

EXTERNAL SLIM DVD DRIVE USER MANUAL

Rev 2.0

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SAFETY NOTICES

Please read carefully and keep this User's Manual for future reference.

Please carefully note the Cautions and Warnings.

1. Always install electrical equipment close to an electrical outlet and ensure that the outlet is easily accessible.
2. Place power cords where people will not step on or trip over them. Do not place any objects over the power cords.
3. Always install equipment on a stable surface to avoid damages and/or injuries.
4. Do not place computer equipment in direct sunlight, on top of any heating units, or near any electrical appliances that draw large amounts of current.
5. Computer equipment enclosures often have openings for air convection. To protect equipment from overheating, do not cover or block air convection openings.
6. Ensure that the equipment is connected to a power outlet with proper voltage.
7. If computer equipment is not in use for long period of time, it is recommended to disconnect it from the power outlet to avoid damage by transient power surges.
8. Protect electrical equipment from humidity.
9. Always disconnect computer equipment from the electrical outlet before cleaning. Do not use liquid or sprayed detergent for cleaning – use a moist cloth.
10. Never pour any liquid into computer equipment openings; internal contact with liquid could cause fire or electrical shock.
11. Keep the area around your computer equipment clear of dust, smoke, and other contaminants.
12. Never open this drive's enclosure. For safety reasons, the drive should be opened only by qualified service personnel.
13. Do not drop or jolt the drive.
14. If you see any of the following condition, contact a qualified service personnel:
 - (a) The power cord or plug is damaged.
 - (b) Liquid has penetrated into the equipment.
 - (c) The equipment has been exposed to moisture.
 - (d) The equipment has not worked well or you can not get it to work according to the user's manual.
 - (e) The equipment was dropped and damaged.
 - (f) The equipment has obvious signs of damage.
15. **DANGER:** Invisible laser radiation when opened. Avoid direct exposure to beam. Complies with FDA radiation performance standards, 21 CFR, subchapter J. Laser power: Wave Length: 783±3nm (CD); 658±3nm (DVD). Emission power: 0.7 mW. Laser diode: class 3b.
16. **DO NOT STORE THIS EQUIPMENT IN AN ENVIRONMENT WITH TEMPERATURE ABOVE 60°C (140°F).** Excessive heat may damage the equipment.
17. The sound pressure level at the operator's position according to IEC704-1:1982 is equal to or less than 70 dB (A).

CAUTIONS

CAUTION: Do not attempt to open the drive for service. Removing the cover may cause exposure to harmful laser radiation and electrical shock. To obtain service, return the defective drive to the vendor where the drive was purchased.

- Always use the original package for transporting the drive. The original packaging was designed and tested to protect your drive under rough conditions.
- Keep your CDs and DVDs surfaces clean. Use a soft, dust-free cloth to clean the disc surface before use in the drive can help protect the drive.
- The copyright laws of each country govern the reproduction of copyrighted materials. The person using this drive may be liable making unauthorized copies of copyrighted works.
- It is recommended to create an image on HDD during copying process, instead of "copy on the fly" mode. Therefore we recommend the user reserving sufficient buffer space for creating a image file (at least 650MB for CD; 5GB for DVD; and if your drive support Double Layer DVD+R or Dual Layer DVD-R writing, then at least 9GB space is needed).
- **Do NOT use a damaged, cracked or low-quality disc as it may shatter during read or write operation when disc is spinning at high speed.**

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INTRODUCTION

This external USB2.0 external DVD/CD writer provides professional quality and performance for writing, rewriting and reading DVD and CD media. It supports Running OPC (ROPC) technology and is compatible with Windows Plug & Play function. In addition, the drive is equipped with innovate technologies to eliminate buffer-underrun errors, so you are free to use your computer for other tasks while the drive is writing to DVD or CD. With an internet connection, you can download the latest firmware, then update this drive so it will support latest technologies.

NOTE: The drive's maximum write, rewrite and read speeds are noted on the original package.

What You Can Do with the DVD Writer

- Archive data files onto recordable or rewritable DVDs or CDs
- Archive images and videos onto recordable or rewritable DVDs or CDs
- Record digital video or slide shows onto DVD+R, DVD+RW, DVD-R, and DVD-RW discs
- Read DVD+R, DVD+RW, DVD-R, DVD-RW, CD-R and CD-RW discs
- Play music CDs
- Play VCD & DVD movies
- Access interactive reference materials stored on DVDs
- Master new software programs on DVDs or CDs
- Create and burn LightScribe labels*

DVD functions:

- Write to DVD+R and DVD-R (recordable DVD) media
- Write to double-layer DVD+R (recordable DVD+R9) and dual-layer DVD-R (recordable DVD-R9) media*
- Write to DVD+RW and DVD-RW (re-writable DVD) media
- Read DVD-ROM, DVD+R, DVD-R, DVD+RW, DVD-RW, DVD+R9 and DVD-R9 discs.
- Read or write to DVD-RAM media*

CD functions:

- Write to CD-R (recordable CD) media
- Write to ultra-speed CD-RW (rewritable CD) media
- Read CD-ROM and CD-R data media, and CD-RW and CD-DA (audio) media

** indicates functions only supported by certain models. To check if your drive supports these functions, check the original packaging for feature listed, or visit us online for detailed specifications*

Format Compatibility

DVD write: DVD+R Version 1.3, DVD-R writing), DVD+RW Version 1.3, DVD-R Version 2.1, and DVD-RW Version 1.2,
DVD+R9 Version 1.0, DVD-R9 Version 3.0 (for drives that support DVD double/dual-layer)
DVD-RAM Version 2.2 (for drives that support DVD-RAM rewriting)

DVD read: DVD-ROM single/dual layer (PTP, OPT), DVD-R, DVD+R, DVD+R9, DVD-R9, DVD-RW, DVD+RW, DVD-RAM (only for drives that support DVD-RAM reading), DVD-Video, DVD-Audio, DVD-CPRM.

CD write: Orange Book Part 2 CD-R Volume 1, Part 2 CD-R Volume 2 Multi Speed, Part 3 CD-RW Volume 1 Low Speed, Part 3 CD-RW Volume 2 High Speed, Part 3 CD-RW Volume 3 Ultra Speed

CD read: CD-DA, CD-TEXT, CD ROM Mode-1, CD-ROM/XA Mode-2 Form-1 and Form-2, CD-I Ready, Video-CD, Karaoke-CD, Photo-CD, Enhance CD, CD extra, UDF(fixed/variable Packet mode), Multi-session, CD Plus, CD-R, and CD-RW.

Recording Modes Supported

Track at Once

Data can be recorded to disc one track at a time. New tracks can be added later. This mode requires the disc to be "closed" (through the software application) before music CDs can be played back in a CD player or CD-ROM drive.

Disc at Once

Data can be recorded to an entire disc in one pass. In this mode, new data can not be added later.

Session at Once

Data can be recorded to a disc one session at a time. In this mode, new sessions can be written later. This mode allows more disc space to be used than multi-session mode allows, because no gap is created between sessions.

Multi Session

Data can be recorded to a disc in one session. In this mode, new sessions can be written later. This mode allows less disc space to be used than session-at-once mode allows, because a gap is created between sessions.

Packet Writing

Data can be added directly to or deleted from rewritable media. (Useful for data backup.) This mode requires software that supports packet writing.

SYSTEM REQUIREMENT

System Requirements

To ensure read/write/rewrite performance, a Windows-based PC system with the following specification is recommended:

CPU	Pentium 4 1.3GHz or higher
Operating System	Microsoft Windows 2000/XP/Vista and Windows-7
Memory	128 MB RAM (256 MB recommended for video editing)
Hard Drive	Minimum 800 MB free spaces for creating a CD image file; Minimum 10 GB free spaces for creating a DVD video image file
Interface	USB2.0 (A second USB2.0 port maybe needed for additional power! See Installation Section for detail)

FEATURES AND CONTROLS

Front View Tray-Load Type Drive

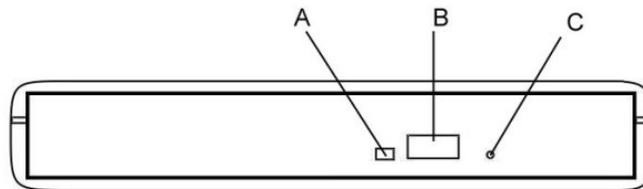


Figure: Front view of tray-load type drive

A	Eject Button	Push button to eject the tray.
B	Status LED	Indicator of drive's status. A blinking LED means the drive is in writing or reading mode.
C	Emergency Eject Hole	Used when tray can not be ejected by pressing "Eject Button" or when the drive has no power. CAUTION: Always ensure the power to the drive is OFF when performing manual eject.

Slot-Load Type Drive

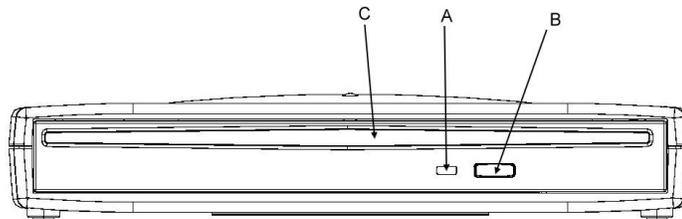


Figure: Front view of slot-load type drive

A	Status LED	Indicator of drive's status. A blinking LED means the drive is in writing or reading mode.
B	Eject Button	Push button to eject the disc.
C	Loading Slot	The slot where a disc is loaded in.

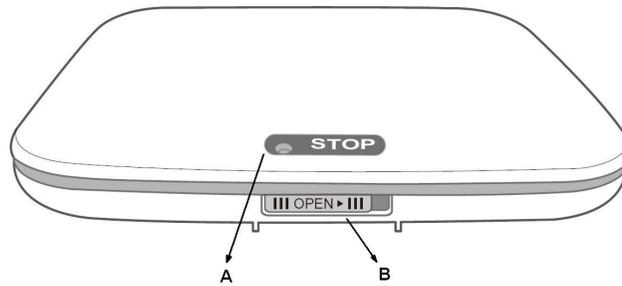
Top-load Type Drive

Figure: Front view of top-load type drive

A	Stop Button	Press the STOP button to stop the disc from spinning. (Note: Always stop the disc before open top cover)
B	Open Latch	Slide the OPEN latch to the right to release the top cover.

Rear View

Tray-Load Type / Slot-Load Type Drive

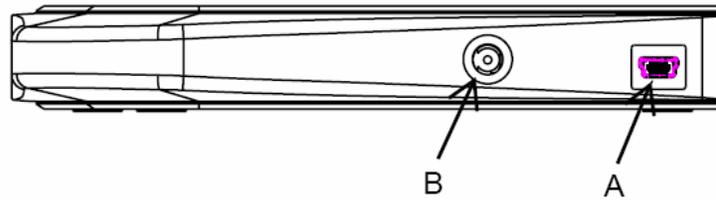


Figure: Rear view of external slim DVD Writer

A	USB Connector	Standard USB Mini-B Type jack
B	Power Indicator LED	LED indicator: “Blue” color means sufficient power, and “Red” indicates insufficient power

Top-load Type Drive

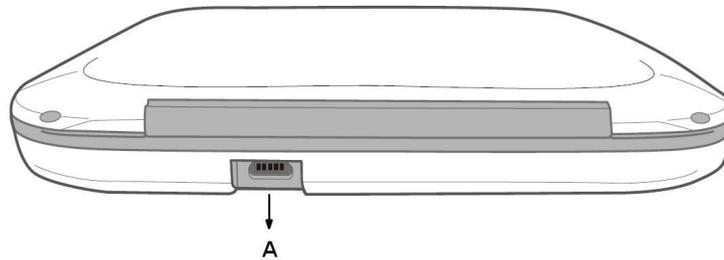


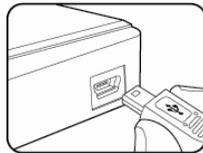
Figure: Rear view of external top-load DVD Writer

A	USB Connector	Standard USB Mini-B Type jack.
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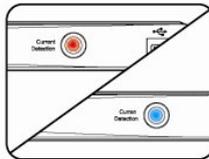
INSTALLATION

Installing Tray-Load / Slot-Load Type Drives:

1. Power on the computer.
2. Plug the mini-B type connector on the USB data cable to the back of the drive



3. Connect the Type-A connector to an available USB port on the computer.
4. Check the LED power indicator, “Blue” LED indicate sufficient power for the drive, or “Red” indicate insufficient power

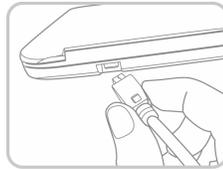


5. If LED is “Red”,
 - a) If your drive comes with a Y-type cable, simply plug the secondary connector into another USB port on the computer for additional power
 - b) If your drive has an Auxiliary Power Cable, simply remove the cap on end of main DATA cable connector, insert the mini-B plug, then connect the other end (Type A) to another USB port.

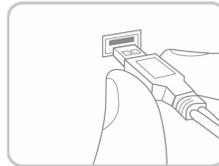
Note: If two ports are required, please DO NOT unplug either of the two connectors.

Installing Top-Load Type Drives:

- 1. Power on the computer.**
- 2. Plug the mini-B type connector on the USB Cable to the back of the drive**



- 3. Connect the Type-A connector to an available USB port on the computer.**



OPERATION

Using the Drive and Installing Software

USB Device:

When the drive is plugged into the computer for the first time, Windows Operating Systems will show a message about new device detected, and will install drivers automatically. Once drivers are installed, there will be a message shown: "Your device is ready to use", and you can start using the drive.

To use the drive:

As a CD-ROM drive: Most Windows Operating Systems (Windows 2000, Windows XP, Windows Vista and Window 7) supply a generic CD-ROM device driver that lets the DVD writer function as a standard CD-ROM drive as soon as it's installed. If you're using one of these operating systems, you do not need to install additional software to read or play CDs.

As a DVD-ROM drive: The same operating systems also let the DVD writer function as a DVD-ROM drive as soon as it's installed. If you're using one of these operating systems, you do not need to install additional software to read DVDs, however you will need special software to playback DVD video titles. Please install the bundle software application.

As a CD or DVD writer: To write to CD or DVD media (recordable or rewritable), you need to install additional utility software such as program included on the software disc bundled with the drive. Please install these application software for mastering disc, backing up files, capturing audio, and more.

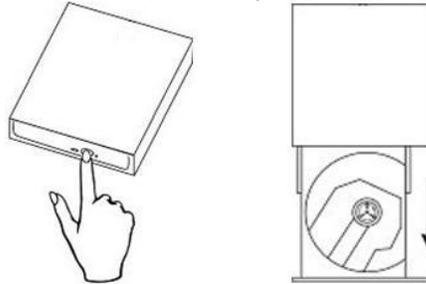
To Install Software:

Insert bundled utility software disc into the drive, the follow the on screen graphic user interface (GUI) screen to install required programs. If the installation program doesn't start by itself, open "My Computer" screen, double-click to enter the location where software CD is loaded, and manually start installation process by double-click on "setup" icon.

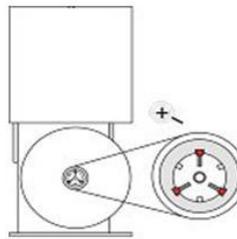
Insert and remove a disc

To insert a disc (Tray-Load type drive):

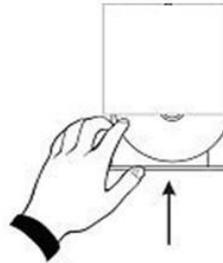
- (1) While the DVD writer is powered up, push the Eject button on the front panel to eject the tray. Then pull the tray out all the way.



- (2) Place the disc, label side up, onto the tray and make sure the center of the disc is aligned with the spindle as shown. Press down at the center of the disc until it is clicked onto the spindle platform.



- (3) Push the tray back until it is locked firmly.



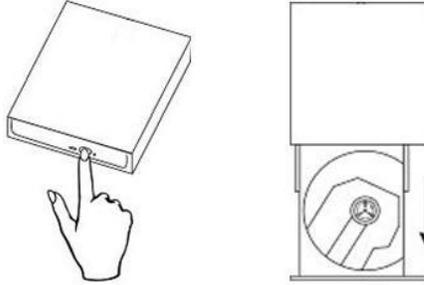
Note:

Use caution when pressing disc down or pulling/pushing tray, as excessive force may cause damage.

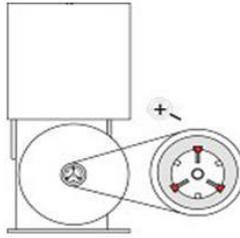
Never touch the lens of the laser assembly.

To remove a disc (Tray-Load type drive):

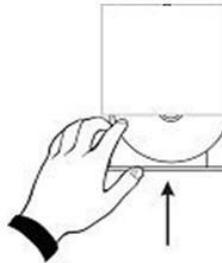
- (1) While the DVD writer is powered up, push the Eject button on the front panel to eject the tray. Then pull the tray out all the way



- (2) Carefully, by holding the disc edge, lift the disc off the spindle platform.

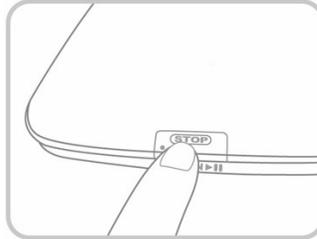


- (3) Push the tray back until it is locked firmly

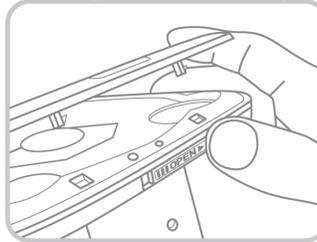


To insert a disc (Top-Load type drive):

- (1) **While the DVD writer is powered up, first press the STOP button on top cover to stop disc from spinning.**



- (2) **Slide OPEN latch to the right to release the top cover.**



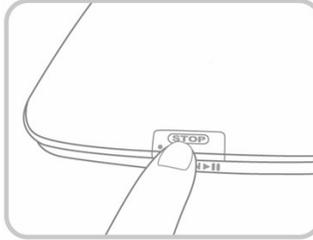
- (3) **Place the disc, label side up, into the drive and make sure the center of the disc is aligned with the spindle. Press down at the center of the disc until it is clicked onto the spindle platform.**
- (4) **Press top cover down till it is securely locked into place**

Note:

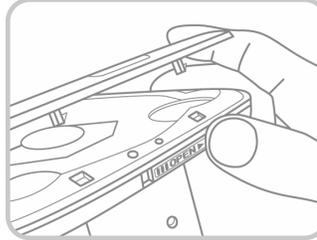
Use caution when pressing disc down, as excessive force may cause damage.
Never touch the lens of the laser assembly.

To remove a disc (Top-Load type drive):

- (1) **While the DVD writer is powered up, first press the STOP button on top cover to stop disc from spinning.**



- (2) **Slide OPEN latch to the right to release the top cover.**



- (3) **Carefully, by holding the disc edge, lift the disc off the spindle platform.**
(4) **Press top cover down till it is securely locked into place**

RECORDING & PLAYING CDs AND DVDs

Recording CDs & DVDs

To record CDs and DVDs, please make sure that you have installed the bundled utility software or other utilities.

Once software is installed, launch the utility, and follow the software instruction on procedures to record CDs and DVDs

Playing DVDs

To play DVD Video contents from this drive, you must have DVD playback software installed on your PC such as the one included in the bundled software.

Once software is installed, launch the utility, and follow the software instructions to enjoy DVD Video contents

Playing DVD Movie with Region Code:

Commercial Movie DVDs are encoded with Region Code, so it can only be distributed and played in a certain regions. The drive must be set to the same region code to play these discs.

The DVD write is shipped without a preset region code. Instead, the first time a Movie disc with region setting is inserted into the drive; there will be a pop-up window prompt user to set the proper region code. This action will only happen once, unless movie disc with different region code is detected.

If you insert a movie disc with a different region code, a pop-up window will prompt user to confirm the region code change. If you do not accept the code change, the new title will not play on this drive. If you do accept the change, the drive's region code will be set to the new code, and you will need to switch back to old code if you want to play those titles.

***NOTE:** You may change the drive's region code up to 5 times only. After that, you will not be able to change your drive's code setting. (Your DVD playback software will warn you if you approach the 5-change limit.)*

About Software & Manuals

The detailed user's manual for the recording and playback software is automatically installed on your computer when you install the software.

LIGHTSCRIBE GUIDE

LightScribe is a direct disc label technology that allows user to create silk screen like graphic labels on the disc. It is as simple as flip and burn.

Check your drive's specifications to ensure it support LightScribe!



Figure: LightScribe Logos

LightScribe Requirement:

To label your CDs and DVDs with LightScribe labeling, you need three components:

- A LightScribe-enabled drive
- LightScribe labeling software (included with the bundled utility software)
- LightScribe media (available where computers are sold)

You can label your LightScribe disc before or after you burn the data side, and you can even label a number of discs in succession, whether or not they have data on them.

The important thing to remember is to always insert your LightScribe disc label side down when burning your LightScribe.

CREATING AND BURNING LIGHTSCRIBE LABELS

1. Launch the LightScribe labeling software, select Lightscribe as labeling option.
2. Create your label design.
 - You can choose to create a label with text and/or graphics, and you can choose the area of the disc in which your label will be inscribed — from a simple band of text (“title only”) to a complete design that covers the entire disc (“full label”).
 - Experiment with text, fonts, ready-made backgrounds, your own photos and other graphics to design the label that best suits your style. (For ideas and advice, visit www.lightscribe.com/labeltips)
3. When your design is ready, insert a blank LightScribe disc into the drive label side down.
4. Select the Preview option to see how your design will look as a LightScribe label. Previewing your design lets you determine whether the design elements are placed where you want them, and it shows you what the grayscale design will look like on disc.
5. Select the Print option to send the label design to disc. When you print your design to disc, you can choose from three quality modes: draft, normal, or best. “Draft” is the fastest printing mode, and the resulting design provides a lower level of contrast; “best” provides the highest contrast and darkest design areas, and the burning process takes longer. The following table shows a rough estimation of the expected print times.

Setting	Title only	Title & content listing	Full label (with graphics)
Best	<4 min.	<9 min.	<36 min.
Normal	<3 min.	<7 min.	<28 min.
Draft	<2 min.	<4 min.	<20 min.

6. When your label is finished, the drive will automatically eject your disc.

FREQUENTLY ASKED QUESTIONS FOR LIGHTSCRIBE:

Q: How does LightScribe work?

A: The coating on a LightScribe disc changes color when it's exposed to the CD/DVD drive's laser. The process is similar to film exposure, except that the LightScribe surface reacts specifically to the intense light of the laser.

Q: What happens if I try to use LightScribe to label a non-LightScribe disc?

A: The software prevents you from sending a label image to a non-LightScribe disc. LightScribe-enabled software is designed to recognize a LightScribe disc from the identification features embossed on it, and the system creates an image and sends it to the drive only if the appropriate media is inserted.

Q: Can I use my computer for other things while the LightScribe label is burning?

A: Yes. The labeling process runs in the background, so the PC can be used for other tasks while the labeling process is underway.

Q: Can I leave my computer unattended while the LightScribe label is burning?

A: Yes. LightScribe presents no tasks that require the user's attendance during the burning process. In addition, a LightScribe system will not go into "sleep" or power-save mode while it is burning a label.

Q: Can I rewrite a LightScribe label, the way I can rewrite a CD-RW or DVD±RW disc?

A: No. The current LightScribe technology is not erasable. Once the image is burned, it's permanent.

Q: Will the LightScribe image cause imbalance when the CD or DVD is spinning in the drive, the way a paper label can?

A: No. A LightScribe disc is as evenly balanced as any high-quality CD or DVD, and it spins evenly within the drive. Burning an image onto the disc does not change its balance and does not endanger the disc's ability to spin properly.

Q: Does the LightScribe imaging process emit any hazardous chemicals?

A: No. The laser imaging process initiates a chemical change in the colorant material embedded in the disc coating, but no hazardous chemicals are created or emitted during the process.

Q: Is the LightScribe disc hot or dangerous to handle immediately after the label is burned?

A: No. Although the terms "burning data" and now "burning an image" are standard in the industry, there is no appreciable temperature change involved in either process. A CD or DVD is safe to touch immediately upon ejection from the drive.

Q: Can LightScribe create a label in color?

A: Currently LightScribe technology is available only in grayscale, creating an image that resembles a black-and-white photograph. LightScribe's development strategy does include future announcements about additional capabilities; however, business

and legal requirements prevent publication of more specific information at this time.

TROUBLESHOOTING

If you have trouble during installation or use of your DVD writer, please refer to the following information.

Read Problems

Symptom	Possible Cause	Solution
No Action	No power	<ul style="list-style-type: none"> • Check all USB ports on the computer • Connect auxiliary power cord • Ensure USB port on the computer is working properly
DVD writer can not be recognized	USB cable not properly connected	<ul style="list-style-type: none"> • Ensure USB cord is plugged in securely. • Check the computer to see if USB port is enabled. • Try a different USB port
Excessive noise when reading a disc	Unbalanced disc loaded	<ul style="list-style-type: none"> • Replace the disc with another.
	Sticker or label attached to the surface	<ul style="list-style-type: none"> • Detach the sticker/label carefully, ensuring that you don't scratch the disc.
Cannot open the tray (Eject)	Drive locked by software	<ul style="list-style-type: none"> • Wait until the software activity is finished; or • Stop the software activity and then press eject.
	Disc set incorrectly in tray	<ul style="list-style-type: none"> • Turn off power to the drive, then use the emergency eject feature to open the tray.
Cannot read a previous session of a CD-RW disc that has been written to at least twice	"Load Contents" or "Import Session" was not selected during write process	<ul style="list-style-type: none"> • Make sure you select "import previous sessions" when adding new data to the disc.
	Defective or damaged disc	<ul style="list-style-type: none"> • Always use high-quality media. • Always handle discs with care and keep them clean. Deep scratches, fingerprints, or other contaminants on a disc's surface can cause read errors.
	Disc inserted upside down	<ul style="list-style-type: none"> • Remove the disc from the tray and reinsert it label side up.

Write Problems

Symptom	Possible Cause	Solution
Cannot write to disc	Authoring software used does not support your DVD writer	<ul style="list-style-type: none"> Use the bundled software provided with the DVD writer. When other software is used, contact the software supplier (or check the appropriate website) to ensure that it supports this DVD writer.
	Disc inserted upside down	<ul style="list-style-type: none"> Reinsert the disc label side up.
	Insufficient hard disk capacity	<ul style="list-style-type: none"> Ensure that 1.2 to 2 times the capacity of the write data is available on hard disk. (Required capacity may vary according to write method.)
	No power	<ul style="list-style-type: none"> Ensure that the power cord is connected securely (at all connections).
	IDE cable not properly connected	<ul style="list-style-type: none"> Ensure that the IDE cable and connectors are not damaged (check the pins carefully), and both sides are connected.
Writing errors occur	Defective or damaged disc	<ul style="list-style-type: none"> Always use high-quality media. Always handle discs with care and keep them clean. Deep scratches, fingerprints, or other contaminants on a disc's surface can cause errors.
	Insufficient hard disk capacity	<ul style="list-style-type: none"> Ensure that 1.2 to 2 times the capacity of the write data is available on hard disk. (Required capacity may vary according to write method.)
Cannot write at highest speed	DVD/CD media not compatible with high speed	<ul style="list-style-type: none"> Use media rated for the highest speed your drive can write.
	Defective or damaged disc	<ul style="list-style-type: none"> Always use high-quality media. Always handle discs with care and keep them clean. Deep scratches, fingerprints, or other contaminants on a disc's surface can slow down write speed.

FCC COMPLIANCE STATEMENT

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 to correct the interference by one 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.

FCC Caution: To assure continued compliance, (example – use only shielded interface cables when connecting to computer or peripheral devices). Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate this equipment.

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

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