

SCB-1608-D

Dual-Interface External Slim Combo Drive

16x/10x/24x CD-RW Drive 8x DVD-ROM Drive

User's Manual



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Product Name: ASUS External Slim CD-RW/DVD-ROM Drive

(SCB-1608-D)

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Contents

Copyrights/Disclaimer	2
FCC/CDC Statements	4
ASUS Contact Information	5
Safety Information	
Installation Notices	
Using the Device	7
Package Contents	8
Welcome!	
Product Introduction	
Features	
Top Cover Panel	
Left Side Panel	13
Right Side Panel	
Rear Panel	
Front Panel	
Installation	
System Requirements	
Connecting the Drive Cables	
Installing SCB-1608-D driver for Windows 98SE	
Installing SCB-1608-D driver for Mac Checking the drive in the System	
Properly unplugging SCB-1608-D device	
CD-RW Drive Basics	
Placing a Disc into the Drive	
Ejecting a Disc from the Drive	
Using the Emergency Manual Eject Bar	
Using Compact Discs	
Cleaning a Disc	
Handling a Disc	
Technical Information	27
Environmental Specifications	
Electrical and Audio Specifications	27

FCC/CDC Statements

Federal Communications Commission Statement

This device complies with FCC Rules Part 15. 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. (Asia-Pacific)

Address: 150 Li-Te Road, Peitou, Taipei, Taiwan 112

General Tel: +886-2-2894-3447 General Fax: +886-2-2894-3449 General Email: info@asus.com.tw

Technical Support

MB/Optical Drives (Tel):+886-2-2890-7121 (English)
Notebook (Tel): +886-2-2890-7122 (English)
Desktop/Server (Tel): +886-2-2890-7123 (English)

Support Fax: +886-2-2890-7698
Support Email: tsd@asus.com.tw
Web Site: www.asus.com
Newsgroup: cscnews.asus.com.tw

ASUS COMPUTER INTERNATIONAL (America)

Address: 6737 Mowry Avenue, Mowry Business Center,

Building 2, Newark, CA 94560, USA

General Fax: +1-510-608-4555 General Email: tmd1@asus.com

Technical Support

Support Fax: +1-510-608-4555
General Support: +1-502-933-8713
Web Site: www.asus.com
Support Email: tsd@asus.com

ASUS COMPUTER GmbH (Germany & Austria)

Address: Harkortstr. 25, 40880 Ratingen, BRD, Germany

General Fax: +49-2102-442066

General Email: sales@asuscom.de (for marketing requests only)

Technical Support

Support Hotline: MB/Optical Drives: +49-2102-9599-0

Notebook (Tel): +49-2102-9599-10 Support Fax: +49-2102-9599-11

Support (Email): www.asuscom.de/de/support (for online support)

Web Site: www.asuscom.de

Safety Information

Observe the following precautions before installing and using the ASUS External Slim CD-RW/DVD-ROM (SCB-1608-D) Drive!

Installation Notices

Do not place this device in an unstable position, or in one that vibrates.



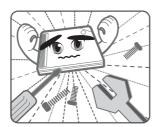
Do not place this device in areas where there is direct sunlight, high humidity, or damp condition.



Do not use or place this device near magnetic fields, televisions, or radios, where there is interference that may affect the performance of the drive.



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



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 or any metal to get into the device. If this situation occurs, contact your retailer for help.
- 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, specially 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: Information 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-1608-D) 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-1608-D)
- Cable set (USB 2.0 cable and IEEE 1394 cable)
- · Power adapter and plug
- ASUS CD-R blank disc
- ASUS CD-RW blank disc
- User's Manual (English and Traditional Chinese)
- Multi-language quick installation poster
- Bundled software CD
 - CD-writing software
 - DVD Playback software
 - Win98SE and MacOS USB 2.0 driver
- Special drive jacket



The above items are available in retail boxes only.

Welcome!

Thank you for buying the ASUS External Slim CD-RW/DVD-ROM (SCB-1608-D) Drive!

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

Product Introduction

Specifications

The SCB-1608-D has the following specifications.

Speeds

- CD-R Write Speed 16x (P-CAV), 10x, 8x, 4x (CLV)

- CD-RW Write Speed 10x, 8x, 4x, 2x (CLV)

- CD Read Speed
 - DVD Read Speed
 - DAE Speed
 <li

• Random Access Time DVD: 120 ms and CD: 100 ms

• Interface USB 2.0 and IEEE1394

• **Technology support** FlextraSpeed[™] Technology

FlextraLink[™] Technology P-CAV Recording Technology

• Buffer Memory Size 2 MB

• Application discs 12cm or 8 cm diameter, 1.2mm thick

DVD: DVD-ROM, DVD-R, DVD-RW, DVD-Video, DVD+RW, DVD+R

CD: CD-Audio, CD-ROM, CD-ROM/XA, CD-I, Mixed Mode CD-ROM, Photo CD, CD-Extra, Video CD, CD-Text, DVCD, CD-G, Karaoke CD, I-trax, Bootable CD

• Writing Mode Track-at-Once, Disc-at-Once, Session-at-Once,

Multi-Session, Packet Write, DAO-RAW Mode

• **Dimensions** 129.0 (w) x 142.0 (d) x 16.0 mm (h)

• Mass 250 g (0.55 lb)



Refer to the section "Technical Information" on page 27 for detailed specifications.

Features

The ASUS SCB-1608-D is an External Slim CD-RW/DVD-ROM drive with 16x CD-Write, 10x CD-ReWrite, 24x CD-Read and 8x DVD-Read capabilities. The drive complies with the Universal Serial Bus 2.0 (USB 2.0) and IEEE 1394 specifications 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, namely: $FlextraSpeed^{IM}$, $FlextraLink^{IM}$, and the P-CAV (Partial Constant Angular Velocity).

The following sub-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 SCB-1608-D 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*TM 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.

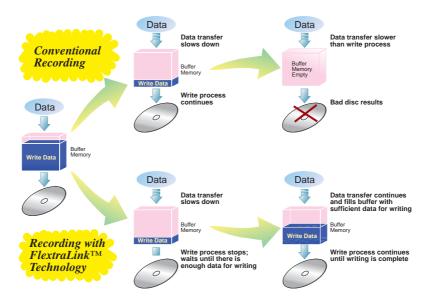
FlextraLink™ Technology

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 $FlextraLink^{TM}$ recording technology.

FlextraLink™ Technology Solution



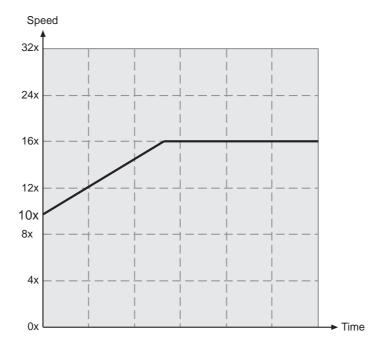
Partial Constant Angular Velocity (P-CAV) Recording Technology

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.

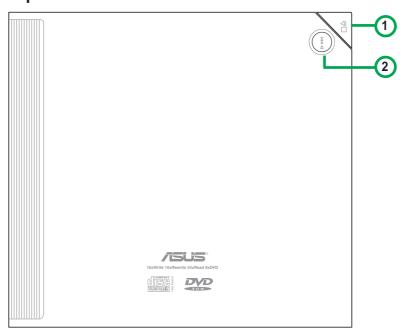
P-CAV recording technology switches from CAV to CLV once the maximum transfer rate is reached. Unlike Zone Constant Linear Velocity (Z-CLV) recording, no links are produced in the P-CAV recording process, resulting in a higher average transfer rate.

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

Partial CAV



Top Cover Panel



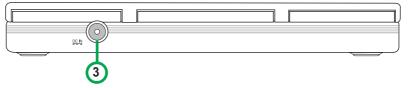
1. STOP/OPEN Button

This button has two functions. Pressing this button when power is ON opens the top cover. While in PLAY mode, pressing this button stops playing the disc loaded in the drive.

2. PLAY/SKIP Button

This button has two functions. If the drive is idle, pressing this button will start playing a loaded audio disc from the first track. While in the PLAY mode, pressing this button skips to the next track on the disc.

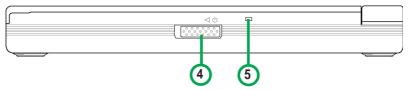
Left Side Panel



3. 5V Power Jack

This jack is for the AC adaptor power cable.

Right Side Panel



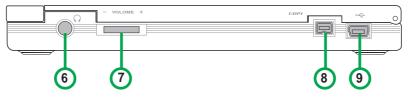
4. Power switch

Turns the power supply ON or OFF. Switching to the right turns the machine OFF and switching to the left turns it ON.

5. Power/Read/Write Indicator

This LED flashes green when drive power is turned ON, when reading data from a disc or when the USB connection is established.lt flashes red when data is being written on a disc. The LED turns off when drive power supply is OFF.

Rear Panel



6. Headphone Jack

This jack allows you to connect a headphone with a stereo mini-plug.

7. Headphone Volume Dial

To adjust volume of headphone connected, turn dial to the left to decrease volume; turn to the right to increase volume.

8. IEEE 1394 connector

A standard high performance serial bus interface for computers.

9. USB connector

A standard Universal Serial Bus (USB 2.0) plug and play interface.

Front Panel



Installation

System Requirements

Before installing and using the External Slim CD-RW/DVD-ROM drive, make sure that your computer system meets the following requirements.

For Notebook or PC:

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

For Macintosh:

- PowerPC® Processor (G3, G4 or G4 Dual)
- Mac OS version 9.1, 9.2 or Mac OS X version 10.1
- 128MB of RAM



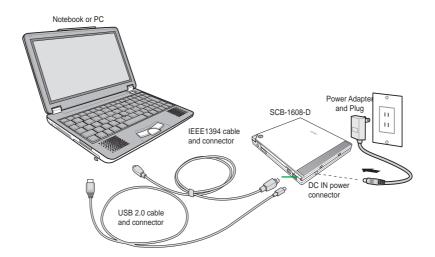
Do not use damaged or warped disc in the CD-RW drive. The disc may break apart during use and cause potential body injury or damage to your drive.

Connecting the Drive Cables

- 1. Connect the USB cord B series plug to the drive USB 2.0 connector or connect the IEEE 1394 plug to the drive IEEE 1394 connector.
- Connect the USB cord A series plug to the USB 2.0 connector or connect the IEEE 1394 plug to the drive IEEE 1394 connector of your notebook, PC or Mac.
- 3. Connect the adapter cable to DC IN power connector on your drive.
- 4. If necessary, use plug adapter to fit power outlets in your area. See the instruction sheet of plug adapter for detailed instructions.
- 5. Connect the power adapter and plug to a power source.



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





Power plug types may vary in different countries or regions around the world.

For Windows 98SE™ users: Installing the SCB-1608-D driver

Windows 98 Second Edition users need to install the SCB-1608-D device driver for the notebook or PC to recognize the new hardware installed. A device driver is the software program that makes a device work on an operating system (OS).

Follow these steps to install the SCB-1608-D driver:

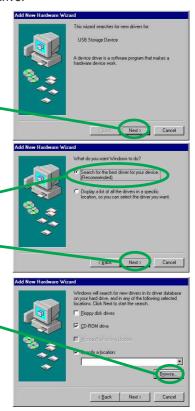
- 1. Make sure all cable connections to the drive and the notebook or PC are properly connected.
- 2. Boot notebook or PC.
- Insert the bundled software CD in the CD drive of your notebook or PC
- 4. Turn on the External SCB-1608-D drive.
- After boot-up, the OS will detect a new hardware was found. Follow the wizard to copy the driver files to your system.

Click Next.

6. Windows 98SE[™] can automatically search for the best driver for the device, select (Recommended) option.

Click Next.

7. Specify the location of the driver .INF file , click on **Browse**.



8. Locate the file folder name "ASUS_RW_USB" in the CD ROM drive.

Click OK.



9. The specific location of the drive will appear on the CD-RW/DVD-ROM list box.

Click Next.



 After searching, the location of the driver and driver .INF file name is displayed.

Click Next.



Source
E:\ASUS_RW_USB\tpp300.sys

Destination:
C:\WINDOWS\SYSTEM3Z\DRIVERS\TPP300.SYS

Cancel

- 11. A message box with the installation progress bar is displayed. If cancelled, the installation process has to be repeated from the start.
- 12. The SCB-1608-D driver is successfully installed.

Click **Finish** to start using your external drive!

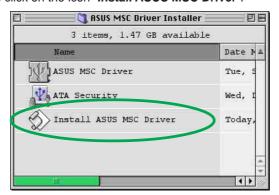


For Macintosh OS 9.X systems: Installing the SCB-1608-D driver

Mac OS 9.x system users need to install the SCB-1608-D device driver for the Mac to recognize the new hardware installed.

Follow these steps to install the SCB-1608-D driver:

- 1. Start-up 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 progress of installation process appears. If you want to abort installation, press **Stop** button.



6. After all files or items are copied to the system, a confirmation dialog box appears. Click **OK** and you may start using your external drive!

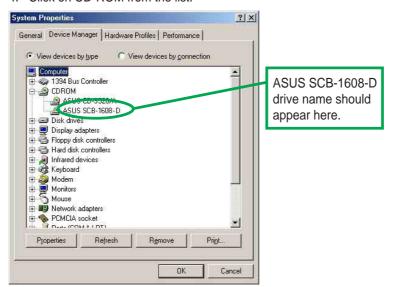


Checking the drive in the System

To make sure the SCB-1608-D external drive is recognized by the computer, 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 **Device Manager** tab on the system properties dialogue box.
- 4. Click on CD-ROM from the list.

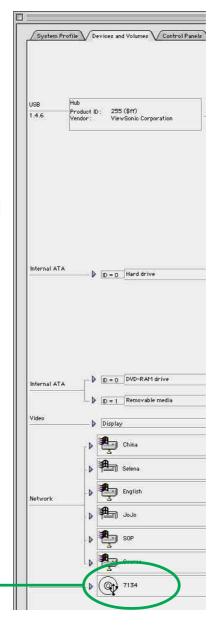




Screen display may vary depending on the operating system (OS) version.

For Macintosh OS:

- 1. If necessary, turn ON the drive.
- 2. Place a disc in the SCB-1608-D external drive.
- 3. Execute the **System Profiler** from the Apple Control Panels.
- Click on the **Devices and** Volumes tab. All types of devices attached to the Mac system are displayed on this tab.
- Look for an additional disc icon with the USB device symbol.
 The icon is displayed with the volume label of the disc placed in the drive. It is usually added at the bottom of the list.



additional disc icon

Properly unplugging SCB-1608-D device

The SCB-1608-D when installed needs to be properly unplugged or disconnected from the computer to avoid computer to crash or possible data loss.

Follow these steps to safely unplug your SCB-1608-D drive from the notebook or PC if you are using Windows operating system.

 Locate the Unplug or Eject Hardware icon found in the taskbar.



Double-click on the icon.

 Select the name of the hardware device ("ASUS SCB-1608-D"), to unplug: Click <u>Stop</u>.



 Confirm the device to be stopped. Again, select the name of the device you want to unplug.
 Click **OK**.



4. The device can now be safely unplugged from the system.





The screen display will go back to the **Unplug or Eject Hardware** dialogue box. Click on <u>C</u>lose.

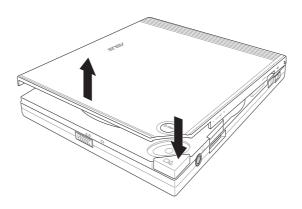
For Mac users, make sure the drive is idle before disconnecting the device. Close all files and applications using the SCB-1608-D drive, if you don't do this, you may damage the data files and/or the drive.

- 1. Drag the device icon to the Trash.
- 2. Unplug the connector from the USB or Firewire port.

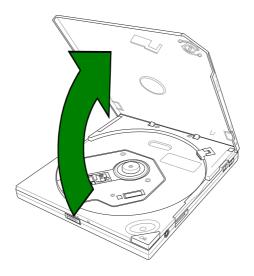
External Slim CD-RW/DVD-ROM Drive Basics

Placing a Disc into the Drive

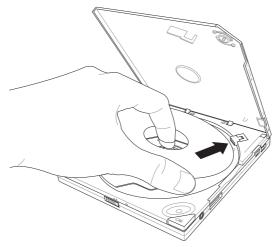
1. Press the stop/open button on the top cover panel of the drive to open the top cover.



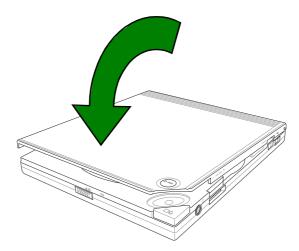
2. When the top cover opens, carefully lift the top cover fully upward.



3. Place the disc into the tray and make sure 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.



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.

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 the following instances:

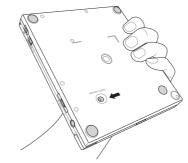
- supply of power to the computer is cut due to electrical power outage
- the drive malfunctions



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.

Follow these steps 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.

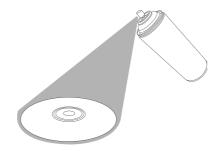


Using Compact Discs

Take note of the instructions in this section when using compact discs. These instructions will help you avoid damaging the discs and your CD-RW/DVD-ROM drive.

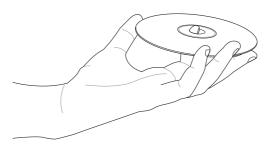
Cleaning a Disc

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.



Technical Information

Environmental Specifications

Temperature	Operation:	5°C < to < 40°C		
	Storage:	- 20°C to < 60°C		
Humidity	Operation:	5% to 80% non-condensing		
	Storage:	5% to 90% non-condensing		
Vibration	Operation:	0.25G peak at 5 ~ 500 Hz		
	Storage:	1.5G peak at 10 ~ 500 Hz		
Impact	Non-operation:	1 oct/min – no damage		
		Less than 50G –		
		(at 11ms/half sine wave,		
		3 shock/each side)		
	Packaged:	1 oct/min – no damage		
		91 cm high –		
		(1 corner, 3 edges, 6 surfaces)		
Acoustic	Access mode:	41.5 dB TYP		
	Read mode:	44.5 dB TYP		
(Microphone located 50cm in front of the drive, 120 cm above the drive at 30° angle.)				
Reliability	MTBF:	60,000 power on hours		
	ODC (Read):	20% of power on time		
	ODC (Write):	1% of power on time		
Mean Time To Repair (MTTR)		30 minutes		

Electrical and Audio Specifications

Power Source	Input Linear Voltage	110/240 V AC
	Input Linear Frequency	50/60 Hz
	Input Linear Current	1.0 A
I/O Terminal	USB terminal	USB B type (High Speed)
	IEEE1394 terminal	IEEE1394
Audio	No. of channels	2 (stereo)
	Sampling frequency	44.1 kHz
	Quantization	16 bits
	Distortion	0.2% max. (at 1 kHz)
	S/N ratio	70 dB
	Output: Headphone	0.7 V rms (typical)

