SCB-2424A-U External Slim Combo Drive

24x/24x/24x CD-RW Drive
8x DVD-ROM Drive

User Guide

E2242

First Edition V1
August 2005

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Notices

Federal Communications Commission Statement

This device complies with Part 15 of the FCC Rules . Operation is subject to the following two conditions:

- This device may not cause harmful interference, and
- This device must accept any interference received including interference that may cause undesired operation.

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 manufacturer's 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 or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment to 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.

WARNING! The use of shielded cables for connection of the monitor to the graphics card is required to assure compliance with FCC regulations. Changes or modifications to this unit not expressly approved by the party responsible for compliance could void the user's authority to operate this equipment.

Canadian Department of Communications Statement

This digital apparatus does not exceed the Class B limits for radio noise emissions from digital apparatus set out in the Radio Interference Regulations of the Canadian Department of Communications.

This class B digital apparatus complies with Canadian ICES-003.

ASUS contact information

ASUSTeK COMPUTER INC.

Address	15 Li-Te Road, Peitou, Taipei, Taiwan 11259
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Fax	+886-2-2894-7798
E-mail	info@asus.com.tw
Web site	www.asus.com.tw

Technical Support

Telephone	+886-2-2894-3447

ASUS COMPUTER INTERNATIONAL (America)

Address	44370 Nobel Drive, Fremont, CA 94538, USA
Fax	+1-510-608-4555
Web site	usa.asus.com

Technical Support

Telephone	
(General)	+1-502-995-0883
(Notebook)	+1-510-739-3777 x5110
Support fax	+1-502-933-8713
Online support	support.asus.com

ASUS COMPUTER GmbH (Germany and Austria)

Address	Harkort Str. 25, D-40880 Ratingen, Germany
Telephone	+49-2102-95990
Fax	+49-2102-959911
Web site	www.asuscom.de
Online contact	www.asuscom.de/sales

Technical Support

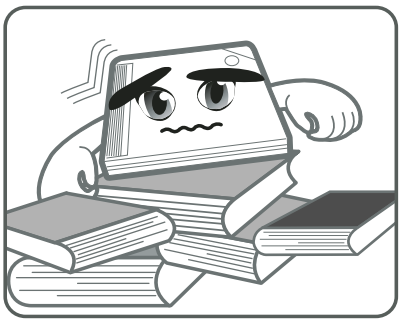
Telephone	
(Component)	+49-2102-95990
(Notebook)	+49-2102-959910
Support Fax	+49-2102-959911
Online support	support.asus.com

Safety information

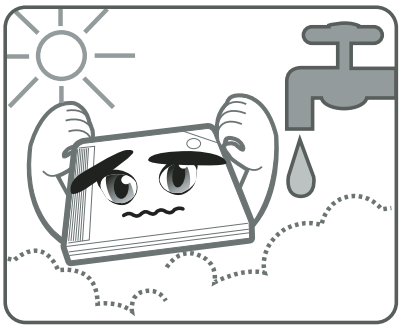
Observe the following precautions before installing and using the drive!

Installation notices

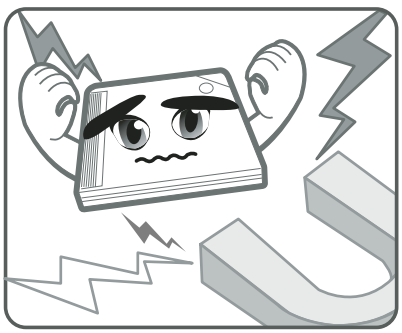
Do not place this device in an unstable position, or on vibrating surfaces.



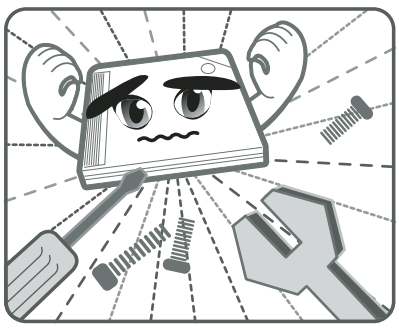
Do not place this device under direct sunlight or in humid or damp places.



Do not use or place this device near magnetic fields, televisions, or radios to avoid electronic interference that affects drive performance.



Do not attempt to disassemble or repair the drive. Opening the drive may result to laser radiation exposure.



Safety information

Using the device

- Use of any controls, adjustments, or procedures other than those specified in this manual may result to hazardous radiation exposure.
- Do not attempt to disassemble the drive.
- Do not move the device from a cold to a warm or hot environment. Drastic change of temperature is harmful to the device.
- Before moving or uninstalling the drive, remove disc from it, if any.
- Prevent liquids and metal objects to get into the device. If this situation occurs, contact your retailer for assistance.
- Do not use any evaporating solvents to clean the device. If you accidentally sprayed any solvent on the device, use a clean cloth to wipe it. You may also use a neutral cleaner to dilute the solvent to easily wipe it from the device.
- Try not to interrupt the supply of power while the device is in reading or writing mode.
- Do not place damaged or warped discs inside the device. A warped disc may break while in use and damage the device.
- Do not place discs into the device immediately if they came from a cold environment, especially during cold seasons. Wait until the discs have reached room temperature.

Conventions used in this guide

To make sure that you perform certain tasks properly, take note of the following symbols used throughout this manual.

WARNING/DANGER: Information to prevent injury to yourself when trying to complete a task.

CAUTION: Information to prevent damage to the components when trying to complete a task.

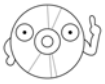
IMPORTANT: Instructions that you MUST follow to complete a task.

NOTE: Tips and additional information to aid in completing a task.

Package contents

Upon opening your ASUS External Slim CD-RW/DVD-ROM (SCB-2424A-U) drive package, check if all the following items are present and in good condition. If any of the items is damaged or missing, contact your retailer immediately.

- ASUS External Slim CD-RW/DVD-ROM drive (SCB-2424A-U)
- USB 2.0 cable
- Power adapter
- User guide (English and Traditional Chinese)
- Multi-language quick installation poster
- Bundled software CD
  (plus Windows® 98 SE and Mac OS® USB 2.0 driver)



The above items are available in retail boxes only.

1. Welcome!

Thank you for buying the **ASUS External Slim CD-RW/DVD-ROM (SCB-2424A-U)** Drive!

To ensure proper installation and use of this drive, read the instructions and other important information contained in this manual.

2. Product introduction

2.1 Specifications

The SCB-2424A-U has the following specifications.

Speeds	
CD-R Write	24x, 20x, 16x, 12x (P-CAV), 8x, 4x (CLV)
CD-RW Write	24x, 20x, 16x, 12x (P-CAV), 8x, 4x, 2x (CLV)
CD Read	24x max (CAV) ~ 3600 KB/sec
DVD Read	8x max (CAV) ~ 10820 KB/sec
Random access time	
DVD	130 ms
CD	125 ms
Interface	USB 2.0
Technology support	*FlextraSpeed*™ Technology *FlextraLink*™ Technology P-CAV Recording Technology
Buffer memory size	2 MB
Application discs	
DVD	12 cm or 8 cm diameter, 1.2 mm thick DVD-5, DVD-9, DVD-10, DVD-18, DVD-ROM, DVD-R, DVD-RW, DVD-Video, DVD+RW, DVD+R
CD	Audio CD, CD-ROM/XA, Video CD, CD-I, I-trax, Multi-session Photo CD, Karaoke CD, and CD-Extra
Writing mode	Track-at-Once, Disc-at-Once, Session-at-Once, Packet Write
Dimensions	129.0 (w) x 142.0 (d) x 16.0 mm (h)
Mass	250 g

Refer to the section “Technical information” on page 27 for detailed specifications.

2.2 Features

The ASUS SCB-2424A-U is an External Slim CD-RW/DVD-ROM drive with 24x CD-Write, 24x CD-ReWrite, 24x CD-Read and 8x DVD-Read capabilities. The drive complies with the Universal Serial Bus 2.0 (USB 2.0) specification and comes equipped with the latest innovative technologies in CD recording.

ASUS External Slim CD-RW/DVD-ROM drives are accentuated by the latest innovations in CD-recording technology including *FlextraSpeed*™, *FlextraLink*™, and P-CAV (Partial Constant Angular Velocity).

The following sections describe these technologies in detail.

FlextraSpeed™ technology

The ASUS *FlextraSpeed*™ technology provides the optimum solution to ensure quality recording when using discs that require flexible speeds. The drive employs this technology that allows automatic recording speed adjustment based on the recording media.

In addition to the fact that there are low and high quality recording media, various other factors such as dye layer, temperature, humidity, dust, fingerprints, etc., affect the recording characteristics of CD-R and CD-RW discs. Due to these factors, some discs may not be able to stand the high-speed capabilities of the latest CD-RW drives. The *FlextraSpeed*™ technology solves this problem by automatic assessment of the disc quality and recording capability. The recording speed is based on these factors. If you use a high quality recording disc, you can maximize the recording capability of the drive and get the best quality output. If you use a low quality disc, the drive speed adjusts to the level that is most appropriate for the disc, still optimizing the disc recording capability.

The *FlextraSpeed*™ technology also helps maintain the CD-RW drive because of the controlled motor rotation speeds and reduced noise caused by spindle air, thus prolonging the drive motor's life and ensuring high-quality recording.

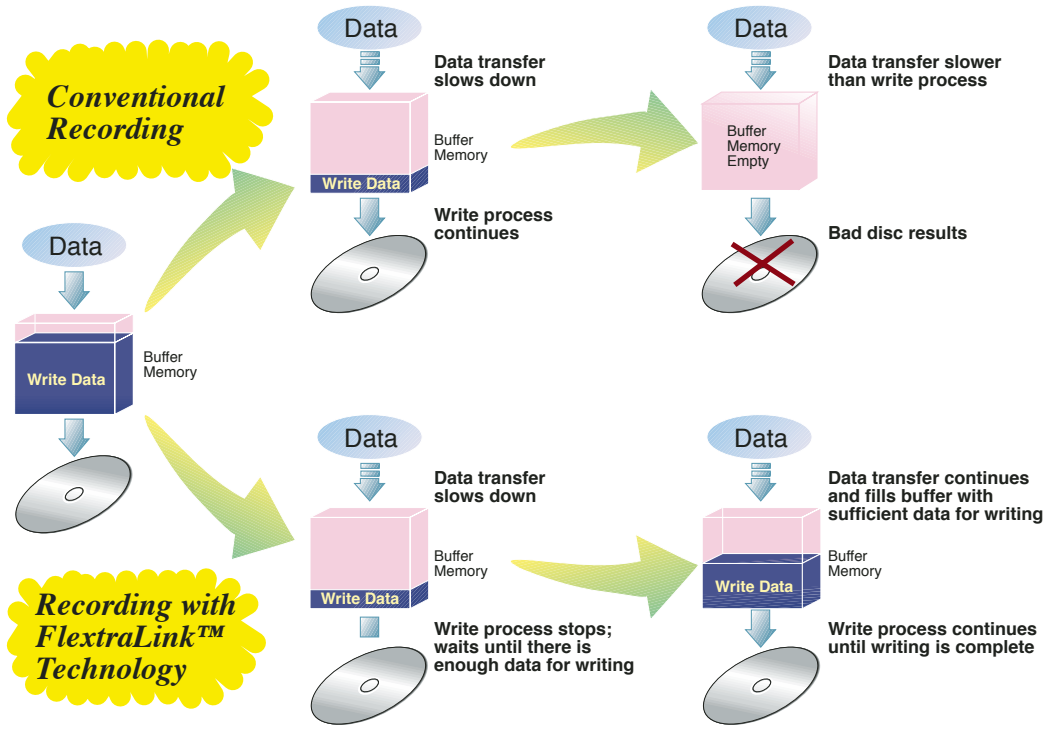
FlextraLink™ technology

The ASUS *FlextraLink™* technology provides a seamless combination of flexibility and ultra-reliable recording quality.

FlextraLink™ incorporates a flexible strategy that prevents buffer underrun problems caused by an empty data buffer. This CD-RW drive technology allows continuous monitoring of the data buffer status during the write process. Once the available data drops to approximately 1% of the total buffer capacity, the drive stops recording and marks the last write position. When new data is received from the host, it is loaded to the data buffer, and the laser is repositioned to link the new data with the data already written. *FlextraLink™* uses minimal system resources so that your PC remains fully operational throughout the writing process, and available for other applications.

The diagram below shows the advantage of the *FlextraLink™* recording technology.

FlextraLink™ technology solution

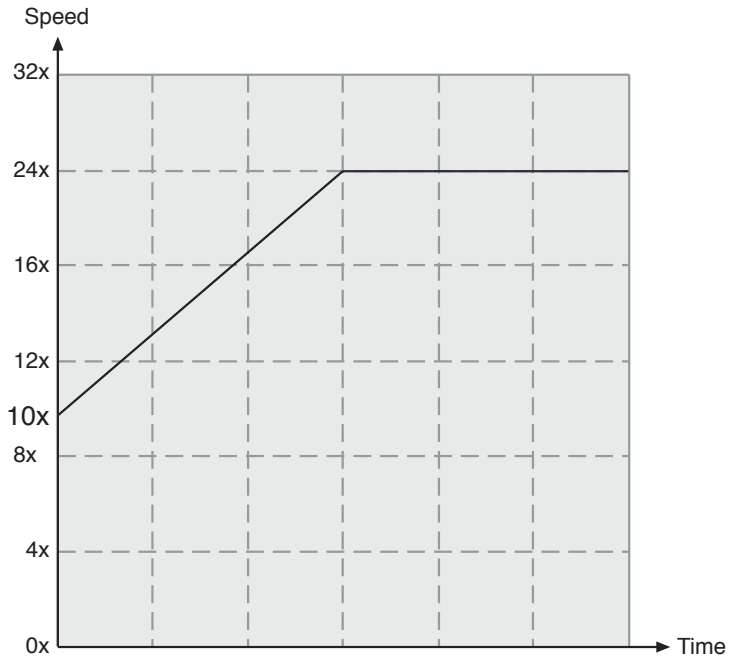


Partial Constant Angular Velocity (P-CAV) technology

The Partial Constant Angular Velocity (P-CAV) recording method is a combination of the Constant Angular Velocity (CAV) and Constant Linear Velocity (CLV) recording technologies. In CAV recording technology, the drive maintains a consistent rotation speed which will result in a variable transfer rate, while in CLV recording technology, the data transfer rate is kept at a fixed level by changing the rotation speed.

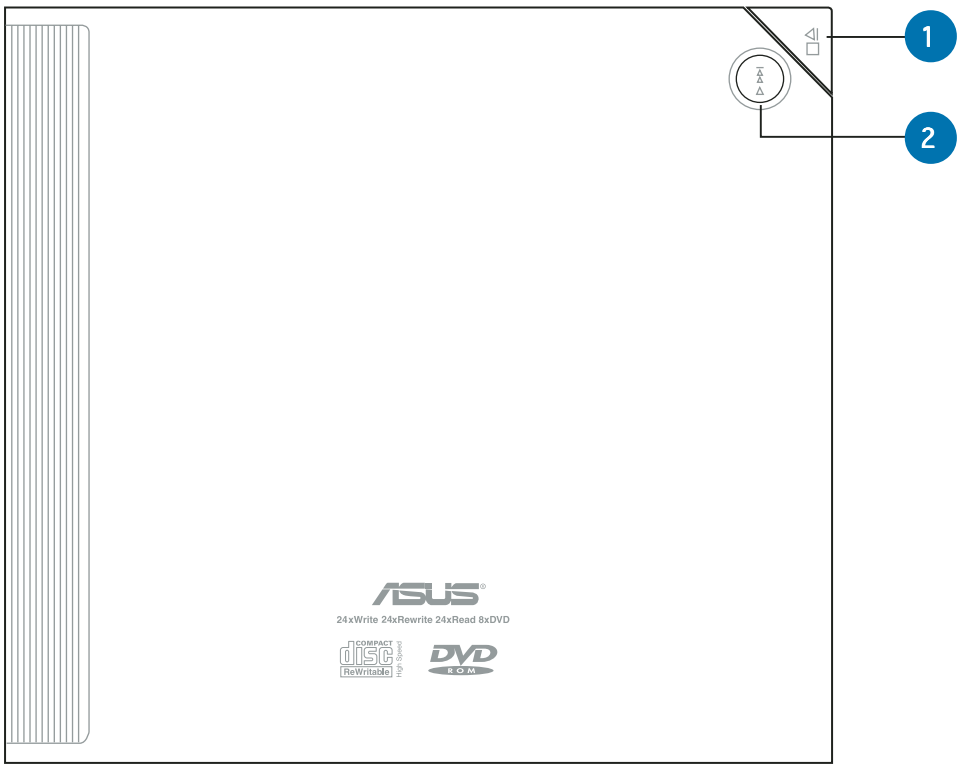
P-CAV recording technology switches from CAV to CLV once the maximum transfer rate is reached. Unlike Zone Constant Linear Velocity (Z-CLV) recording, no links are produced in the P-CAV recording process, resulting in a higher average transfer rate.

The following illustration shows the Partial Constant Angular Velocity (P-CAV) recording technology.



Partial CAV

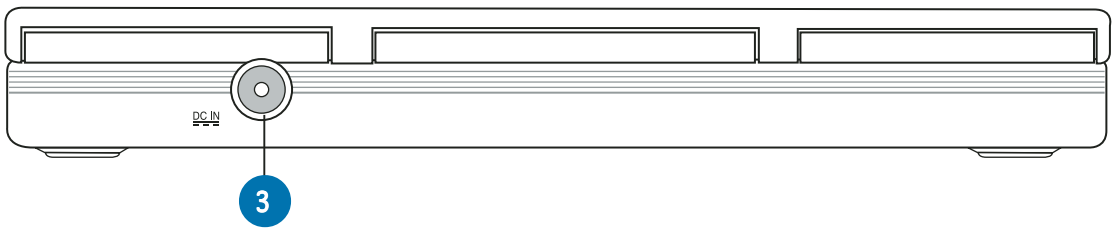
Top cover



1. STOP/OPEN button
   This button has two functions. When power is ON, pressing this button opens the top cover. While in PLAY mode, pressing this button stops the disc in the drive.

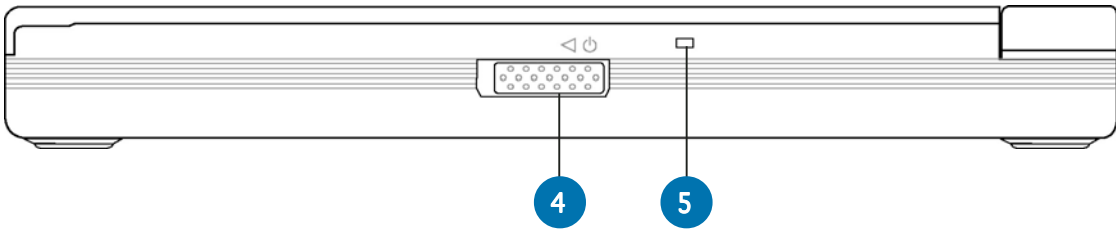
2. PLAY/SKIP button
   This button has two functions. When the drive is idle, press this button to start playing a loaded audio disc from the first track. While in the PLAY mode, press this button to skip to the next track on the disc.

Left side panel



3. 5V Power port
   This port is for the AC adapter plug.

Right side panel



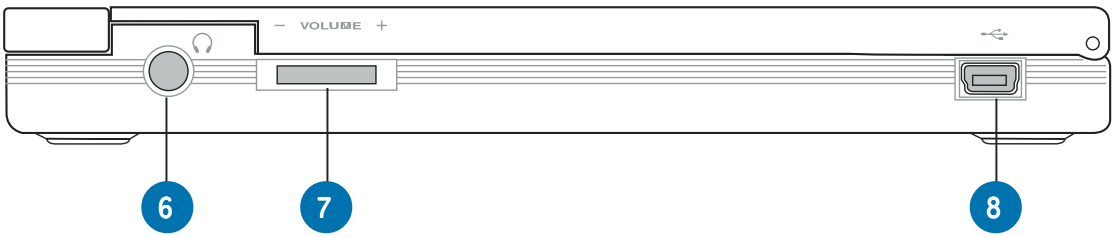
4. Power switch
   Turns the drive ON or OFF. Move the switch to the left turns on the drive. Move the switch to the right turns off the drive.

5. Power/Read/Write indicator
   This LED flashes green when

   - the drive is turned ON
   - the drive is reading data from a disc
   - a USB connection is established

   The LED flashes red when the drive is writing data on a disc. The LED turns off when the drive is off.

Rear panel

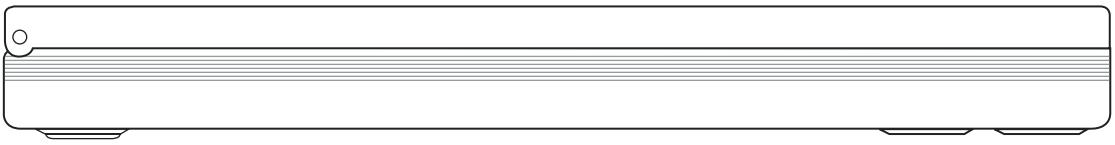


6. Headphone port
   This port allows you to connect a headphone with a stereo mini-plug.

7. Headphone volume dial
   Controls the volume on the connected headphone. Turn left to increase or right to decrease the volume.

8. USB port
   This port connects the supplied USB plug and cable.

Front panel



3. Installation

3.1 System requirements

Before installing and using the SCB-2424A-U, make sure that your system meets the following requirements.

For Notebook or PC

- IBM-compatible Intel® Pentium® II 333 MHz or higher PC
- Windows® 98 SE/Me/2000/XP operating system
- At least 64 MB RAM (128 MB recommended)

For Macintosh®

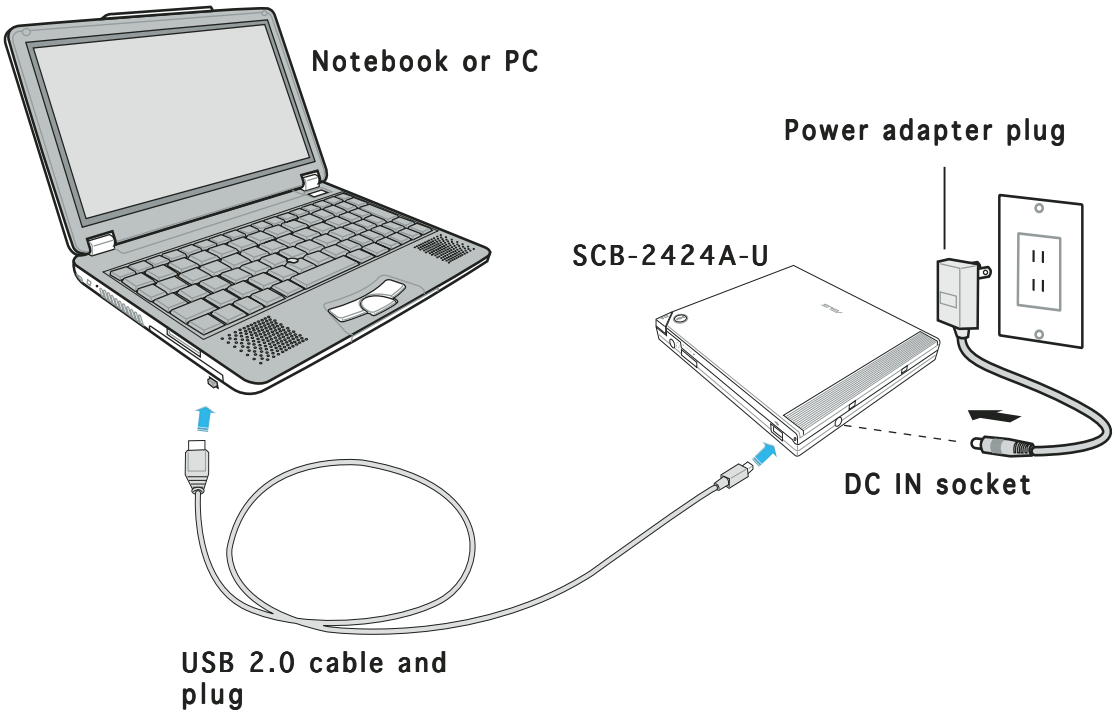
- PowerPC™ Processor (G3, G4 or G4 Dual)
- Mac OS®
- 128 MB of RAM

Do not use damaged or warped disc in the drive. The disc may break during use and may cause potential body injury or damage to your drive.

3.2 Connecting the drive cables

1. Insert the USB cord - B series plug into the USB port of the drive
2. Insert the USB cord - A series plug into a notebook, PC or MAC USB port.
3. Insert the power adapter plug into the DC IN socket of the drive.
4. Connect the the other end of the power adapter cable to a wall socket. If necessary, use an adapter plug to fit the power outlet in your area.

All the cable plugs are slotted to fit in only one orientation. If a plug does not fit in, try reversing it. DO NOT use too much force when fitting the cable plugs.



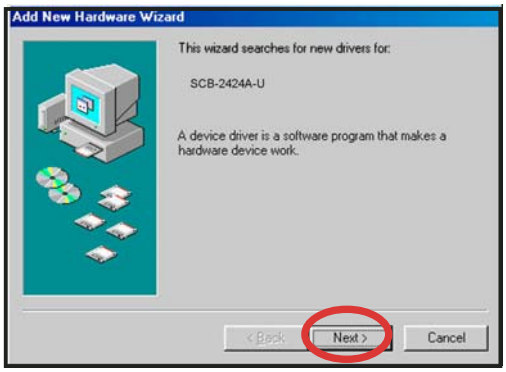
3.3 Driver installation

For Windows® 98 SE

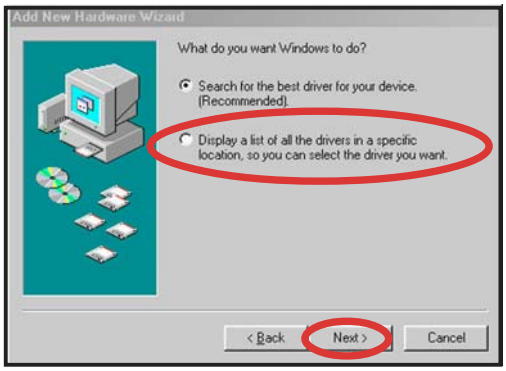
Windows 98® Second Edition users need to install the SCB-2424A-U driver on the system before using the drive. A device driver is a software program that makes a device work on an operating system (OS).

To install the driver:

1. Check if all cables between the drive and the notebook or PC are properly connected.
2. Turn on the notebook or PC.
3. Insert the installation CD into the CD-ROM drive of your notebook or PC.
4. Turn on the drive.
5. The OS automatically detects a new hardware after restarting. Click **Next**.

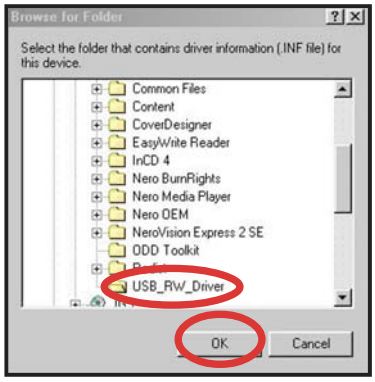


6. Select the recommended option to allow Windows® to search the driver. Click **Next**.

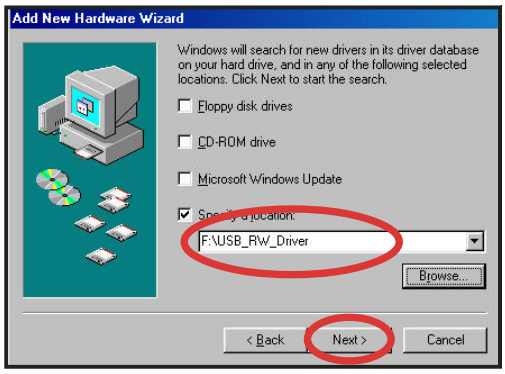


7. Specify the location of the driver. Click **Browse** to locate the .INF driver file.

8. Locate the folder “USB_RW_Driver” in the CD-ROM drive. Click **OK**.



9. The specific location of the device driver appears on the Add New Hardware Wizard window. Click **Next**.



10. Windows® automatically displays the location of the driver and detects the driver file name, which has an INF extension. Click **Next** to install the device drivers on the system.

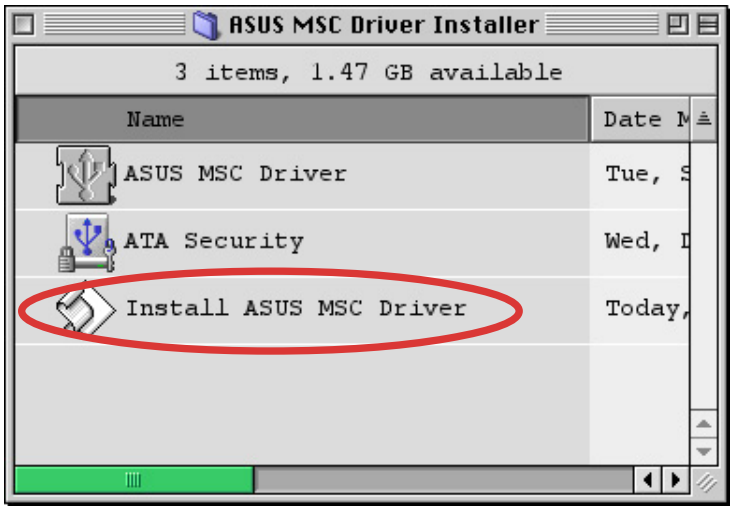
11. After the driver installation is completed, click **Finish** to start using the drive.

For Mac OS®

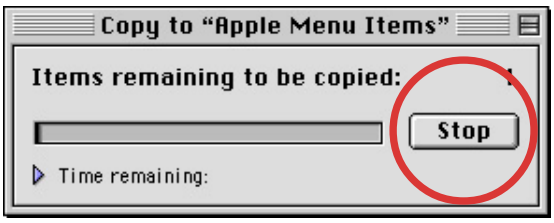
Mac OS® users need to install the driver for the Mac® to recognize the new hardware installed.

To install the driver:

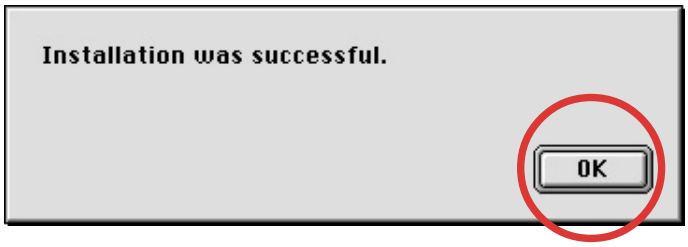
1. Start up your Mac®.
2. Insert the bundled software CD in the CD drive of your Mac®.
3. Open the folder "ASUS MSC Driver Installer."
4. Double click on the icon "Install ASUS MSC Driver."



5. A window displaying the progress of the installation process appears. Press **Stop** if you want to abort installation.



6. After all the device drivers are installed in your system, a confirmation box appears. Click **OK**. You may start using your SCB-2424A-U drive!

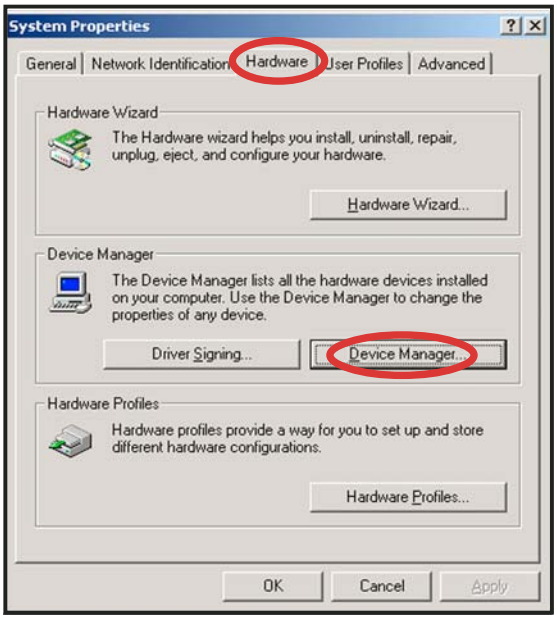


3.4 Checking the drive in the system

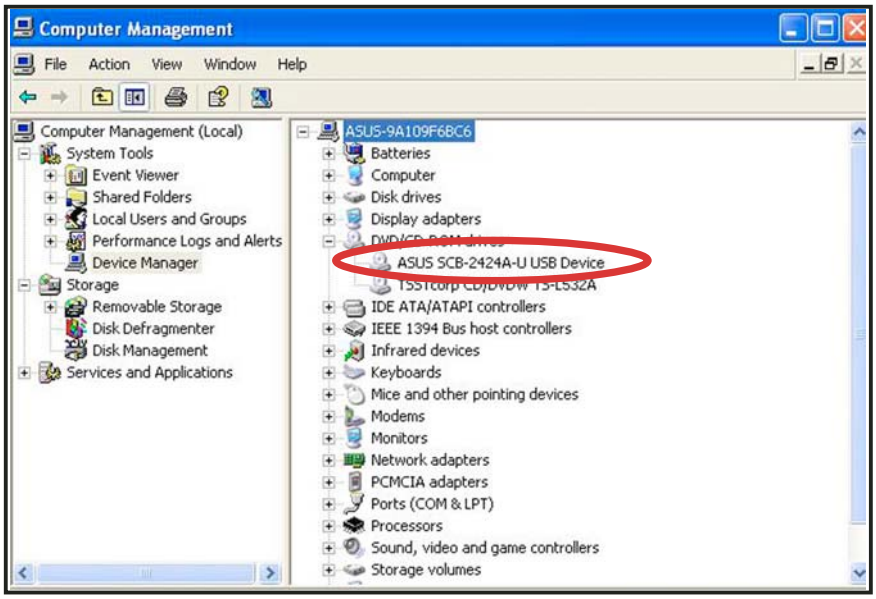
To make sure your computer recognizes the drive, follow these steps to check the computer.

For Windows® OS:

1. Right-click **My Computer** icon on your desktop.
2. On the pop-up menu, click **Properties**.
3. Click the **Hardware** tab on the system properties window.
4. Click **Device Manager.**



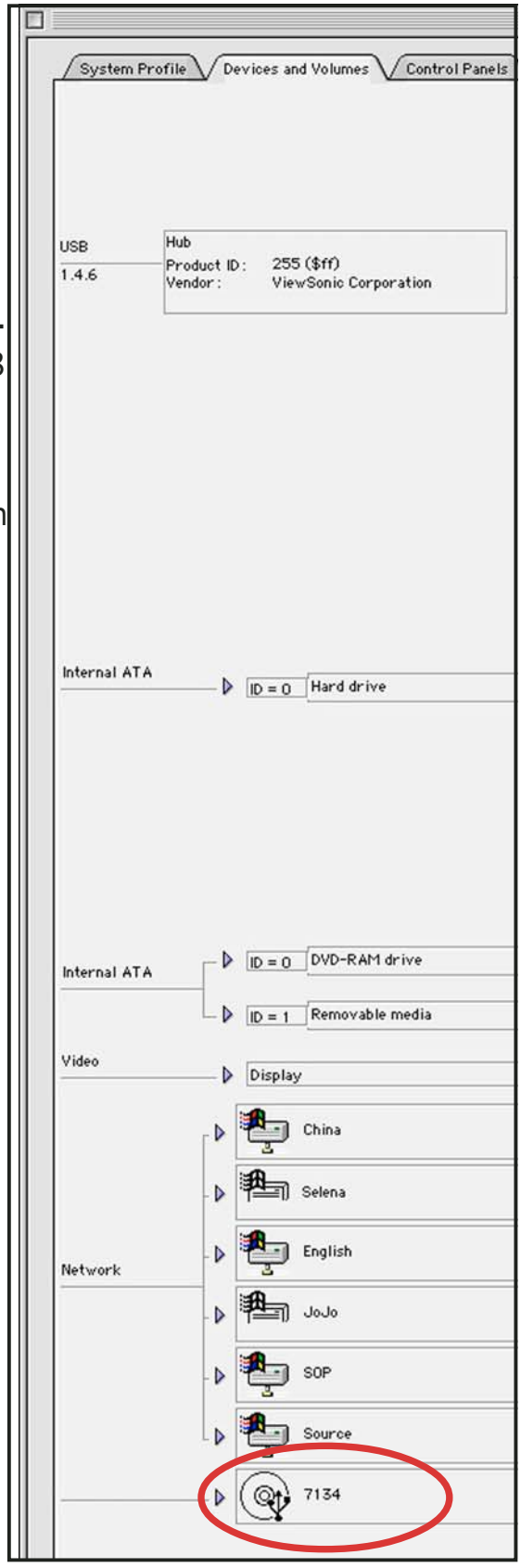
5. Double-click on **CD-ROM** from the list.



Screen displays may vary depending on the operating system (OS) version.

For Macintosh OS®:

1. Turn ON the drive.
2. Place a disc in the drive.
3. Execute the **System Profiler** from the Apple Control Panels.
4. Click on the **Devices and Volumes** tab. All types of devices attached to the Mac system are displayed on this tab.
5. Look for a disc icon with the USB device symbol. The icon is usually added at the bottom of the list and is displayed with the volume label of the disc placed in the drive.



3.5 Unplugging the drive

When installed, the drive must be properly unplugged or disconnected from the computer to avoid a computer crash or possible data loss. Follow these steps to safely unplug your drive from the notebook or PC.

Windows® OS

1. Left-click the **Unplug or Eject Hardware** icon in the taskbar.

2. Click **Safely Remove**.

3. Unplug the drive from the USB port when this pop-up window appears. Click **OK**.

Mac OS®

For Mac® users, make sure the drive is idle before disconnecting it. Close all files and applications using the drive.

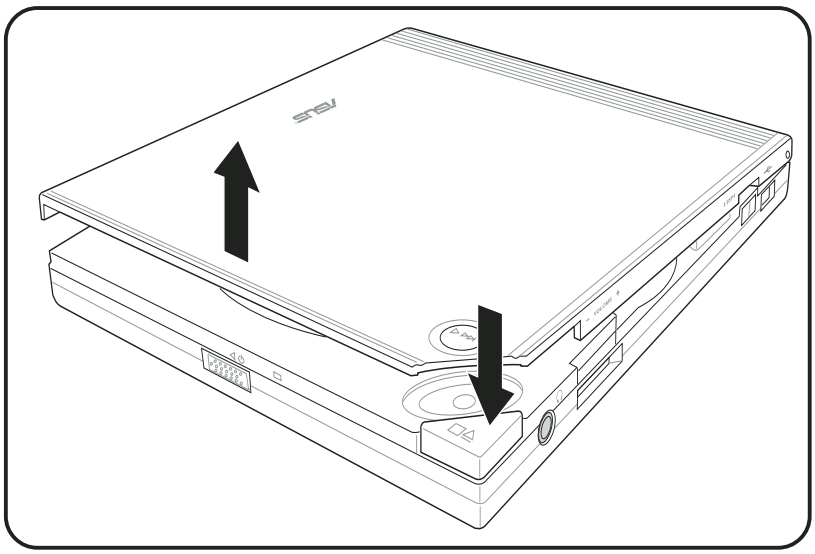
1. Drag the drive icon to the Trash.
2. Unplug the connector from the USB port.

Disconnecting the drive while in use may damage the data files and/or the drive.

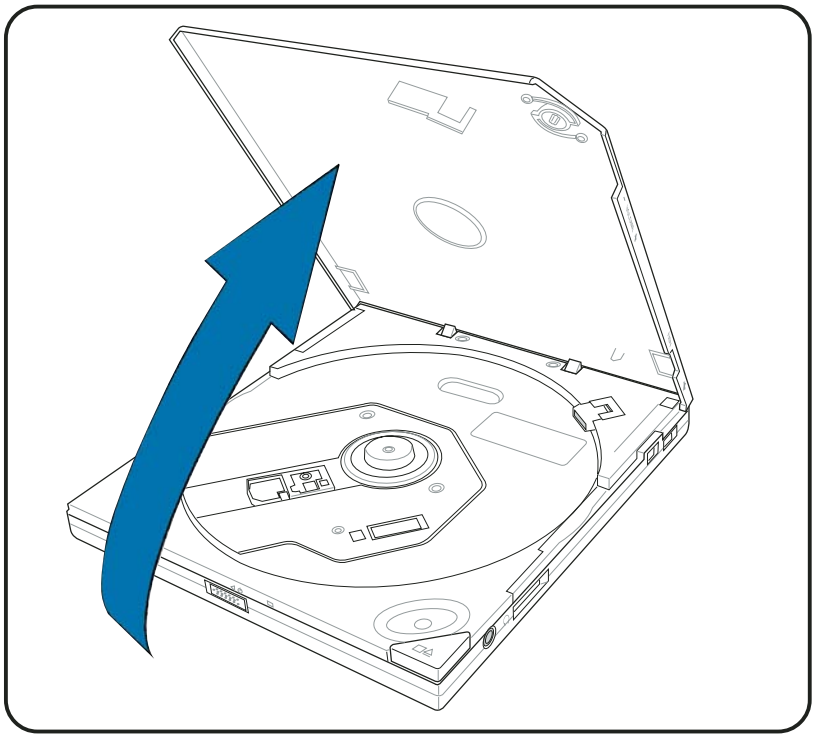
4. Drive basics

4.1 Placing a disc into the drive

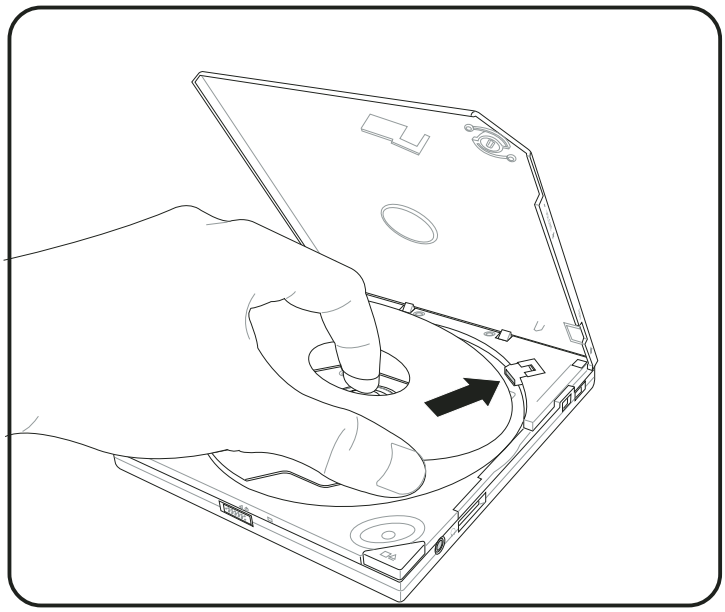
1. Press the **Stop/Open** button on the top cover panel of the drive to open the top cover.



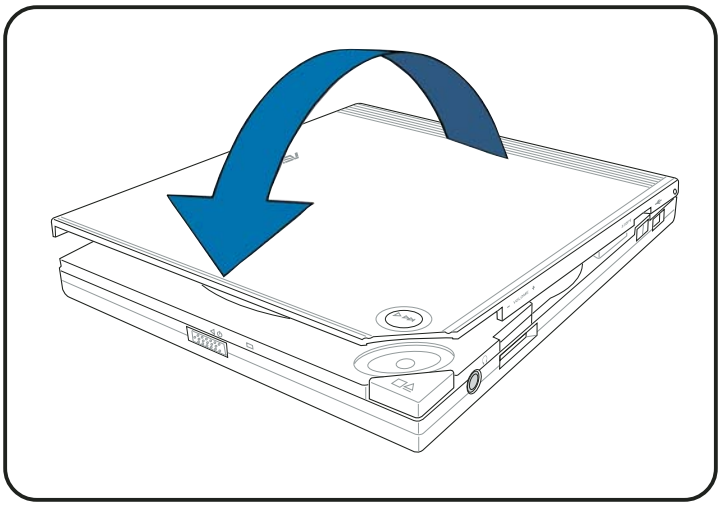
2. When the top cover opens, carefully lift the top cover fully upward.



3. Place the disc into the tray and make sure that the disc is securely clipped in place.



4. Close the top cover by gently pressing the cover downwards until the top cover locks in place.



4.2 Ejecting a disc from the drive

1. Press the **Open/Stop** button on the top cover panel of the drive to open the top cover.
2. Carefully remove the disc from the drive.
3. Close the top cover by gently pressing it downwards.

4.3 Using the emergency manual eject bar

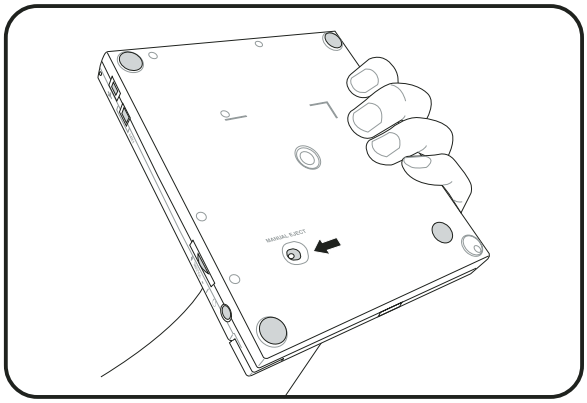
The emergency manual eject bar at the bottom panel of the drive allows you to manually open the top cover and remove a disc from the drive in cases when:

- supply of power to the computer is cut due to power outage
- the drive malfunctions

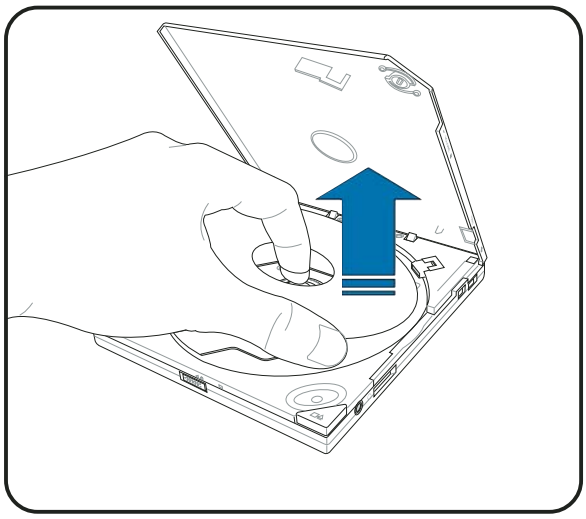
Use the manual method only as a last resort when the **Open/Stop** button does not work. Make sure that you have turned off your CD-RW/ DVD-ROM drive before manually opening the top cover of the drive.

To manually open the top cover of the drive using the emergency manual eject bar:

1. Lift the slim CD-RW/DVD-ROM drive and place upside down to expose the bottom of the drive. Press the manual eject bar, located as labeled.



2. Open the top cover and carefully remove the disc.

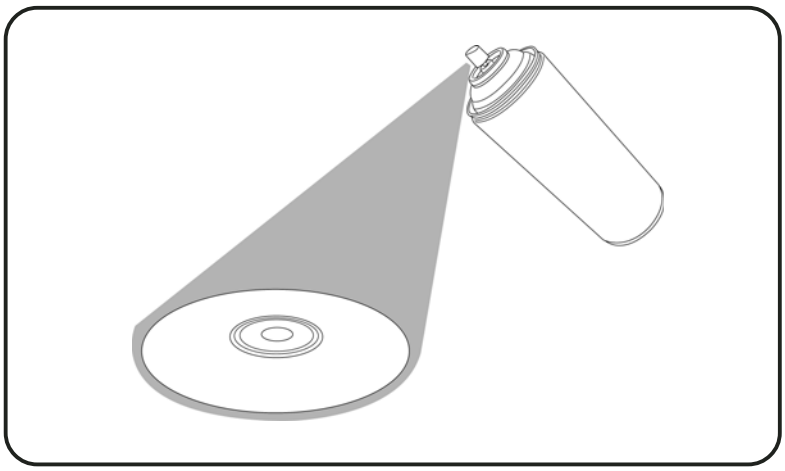


4.4 Using compact discs

Take note of these instructions when using compact discs to avoid damaging the discs and your drive.

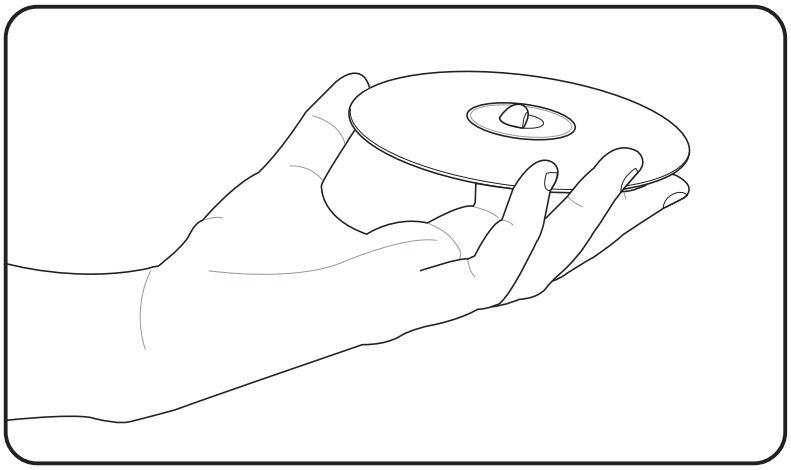
Cleaning a disc

Spray the disc with compressed air for about five seconds to get rid of the dust on a disc.



Handling a disc

Hold a disc by the edges. Do not touch the disc surface.



5. Technical information

5.1 Environmental specifications

Temperature	Operation Storage	+5°C to <+50°C - 20°C to <+60°C
Humidity	Operation Storage	8% to 85% non-condensing 5% to 95% non-condensing
Vibration	Operation Storage	0.5 G peak at 10 ~ 500 Hz 2 G peak at 10 ~ 500 Hz
Impact	Operation Storage	Read (CD, DVD, CD-R, CD-RW) • Half sine wave, 11 ms/10s interval, 15 G, 3 cycles • Half sine wave, 3 ms/10s interval, 60 G, 3 cycles Write (CD-R, CD-RW) • Half sine wave, 11 ms/10s interval, 0.8 G, 3 cycles 120 G (3 ms, half sine wave, 3 shock/each side, no damage
Acoustic	Random access	Sound power level<50 dB Time Averaged Sound Pressure Level<42dB
Reliability	MTBF ODC	60,000 power on hours 20% of power on time
MTTR*		30 minutes

**Mean Time To Repair*

5.2 Electrical and audio specifications

Power source	Voltage	+5V DC	+/-5%
I/O terminal	USB terminal	USB B type (high speed)	
Audio	No. of channels Sampling frequency Quantization Distortion S/N ratio	2 (stereo) 44.1kHz 16 bits 0.2% max (at 1 kHz) 70 dB	