Iomega CD-RW USB 2.0 Drive User's Manual

Welcome to the Iomega CD-RW USB 2.0 Drive. This drive uses the latest USB 2.0 technology to achieve the following speeds:

- 24X CD-R Write Speed
- 40X Read Speed on CD Formats
- 10X CD-RW Write Speed
- 32X Speed on Digital Audio Extraction (DAE)

USB 2.0 technology is capable of running at speeds up to 40 times faster than the standard USB 1.1 technology. Connect the Iomega CD-RW USB drive to a USB 2.0 port to achieve the USB 2.0 speed. Connected to a standard USB 1.1 port, the drive runs at the standard USB 1.1 speed.

The Iomega CD-RW USB drive is capable of reading and writing many types of CDs, such as <u>audio CDs</u>, <u>CD-ROMs</u>, <u>CD-RW</u>s. The Iomega CD-RW drive can:

- Play/Read most types of CD media.
- Write CD-R discs.
- Write and Rewrite CD-RW discs.

System Requirements

Your system must meet the following minimum requirements to support the lomega[®] CD-RW USB 2.0 drive.

- USB 2.0 Hi-Speed PCI card installed in your computer
- Recommended RAM requirements for your operating system (see your OS manual for details)
- CD-ROM drive or 740 MB hard drive space to copy CDs
- CD-ROM drive for software installation
- Microsoft[®] Internet Explorer 5.0 or higher or Netscape[®] Navigator[®] 6.1 or higher (to view user's manual)
- The following amount of hard drive space for lomega software:

Software	Size
Iomega HotBurn	10 MB
MusicMatch [®] Jukebox Plus	30 MB
ActiveShare [®]	40 MB

- Pentium[®] 166 or higher with built-in USB controller (some USB controllers or motherboards might not support all types of USB devices)
- Microsoft[®] Windows[®] 98, 98SE, 2000, Me, NT or XP
- Sound Blaster[®] compatible sound card for audio playback

Upgrading from Windows 98 to Windows Me/2000/XP

If a previous version of lomega CD-RW software is installed on your system, remove it before installing Windows Me/2000/XP. Use **Add/Remove Programs** in Control Panel, uninstall all the Iomega CD-RW software, then restart Windows. Install Windows Me/2000/XP according to the instructions included with the Windows Me/2000/XP package. Install the Iomega CD-RW software included with your Iomega drive after the Windows Me/2000/XP installation is complete. See <u>Installing Iomega CD-RW Software</u> for help installing the Iomega software.

Getting Started

IMPORTANT: To operate the Iomega[®] CD-RW drive at <u>USB 2.0 speeds</u>, you will need to purchase and install a USB 2.0 adapter card.

Before installing or using your lomega CD-RW drive, read and follow the USB guidelines to ensure reliable performance from your USB drive.

Here's how to get started using your Iomega CD-RW drive:

1. Unpack the lomega CD-RW drive and accessories.



Iomega CD-RW Drive



2. Install the Iomega CD-RW software.

NOTE: Installing the Iomega CD-RW software installs the drivers needed on your computer to support the Iomega CD-RW drive. If the necessary drivers are not installed, the Iomega CD-RW drive might not be recognized or might not work correctly.

3. Connect your Iomega CD-RW drive.

Installing Iomega[®] CD-RW Software

Installing the lomega software installs the drivers and tools you need on your computer to support your lomega CD-RW drive. See <u>Selecting and Using Discs</u> for information about the additional software applications included on the lomega software CD.

NOTE: You must connect the lomega CD-RW drive to a USB 2.0 adapter card and install the correct drivers before the CD-RW drive will run at USB 2.0 speeds. Check with the manufacturer of your USB 2.0 adapter card to find the correct drivers for your operating system. The lomega CD-RW USB drive will run at USB 1.1 speed when connected to a USB 1.1 connector.

1. Start your PC and wait for Windows to finish loading.

NOTE: If Windows is already running, close any open applications before proceeding.

2. Insert the Solutions CD (label-side up) into the CD-ROM drive.



The software setup program should start automatically. If the lomega software setup program does not start automatically:

- a. Open My Computer or Windows Explorer.
- b. Double-click the CD-ROM drive letter (usually D:, E:, or F:).

- c. Double-click lomega_CD-RW.
- 3. Select Install CD-Ware Software to install the required software for the lomega CD-RW USB drive.
- 4. Follow the instructions on the screen to install the software.
- 5. Connect your Iomega CD-RW drive.

Connecting the Iomega[®] CD-RW Drive

1. If you have not already installed the lomega CD-RW software, install it now.

NOTE: You must connect the lomega CD-RW drive to a USB 2.0 adapter card and install the correct drivers before the CD-RW drive will run at USB 2.0 speeds. Check with the manufacturer of your USB 2.0 adapter card to find the correct drivers for your operating system. The lomega CD-RW USB drive will run at USB 1.1 speed when connected to a USB 1.1 connector.

2. Connect the power supply to your lomega CD-RW drive and then plug it into an outlet. The green power light on the front of the drive should flash momentarily when you plug in the power supply.



3. Connect the lomega CD-RW USB cable that came with your drive to the lomega CD-RW drive. Squeeze the side buttons to attach the connector or remove it from the drive.



4. Connect the other end of the USB cable to the external USB 2.0 port on the back of your computer. The USB 2.0 PCI card external connectors might not be marked. If you do not have a USB 2.0 adapter card, connect the drive to a standard USB connection. However, this reduces the speed of the drive.



Congratulations!

- For information on operating your new Iomega CD-RW drive, refer to Using Your Iomega CD-RW drive.
- For information on creating different types of CDs, refer to <u>Selecting and Using Discs</u>.
- If you encounter problems installing or using the lomega CD-RW drive, refer to the <u>Troubleshooting</u> section.

USB Guidelines

USB (Universal Serial Bus) is an interface designed to make it easy to connect mice, keyboards, joysticks, printers, digital cameras, and other devices to your computer. Because its ease of use, USB is also used to connect high speed storage devices, such as the Iomega CD-RW USB drive.

The Iomega CD-RW USB 2.0 Drive uses the latest USB technology, USB 2.0. This technology is approximately forty times faster than the previous USB 1.1 technology.

Follow these guidelines to ensure optimal and reliable performance of your lomega CD-RW USB drive and other USB devices.

You can...

- You can use your Iomega CD-RW USB drive on a Windows PC with built-in USB running Windows 98/Me/2000/XP. (Some USB controllers or motherboards might not support all types of USB devices.)
- You can connect or disconnect the Iomega CD-RW drive while the computer is on.
- You can optimize the Iomega CD-RW drive's performance by disconnecting other USB devices when using the Iomega CD-RW drive. The performance of all USB devices decreases as additional USB devices are connected.
- You can ensure maximum performance by connecting your lomega CD-RW drive directly to your computer, instead of a hub.
- You can avoid some system lockups by waiting at least 30 seconds after connecting or disconnecting any USB device to use the lomega CD-RW drive. (This allows the system to re-enumerate the USB bus.) Do not connect, disconnect, or use any other USB device during this time.

CAUTION: After disconnecting a USB device, always wait at least 30 seconds before reconnecting, using, or disconnecting another USB device. Your system might lock up if it doesn't have a chance to re-enumerate the USB bus.

Do not...

• Do not connect or disconnect any USB device while the Iomega CD-RW drive is transferring information. Data loss will result!

NOTE: If the activity light is flashing, the lomega CD-RW drive is transferring information. Wait to connect or disconnect any USB device until the activity light goes out and stays out.

- Do not use any USB cable with your lomega CD-RW drive other than the cable that came with the drive. Never use USB extension cables with your lomega CD-RW USB drive. **Data loss might result.**
- Do not disconnect your lomega CD-RW drive or unplug power to the drive while a CD is inserted.
- Do not connect more than two lomega CD-RW USB drives to a single computer.
- Do not transport the lomega CD-RW USB drive with a disk inserted—You could damage the drive or the disk.

CAUTION! USB devices (including controller chips, hubs, cables, cards, mice, joysticks, and peripherals) that do not comply with the USB specification might cause system lockups or possible data loss. If you are not sure that a USB device complies with the latest USB specification, contact the manufacturer of the device.

Using the Iomega[®] CD-RW USB Drive

About the lomega CD-RW Drive

Performance

CD drive performance is measured by how quickly the drive can copy a 74-minute audio CD. A standard 1x CD recorder can record an entire 74-minute audio CD (650 MB) in 74 minutes.

Disc Type	Speed	Description
CD-R Write once	24x	Your lomega CD-RW drive can record a full CD 24 times faster than a standard 1x CD recorder; or in about 3 minutes.
CD-RW Rewritable	10x	Your lomega CD-RW drive can create a full rewritable CD 10 times faster than a standard 1x CD recorder; or in about 8 minutes*.
CD Read	40x	Your lomega CD-RW drive can read data from a CD-ROM 40 times faster than a standard 1x CD-ROM.

* Assuming that the CD-RW media is preformatted.

Drive connectors

The connectors on the back of the drive are listed below.



Connector	Function
Connector	Function

- **1. Power** Use the provided power supply cable to connect to the drive and then to a wall outlet.
- 2. USB 2.0 port Use the provided USB cable to connect the drive to a USB 2.0 port or to a standard USB port on your computer.
- **3. Factory Test** Do not connect anything into this port.

Drive Controls and Indicators

The lomega CD-RW drive has controls and jacks on the front and back panel of the drive that are labeled with various indicators. The following section describes these controls and indicators.



- 1. The View Window lets you view the CD.
- 2. The Write status LED (left) flashes red if the drive is reading from or writing to a disc.
- 3. The Power LED (right) will be green if the drive is receiving power.
- 4. The Eject Button opens the lomega CD-RW drive to insert or remove a disc.
- 5. The Emergency Eject Hole opens the lomega CD-RW drive to remove a disc during a power failure.
- 6. The **Volume Control** raises and lowers the volume output.
- 7. The Audio Jack enables you to use the provided audio cable to connect to an audio port on your computer and listen to audio CDs.

Iomega CD-RW USB Drive Power

When you shut down your system, you can disconnect power to the lomega CD-RW drive; however, it will not harm the drive to leave it powered up. Disconnecting the power supply from the drive is an easy way to power down the lomega CD-RW drive.

If you disconnect power from the drive, but leave the power supply plugged in, the power drawn is less than 2 Watts. To power down completely, plug the power supply into your computer's power strip and use the switch on the power strip to power down both the computer and your lomega CD-RW drive.

Identifying the Drive Letter Assigned to your Iomega CD-RW Drive (PC Only)

If you have more than one CD drive connected to your computer, you might not know which drive letter is assigned to your lomega CD-RW drive.

To find the drive letter for your lomega CD-RW drive, double-click the My Computer icon on your desktop. Right-click the CD Drive icon and select Eject from the menu. The tray

Inserting or Ejecting a CD

Press the eject button on the Iomega CD-RW drive to insert or remove discs. When you insert a CD into the Iomega CD-RW drive, the red activity light flashes.



Ejecting a Disc in Case of Power Loss

The Iomega CD-RW drive must be receiving power for normal disc insertion and removal. However, if you need to eject a disc during a power failure, use the following steps:

CAUTION! Never remove a disc manually while the power supply is connected to the lomega CD-RW drive.

- 1. Turn off your computer and lomega CD-RW drive.
- 2. Disconnect the power to the lomega CD-RW drive.
- 3. Insert a straightened paper clip into the emergency eject hole to eject the CD.

Disconnecting Your Iomega CD-RW Drive

Always close any open files and remove the CD before disconnecting the Iomega CD-RW drive. Disconnect the cable first, then remove the cable from the drive.

Using the Drive as an Audio CD Player

NOTE: The following instructions enable you to listen to audio CDs through your computer speakers. You can also connect headphones to the <u>audio jack</u> on the side of the CD-RW drive. Plug in headphones only while listening to audio CDs.

Connecting the Audio Cable:

1. To avoid damage to your computer and lomega CD-RW drive, turn off the power to both your computer and the lomega CD-RW drive.

Print this User's Manual as a reference before shutting down your computer.

2. Locate the "audio out" jack on the side of the Iomega CD-RW drive. Connect the audio cable included with your Iomega CD-RW drive.



3. Locate the "Audio In" or "Line In" port on your computer and plug in the other end of the audio cable. Check the documentation that came with your computer or sound card if you are not sure of the location of this port.

NOTE: The location of the line in port on your computer might not be exactly as shown in the illustration below.



4. Reconnect the power to your system and the lomega CD-RW drive.

Selecting and Using Discs

Selecting CDs

Your lomega CD-RW USB drive is capable of reading and writing many types of CDs, such as <u>audio CDs</u>, <u>CD-ROMs</u>, <u>CD-RW</u>s. Your lomega CD-RW drive can be used in the following ways:

- 1. Play/Read most types of CD media.
- 2. Write CD-R discs.
- 3. Write and Rewrite CD-RW discs.

Your drive is compatible with the following types of CDs:

Media	Description
CD-DA	Compact Disc-Digital Audio
CD-ROM	Compact Disc-Read Only Memory
CD-R	Compact Disc-Recordable
CD-RW	Compact Disc-Re writable

Your Iomega CD-RW USB drive is compatible with the following CD formats:

Format	Description
CD-DA	Compact Disc-Digital Audio
CD-ROM	Compact Disc-Read Only Memory
CD-Extra	Enhanced Music CD (formerly CD Plus)
CD-ROM	Multitrack CD-ROM
XA	Photo CD
Photo CD*	Compact Disc-Interactive
CD-i*	Compact Disc Plus Graphics
CD+G	Compact Disc Text
CD Text	Compact Disc-Digital Video
Video CD	

*Might require special software.

When to Use CD-R Discs

<u>CD-R</u> discs enable you to permanently store data in a format that is readable on virtually all <u>CD-ROM</u> drives. This information is stored permanently on the CD and cannot be erased. Use CD-R discs for:

• Backing up your hard drive

- Permanently saving large presentations
- Sharing non-editable information
- Making a master CD for duplication
- Duplicating a CD
- Compiling your favorite music creations

Advantages of CD-R over CD-RW:

- Good for permanent data storage (disc cannot be erased)
- Less expensive per CD than CD-RW discs
- Readable on virtually all CD-ROM and CD-R drives
- Can be used in most stereo CD players

When to Use CD-RW Discs

<u>CD-RW</u> enables you to record information to a CD, then rewrite new information to it. Use CD-RW discs for:

- Transporting large data files between computers
- Archiving data
- Storing large files while you work on them
- Updating important files each week
- Backing up data from your hard drive

Advantages of CD-RW over CD-R:

- Enables you to erase the data and rewrite new information (for example, updating files)
- Ideal for backup, sharing files with colleagues, and transporting files between computers
- Enables you to make a practice CD or test the contents of a CD before making a permanent one

NOTE: Only CD-RW drives can read and write data to CD-RW discs. Multi-read CD-ROM drives can read (but not write) to CD-RW discs.

Selecting High Quality CD-R Media

- Use only the highest quality brand name CD-R media.
- Verify that your CD media is certified for the speed of your lomega CD-RW drive.
- Some name brand CD-R media might perform differently in different drives. Experiment with different brands of CD-R media until you find one that works well with your lomega CD-RW drive.

Caring for Your CDs

Follow these general guidelines when handling CD-Recordable and CD-ReWritable discs:

- Avoid exposing the discs to extreme temperatures or direct sunlight.
- Always place the CDs in their protective cases when not in use to avoid scratching them.
- Do not use alcohol-based or ballpoint pens to write on the CDs-the ink might eventually damage your data. Use felt-tip pens instead.
- Use only CD labels that are expressly designed for recordable CDs. Do not attempt to remove a label.
- Do not stack CDs together-doing so might damage the discs.

Using the Software on the lomega CD

The lomega Software CD includes several applications to enable you to create different types of CDs.

Using Iomega HotBurn[®] Software

Use the lomega HotBurn software to do the following:

- Copy a Data CD
- Create a Data CD
- Create an Audio CD

lomega HotBurn software has an interactive User's Manual. Open the HotBurn software and click on the Help Icon for instant help on using the software. The HotBurn User's Manual is also on the Solutions CD.

Additional Software

Check out the additional software applications included on the Solutions CD. Use this software to convert music to MP3 files or play audio CDs on your computer. Insert the Iomega Solutions CD and select one of the software icons for details.

Technical support for additional software applications is provided on the software manufacturer's Web sites.

Troubleshooting

Problems Burning CDs

Try these suggestions first:

- Disable any virus protection while burning CDs.
- Use high-quality discs. Check lomega's Web site for recommended media.
- Close all programs running in the background. Disconnect from the internet.
- When duplicating a CD, select the option to copy to the hard drive first.

- For audio CDs, do not copy directly from another CD.
- Make MP3 files of your favorite tracks on your hard drive, then copy them to your CD.
- Verify that you are using the latest firmware for your CD-ROM drive. Check with your CD-ROM drive manufacturer for updates.
- Lower the recording speed and retry the burn.

A Buffer Underrun Error Occurred

CD writing is a process that must run constantly at the selected recording speed, without interruptions. The lomega CD-RW drive's buffer is constantly filled with a reserve of data waiting to be written, so that small slowdowns or interruptions in the flow of data from the computer do not interrupt writing.

A buffer underrun error means that the flow of data from the source (e.g., hard disk, CD-ROM drive) to the lomega CD-RW drive was interrupted long enough for the lomega CD-RW drive's buffer to be emptied, and writing was halted. If this occurs during a write operation your recordable disc might be ruined.

To Avoid Buffer Underrun Errors

- Record at a slower speed.
- It might be necessary to write audio at slower speeds than those you can achieve for data, since writing CD-DA audio requires streaming more bits per second to the Iomega CD-RW drive.
- Keep the CDs, the recorder, and your source CD-ROM drive free of dust.
- Do not try to copy empty directories, zero byte files, or files that might be in use by the system at the time of recording.
- If your data includes more than 10,000 very small files, create a disc image first, or record at a slower speed.
- The temporary directory should always have free space at least twice the size of the largest file you are recording.
- Do not record across a network. Copy the desired files to your local hard drive.

If you are using a CD-ROM drive as the source for CD to CD copying, enabling DMA (Direct Memory Access) might improve system performance. Check the documentation that came with your computer to see if your hard drive and CD-ROM drive support DMA.

To enable DMA on Windows[®] 98/Me:

NOTE: On some systems, you need to change the BIOS settings to add DMA support, check the user's manual that came with your computer for more information.

1. Right click My Computer on the Windows desktop and select Properties.

- 2. Click the Device Manager tab.
- 3. Double click **CD-ROM.**
- 4. Double click the icon for your Source CD-ROM drive.
- 5. Click the Settings tab.
- 6. If the box next to the **DMA** setting does not already have a check mark in it, click the box to enable DMA.
- 7. Click **OK**.
- 8. Double click the **Disk drives** icon.
- 9. Double click the icon for your computer's hard drive.
- 10. Follow steps 5-7 to enable the DMA setting for your hard drive.
- 11. Click **OK** to finish.
- 12. Allow the system to reboot.
- 13. Begin the recording session again.

To enable DMA on Windows 2000/XP:

NOTE: On some systems, you need to change the BIOS settings to add DMA support, check the user's manual that came with your computer for more information.

- 1. Right click My Computer on the Windows desktop and select Manage.
- 2. Click Device Manager.
- 3. Double click IDE ATA/ATAPI controllers.
- 4. Double click location of your **source** CD-ROM drive.
- 5. Select the Advanced Settings tab.
- 6. Select Transfer Mode and highlight DMA if available.
- 7. Allow the system to reboot.
- 8. Begin the recording session again.

If Enabling DMA Does Not Fix the buffer underrun problem, open the HotBurn software, click Settings. Change the burn speed to a lower setting.

Possible Causes of Buffer Underrun Errors

Causes of buffer underrun errors include:

- Poor Media Quality
- USB Problems
- Network Problems
- File Problems
- Hard Disk Problems

Poor Media Quality

Use brand name CD-R and CD-RW discs. Using top brand name discs helps to ensure the optimal performance of your lomega CD-RW drive. Check the lomega website for a list of recommended media brands. Verify the media is not scratched, dirty, or damaged.

USB Problems

- If you are using a USB 2.0 card, verify that you have the latest USB 2.0 drivers. Contact the USB card manufacturer for updates.
- If you are using built-in USB controllers, verify that you have the latest drivers. Contact the manufacturer of your motherboard for updates.

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NOTE! The lomega CD-RW USB drive is designed to the latest USB specification. However, some USB devices (including controller chips and hubs) currently available on the market do not conform to the USB standard. If you experience problems after connecting the lomega CD-RW USB drive, your system might contain an old driver or a non-compliant USB controller. Contact the manufacturer of the USB controller or your computer for possible solutions. We also recommend checking the lomega web site (<u>www.iomega.com</u>) frequently for updated software and the latest information on USB.

Network Problems

• Recording across the network (a network may be too slow to maintain adequate throughput speed)

File Problems

- Recording many small files
- Damaged source files (data loss)
- Trying to record files in use by the system or other applications

Hard Disk Problems

- Extremely fragmented hard drive
- Not enough space in temporary directory (20MB recommended)
- Hard disk compression might cause buffer underruns. We do not recommend writing from a compressed hard disk or disk partition.
- Very old hard drives

Problems Creating Digital Audio CDs

CAUTION! Digital Audio Extraction (DAE) is designed to assist you in reproducing material in which you own the copyright or have obtained permission to copy from the copyright owner. Unless you own the copyright or have permission to copy from the copyright owner, you might be violating copyright law and be subject to payment of damages and other remedies. If you are uncertain about your rights, contact your legal advisor.

Copying audio digitally from a CD requires a CD-ROM drive or lomega CD-RW drive which supports DAE. All lomega CD-RW drives can perform DAE. Many CD-ROM drives do not support DAE at all; others do it, but not very well. Few (if any) high speed CD-ROM drives can extract audio successfully at or even near their top-rated data speed.

Unsuccessful audio extraction is easy to detect: it sounds bad (clicks, pops, or hissing within the track). The most common reason is that DAE was performed at too high a speed for your source CD-ROM or lomega CD-RW drive to maintain proper synchronization of the audio data it was passing to the hard disk or lomega CD-RW drive. Audio samples are skipped or repeated, causing errors which sound to the human ear like clicking, popping, or hissing.

The solution is to slow down DAE. However, with some drives, getting a clean audio extraction requires reading at very slow speeds, with lots of going back and rereading the same audio samples over again to make sure that everything is in the right place (this is called audio-resynching or jitter correction). Sometimes the read will be so slow that it becomes impossible to copy directly from your source audio CD to the lomega CD-RW drive—the read speed is slower than the lomega CD-RW drive's write speed. In this case you will have to copy the audio tracks to the hard disk and then record them back to the CD.

For more information, Open the HotBurn console and click the Help icon. Go to troubleshooting and read through the section What is Digital Audio Extraction?

The Iomega CD-RW Drive Writes at a Speed Lower than the Speed Setting

Other USB devices connected at the same time as the Iomega CD-RW drive can affect the Iomega CD-RW drive's performance, especially digital cameras or scanners that are processing large amounts of data. If you are using a hub to connect several devices to your computer, disconnect the other devices and connect the device directly to either of the computer's USB ports.

Your Iomega CD-RW USB 2.0 drive has the capability of writing data to both CD-R and CD-RW discs at 24x speed, when connected to a USB 2.0 adapter card. This means that it can write the equivalent of 24 minutes of audio data in one minute. An audio CD can contain up to 74 minutes of audio data. For example, in 24x mode, it will take around 3 minutes to write 74 minutes of audio data. Writing non-audio data might be even slower.

If the Iomega CD-RW USB 2.0 drive is connected to a USB 1.1 port, it will run at a much lower speed.

Average write speeds for a 1x CD writer are:

• 1x for audio = 172 kb/second

• 1x for data = 150 kb/second (In other words, at 1x speed you can write about 8.7 megabytes of data per minute.)

Any CD recorder will seem slow compared to an average Ultra DMA hard drive which can write about 33 MB/second. The speed difference stems from the difference in technologies. A hard drive uses magnetics to store its data. The CD recorder uses a laser to burn pits into blank CD discs.

There are several additional causes for slow write speeds:

• Burn-proof technology

Burn-proof technology temporarily suspends the write operation if the flow of data is interrupted because of system limitations. This prevents buffer underrun errors from occurring.

• Poor quality CDs

For optimal performance, use brand name CD-R and CD-RW discs. Using top brand name discs helps to ensure the optimal performance of your lomega CD-RW drive.

NOTE: Some name brand CD-R media might perform differently in different drives. If you are not getting the performance that you expect from your lomega CD-RW drive, experiment with different brands of CD-R media until you find one that works well with your lomega CD-RW drive.

• Check your DMA Mode

To optimize the speed of your lomega CD-RW drive, enable the DMA mode for your CD-ROM drive. See Enabling DMA on Your Source CD-ROM Drive for step-by-step instructions on enabling DMA.

NOTE: You might need to disable the DMA mode in order to format a CD.

• Compatibility problems with the source device

The source device refers to a CD-ROM drive, a Network, or any type of device from which you can copy data to the Iomega CD-RW drive.

For example, when recording from a Network, the Network might be too slow to maintain an adequate throughput speed and might cause the lomega CD-RW drive to run slowly. CD-ROM drives that are not DAE (Digital Audio Extraction) compatible can also be an issue. Many CD-ROM drives do not support DAE and those that do might not support the DAE effectively.

Test your system before burning a CD-R or CD-RW from any source. HotBurn comes with a variety of system tests that checks different parts of your system for compatibility. To test your system for compatibility:

- Open the HotBurn software. Click the Tools icon and select Run System Test. Click Test.
- Follow any onscreen instructions.
- The CD-ROM drive is not DAE (Digital Audio Extraction) compatible

If your CD-ROM drive is not DAE compatible, or if you are copying from the Network and it is too slow, copy your data or audio files to your hard drive and record the files back to CD. See <u>Trouble Creating Digital Audio CDs</u> for more information.

HotBurn Doesn't Recognize My Disc.

HotBurn software comes with a system test that checks different parts of your system for compatibility. This helps to make sure your system is configured for optimal performance with HotBurn software and improves the likelihood of successfully making a CD.

Open Hotburn and click the HotBurn Tools icon, then click Run System Test. Follow the instructions on the screen.

If you are still experiencing problems, read the section in the HotBurn User's Manual about Buffer underruns.

I Want to Change the Drive Letter Assigned to the Iomega CD-RW Drive

Drive letter assignments are controlled by the operating system—in order to change a drive letter assignment, you must work with the procedures required by your computer's operating system.

NOTE: Changing your drive letters might cause letters assigned to other devices to be reassigned. Some links and dependencies might be broken. It might be necessary to reconfigure the software that came with your lomega CD-RW drive after following these step, since changing drive letters may break some links within the software.

Windows 98/Me Users:

- 1. Right click the icon for My Computer and select Properties.
- 2. Click the Device Manager tab.
- 3. Click the plus sign (+) next to CD-ROM drives, then click the icon for the lomega CD-RW drive to select it.
- 4. Click the **Properties** button located at the lower left of the Device Manager window.
- 5. Click the Settings tab.
- 6. The Settings window displays the current drive letter for the lomega CD-RW drive. To set a specific drive letter, select the desired drive letter in the dialog box for **Start drive letter**. Note that the same drive letter should appear in the dialog box for **End drive letter**.
- 7. Reboot the system.

Windows 2000/XP Users:

NOTE: You must have administrator privileges for the computer in order to change drive letters under Windows 2000.

- 1. Select Control Panels, Administrator Tools, Computer Management, then Disk Management.
- 2. Right click the icon for the lomega CD-RW drive and select Change Drive Letter and Path from the shortcut menu.

- 3. Click the Edit button.
- 4. Click Assign a drive letter and select the letter you want to use for your lomega CD-RW drive.
- 5. Reboot the system.

Problems Reading Recordable CDs on a Standard CD-ROM Drive

Sometimes, it appears that you wrote a CD without trouble and can read it on your lomega CD-RW drive; however, when you put it in a standard CD-ROM drive, one of the following happens:

- The CD is ejected.
- You get error messages such as no CD-ROM or not ready reading.
- You have random problems accessing some files or directories.

The problems might not appear when you use the disc on different CD-ROM drives.

The lasers of some CD-ROM drives, especially older ones, are not calibrated to read recordable CDs because their surface is different from that of factory-pressed CDs. If your CD-ROM drive reads mass-produced (silver) CDs but not recordable CDs, check with the CD-ROM drive manufacturer to determine if this is the problem. An upgrade might be available to resolve the problem.

Problems Reading Recordable CDs on Any CD-ROM Drive

If you have successfully written a CD but have problems reading it, there are a number of possible reasons:

- If your CD is ejected, you receive an error message, or you have random problems accessing files from the CD, your CD-ROM drive might not be well-calibrated to read recordable CDs. See <u>Problems Reading Recordable CDs on a Standard CD-ROM Drive</u> for more information.
- The CD can read fine, but all of the files have a read-only attribute. This occurs because the file system extensions used to read back ISO 9660 discs in Windows assume that CDs are a read-only medium, and therefore set the read-only attribute for files on CD. If you copy files from CD back to hard disc, this attribute is maintained until you change it using Windows Explorer. See Problems with File Systems and File Names for more information.

Problems with File Systems and File Names

Not all CDs can be read by all operating systems because of the file system and file names you use when the disc is created.

Search the World Wide Web for the most current information about file formats.

The following are the file naming conventions supported by different operating systems.

ISO 9660 (8+3 characters set)

If you are going to make an ISO 9660 Level 1-compliant disc, take ISO 9660's filename limitations into consideration from the start when creating your files and applications. Use this option to record discs with filenames which comply strictly with ISO 9660 Level 1 restrictions.

Any MS-DOS 8+3 filenames (unrestricted character set)

Windows 95/98/Me/2000/NT allows you to use file and folder names up to 255 characters long, which may include spaces. To maintain DOS compatibility, a DOS-standard (8+3) filename is associated with each file; these names are created automatically by Windows and can be viewed in Properties for each file. To create these DOS-standard names, long filenames are truncated and the tilde (~) character is added; a number may also be added to distinguish between files which would otherwise have identical names when truncated. For example, the filename "Letters to Send.DOC" might become "LETTER~1.DOC."

Joliet

Joliet is an extension of the ISO 9660 standard, developed by Microsoft for Windows 95, to allow CDs to be recorded using long filenames (it also allows for using the Unicode international character set). For files recorded to CD, Joliet allows you to use filenames up to 64 characters in length, including spaces.

Versions of Windows NT up to 3.51 build 1057 do NOT read the long filenames on Joliet discs. Windows NT 4.0 does support Joliet. If you select this option, filenames up to 64 characters long will be allowed. If a filename is longer than 64 characters, a message will appear allowing you to edit the filename.

Long File Names (30 characters max)

In Windows 95/98/Me/2000/NT long filenames are used, but converted to upper case. Filenames longer than 30 characters are truncated and the tilde (~) is added; a number might also be added to distinguish between files which would otherwise have identical names when truncated.

Romeo

Romeo allows you to write to disc filenames up to 128 characters long, including spaces. This is not part of the Joliet standard, and the Unicode character set is not supported. If read under DOS or Windows 3.1, file and directory names will appear truncated to 8+3. (However, if two or more filenames become identical when truncated, you will probably be able to see only the first.) Romeo long filenames can be read on Windows 95 and Windows NT 3.51 systems.

When you select this option, your disc can include filenames up to 128 characters long. File and directory names are automatically converted to uppercase for maximum compatibility with Windows NT 3.51 and DOS.

File Version Numbers

In strict interpretations of the ISO 9660 standard, all directory entries of files must contain the file name followed by a semicolon and the file version number, "1." Most operating systems automatically remove these two characters from the filename when accessing a file or displaying a directory.

Some UNIX systems require a setting to make the version numbers "disappear."

Windows System Problems When Creating CDs

If you are experiencing problems with your Windows Operating System when creating CDs, try one or more of the following:

- Close any open applications when creating a CD.
- Turn off any screen saver, power management or suspend mode that might be enabled on your computer while a CD is being created. These can be reenabled once the CD creation process has finished.
- If you have anti-virus software installed, disable any active virus scanning during the creation of a CD or when copying a large amount of files to a disc. Make sure that you reenable the active anti-virus software and scan the disc that you created before using or distributing it.

Problems Using CDs Created on The Iomega CD-RW Drive on Any CD player.

CD-RW discs created on a lomega CD-RW drive can be read on Multi read CD players. Virtually all CD-RW drives sold today are Multi read compatible. Many PC OEMs provide Multi read compatible CD-ROM or DVD-ROM drives as standard equipment with the computers they sell. Check with the owner's manual that came with your computer equipment to verify that the CD player is Multi read compatible.

NOTE: CD-R discs are read by virtually all types of CD drives sold today. If in doubt as to which type of disc to use, use a CD-R disc.

The Iomega CD-RW USB Drive Is Not Assigned a Drive Letter Under Windows 98/Me.

- 1. Check all connections.
- 2. Verify that the drive is receiving power.
- 3. Verify that you are using the USB cable that came with your lomega CD-RW drive.
- 4. Verify that the Iomega HotBurn software is installed. The Iomega CD-RW software package shipped with your drive includes drivers required for Iomega CD-RW USB drives.
- 5. Restart the computer after installing the lomega HotBurn software.
- 6. Try reinstalling the software. If you are using Windows and the Iomega CD-RW software is already installed, remove it using Add/Remove Programs in Control Panel, restart Windows, then reinstall the software.
- 7. If you are using a USB 2.0 card, check Device Manager to verify that the card is installed and working properly.
- 8. Check to see if your USB controller is enabled and is working properly.
 - a. Right click the icon for My Computer and select Properties.
 - b. Click the tab for **Device Manager**.
 - c. Double click Universal Serial Bus Controller.
 - d. Universal Host Controller and USB Root Hub should be listed.
 - e. If either of these has an exclamation or a red X next to it, or if the Universal Serial Bus Controller is not listed, there is a problem with the USB Controller. Call your computer manufacturer for information on getting it fixed.
- 9. If you are connected to a USB hub, ensure the hub is connected correctly and has power.
- 10. Try connecting the lomega CD-RW drive directly to one of the USB connections on your computer, rather than a USB hub or keyboard.
- 11. Try manually assigning a drive letter to the lomega CD-RW USB drive: Windows 98/Me.

12. Check your BIOS to ensure USB is enabled. Refer to your computer's User's Guide or manual for directions.

NOTE: If you disconnect your lomega CD-RW USB drive and reconnect to the same USB port, the drive should be reassigned the same drive letter automatically. If you reconnect to a different USB port, you may have to manually reassign the drive letter.

If the problem continues, there may be a driver conflict on your system. Please contact the lomega web site (<u>www.iomega.com</u>) or go to the <u>How To Get Help</u> section and call our Automated FaxBack help for additional troubleshooting information.

The Iomega CD-RW Drive Is Not Assigned a Drive Letter Under Windows 2000 or Windows XP.

- 1. Check all connections.
- 2. Make sure the lomega CD-RW USB drive is receiving power.
- 3. Make sure you are using the Iomega CD-RW USB cable that came with your Iomega CD-RW drive.
- 4. If you are using a USB 2.0 card, check Device Manager to verify that the card is installed and working properly.
- 5. If you are connected to a USB hub, ensure the hub is connected properly and has power.
- 6. Try connecting the lomega CD-RW USB drive directly to one of the USB connections on your computer, rather than a USB hub or keyboard.
- 7. Try manually assigning a drive letter to the lomega CD-RW USB drive:

NOTE: You must have administrator privileges for your local computer in order to change drive letters under Windows 2000.

- a. Select Control Panel, Administrator Tools, Computer Management, then Disk Management.
- b. Right click the icon for the lomega CD-RW USB drive and select Change Drive Letter and Path from the shortcut menu.
- c. Click the Edit button.
- d. Click Assign a drive letter and select the letter you want to use for your lomega CD-RW USB drive.
- e. Reboot the system.

Green Power Light Does Not Come On.

- 1. Make sure you are using the lomega universal power supply that came with your lomega CD-RW drive. Ensure that it is connected to the lomega CD-RW drive as shown in the instructions for connecting your drive.
- 2. Verify that the power supply connector is completely inserted into the Iomega CD-RW drive power connector.
- 3. Verify that the power supply is plugged into a working power outlet.

Windows Stops Responding When You Disconnect the Iomega CD-RW USB Drive.

This might occur because Windows is trying to access a file that is on your lomega CD-RW disk. Make sure that no files on the disk are in use when you unplug the drive. Eject the disk before disconnecting the USB interface cable and lomega drive to prevent any data loss.

The lomega CD-RW USB Drive Stops Responding (Locks up), or Information Gets Lost or Corrupted While You Are Saving or Copying Files.

The problem is probably due to a non-compliant USB controller chip or other USB device on your computer system. Try the following suggestions:

- Carefully follow the USB guidelines. They are designed to help you avoid some of the problems caused by non-compliant USB.
- Upgrade your system software to Windows 98 Second Edition. This version of Windows 98 includes USB driver upgrades that fix most of the problems associated with USB controllers and motherboards.
- If the problem still continues, you may want to upgrade the USB controller in your computer system to one that complies with the latest USB specification. In this case, contact your computer manufacturer for help.
- Do not connect or disconnect any USB device while the lomega CD-RW USB drive is transferring information. Data loss will result!

CAUTION! USB devices (including controller chips, hubs, cables, cards, mice, joysticks, and peripherals) that do not comply with the USB specification may cause system lockups or possible data loss when used with your lomega CD-RW USB drive. If you are not sure that a USB device complies with the latest USB specification, contact the manufacturer of the device.

The Iomega CD-RW Drive Does Not Work on an Older Laptop Computer.

Some older laptops use a USB port called an "Open Host" that is not compliant with the latest USB specification. If your laptop has an Open Host USB port, your lomega CD-RW drive may not be assigned a drive letter when connected to the laptop. Try following the USB guidelines. They are designed to help you avoid some of the problems caused by non-compliant USB devices. If you continue to have problems, contact the manufacturer of your laptop computer for additional information.