 bytes.

**KB/s** – Kilobytes per second. A means of measuring throughput.

**Mb (Megabit)** – Equivalent to 1,000,000 bits.

**Mb/s** – Megabits per second. A means of measuring throughput. 480Mb/s is equal to 60MB/s.

**MB (Megabyte)** – Basically means one million bytes, but is actually 1,024 Kilobytes or 1,024 x 1,024 bytes, which equals 1,048,576 bytes.

**MB/s** – Megabytes per second. A means of measuring throughput.

**Media** – The material or device used to store information in a storage subsystem, such as a tape cartridge, CD, DVD or disk drive.

**Operating System (OS)** – Software that controls the assignment and use of hardware resources such as memory, processor time, disk space and peripherals. An operating system is the basis on which software (applications) run. Windows, Mac OS and UNIX are among the most common.

**Overwrite** – To write data on top of existing data thus erasing the original data.

**Partition, -ing** – After formatting, the hard drive is not yet ready to store files. It must be divided into sections that will contain special information required for a Mac or PC to operate and other sections that will contain the files. This process of dividing up the hard drive is called partitioning. A partition is just one section of the hard drive that will contain either special data put there by Silverlining or other files and data.

**Peripheral** – A generic term applied to printers, scanners, mice, keyboards, serial ports, graphics cords, disk drives and other computer subsystems. This type of peripheral often relies on its own control software, known as a peripheral driver.

**Port, hardware** – A connection component (SCSI port, for example) that enables a microprocessor to communicate with a compatible peripheral.

**Port, software** – A memory address that identifies the physical circuit used to transfer information between a microprocessor and a peripheral.

**RAM (Random Access Memory)** – Generally referred to as a computer's "memory." An integrated circuit memory chip that allows information to be stored and retrieved by a microprocessor or controller. The information can be stored or accessed in any order, and all storage locations are equally accessible.

**Seek Time** – The amount of time (in thousandths of a second, or milliseconds) that it takes a hard drive's read/write head to move to a specific location on the disk. Average seek, then, is the average of a large number of random samplings all over the disk. Seek time is CPU independent, meaning that seek time is the same for a disk drive, whether it is attached to a computer or not.

**Software** – In a nutshell, software is a set of instructions for the computer. A set of instructions to perform a particular task is called a program. There are two main types of software: system software (an operating system such as Mac OS or Windows) which controls the operation of the computer and application software (programs such as Word or Excel) which enable users to perform tasks such as word processing, spreadsheet creation, graphics, etc.

**Storage** – In computers, any equipment in which information may be kept. PCs generally use disk units and other external storage media (diskettes, CD-ROMs, magnetic disks, etc.) for permanent storage of information.

**Striping** – Spreading data evenly over multiple disk drives to enhance performance. Data striping can be performed on a bit, byte or block basis for optimum application performance.

**Transfer Rate** – The rate at which the drive sends and receives data from the controller. Transfer rates for reading data from the disk drive may not be the same as the transfer rate for writing data to the disk drive. Transfer rates are CPU dependent, meaning that regardless of how great a transfer rate your drive is capable of, the actual transfer rate can only be as fast as the slowest of your hard drive and computer.

**Volume** – A desktop mountable storage area, may be a partition of a hard drive, a removable disk or a cartridge. Typically measured in Megabytes or Gigabytes.

**Utility** – Software designed to perform maintenance tasks on the system or its components. Examples include backup programs, programs to retrieve files and data on disk, programs for preparing (or formatting) a disk or and resource editors.

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