SW-240

SAMSUNG ELECTRONICS

BG68-00488A Rev:00

http://www.samsungodd.com
www.samsungelectronics.com

SAMSUNG DIGITall

CD-R/RW DRIVE

User's Guide

SW-240

- ENGLISH
- ESPAÑOL
- DEUTSCH
- FRANÇAIS

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SAMSUNG

CD-R/RW DRIVE
SW-240

User's Guide

FCC Compliance

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 deter-mined 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:

- Re-orient 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.

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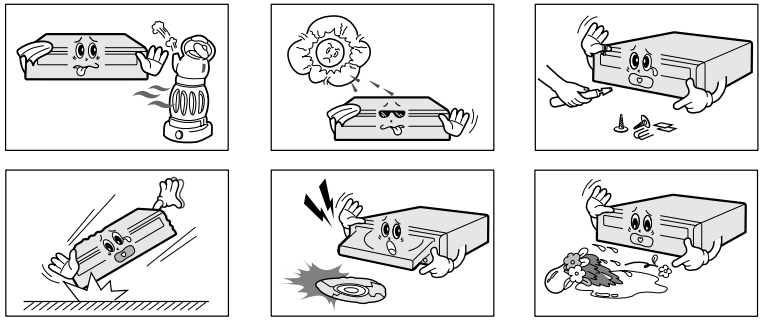
* All product names mentioned in this document are trademarks or registered trademarks of their respective owners.

Safety Precautions

The following diagrams illustrate the precautions to be taken when using your CD-R/RW drive.



✶ **Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.**

You must not use the drive in any manner other than that specified in this guide.

CAUTION Do not attempt to repair the CD-R/RW drive yourself.
Contact your dealer or local SAMSUNG representative for all repairs.
If you make any adjustments or perform any operations other than those specified in this guide, you run the risk of exposure to hazardous radiation.

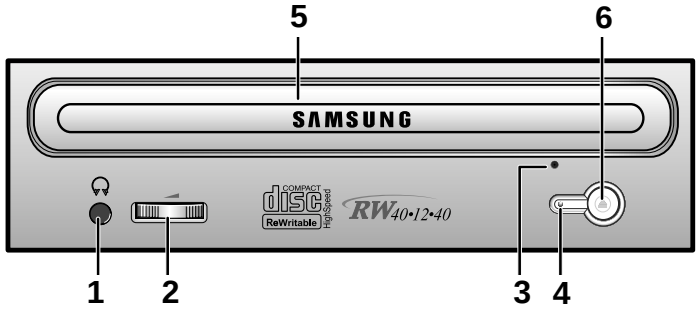
Avoid exposing your eyes or skin to direct or scattered radiation.

WARRANTY Please refer to the Samsung limited warranty statements.

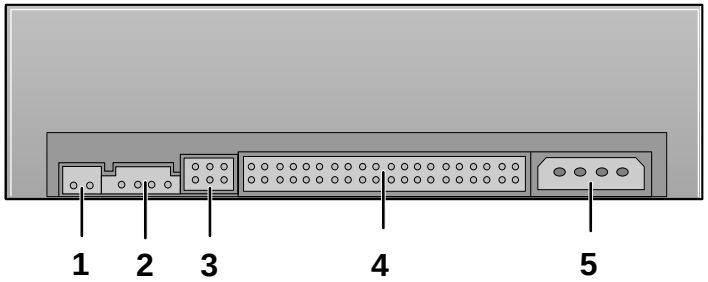
PRECAUTIONS

1. To reduce the risk of fire or electric shock, do not expose this appliance to rain or moisture.
2. Always check each disc for cracks before using it. If there are cracks on the surfaces, especially around the border of the center hole, we recommend that you make a copy of the disc immediately and then stop using it. If you continue using the disc, it will probably develop more cracks and eventually cause irreparable damage.
3. Do not use poor quality discs:
   - From unknown sources
   - Without any copyright
   - Scratched or damaged in any way

Your CD-R/RW Drive



1. Connector for stereo headphones with a 3.6 mm stereo mini-jack.
2. Headphone volume control.
3. Emergency eject hole. (if the compartment does not open when you press the Eject button, power off the computer, insert a pin or unfolded paper clip in the hole and push firmly)
4. Indicator Light. (GREEN: Read RED: Record)
5. Disc compartment. (the compartment opens and closes automatically when you press the Eject button)
6. Eject button.



1. Two-pin digital audio output terminal for use with a sound or MPEG card supporting digital audio features.
2. Four-pin sound output terminal for use with a sound card. (refer to the sound card documentation for further details)
3. Master/slave select terminal.
4. 40pin host E-IDE interface connector.
5. 4pin power terminal.

Upgrading the Firmware Flash Memory

The product firmware can be upgraded by downloading the updated file from the following Web site:

http:// www.samsungodd.com
www.samsungelectronics.com

System Requirements

Before you install the CD-R/RW drive, we strongly recommend that you check that your setup meets the system requirements listed below.

Item	Description
Computer	Intel Pentium II (or higher), 64 MB of RAM (or higher) with an E-IDE interface
Disk space	700 MB minimum
Windows version	Windows 95 / 98 OSR2 / 2000 / ME or XP / Windows NT 4.0 (or higher)

General DMA Installation Guide Windows 95/98/Me

Important!

Please read the entire DMA installation guide before installing your CD-R/RW drive.

About DMA Installation

For stable writing performance at high speeds, Installation of DMA transfer mode forE-IDE/ATAPI interface is strongly recommended. We recommend DMA mode for fast writing.

DMA Setting

Before you install your CD-R/RW drive, we recommend to set DMA to enabled on your PC system. See the following procedure to set DMA transfer mode in windows oprerating system. (Windows 95 OSR2/98/ME)

- Click on START
- Click on Settings
- Select Control Panel
- Select the System Icon
- Select the Device Manager panel in System Properties
- Expand the CD-ROM icon
- Select your CD-R/RW drive
- Click on the Properties button
- Click on the Settings tab
- Check the DMA checkbox to enables DMA.
- Click OK
- Restart your PC

Windows 2000/XP

Select the DMA mode by selecting [Start > Setting > Control Panel > System > Device Manager > IDEATA/ATAPI Controller > Default/Assistant IDE Channel Advanced Information]

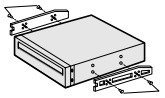
Installing the CD-R/RW Drive

To install your CD-R/RW drive in the PC, proceed as follows.

1 Make sure that the PC is powered off and disconnected from any power source.

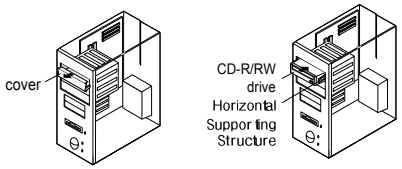
2 If necessary, attach a horizontal bracket to both sides of the drive.

- Use of the brackets depends on your computer model; you can purchase these accessories separately from your computer dealer.

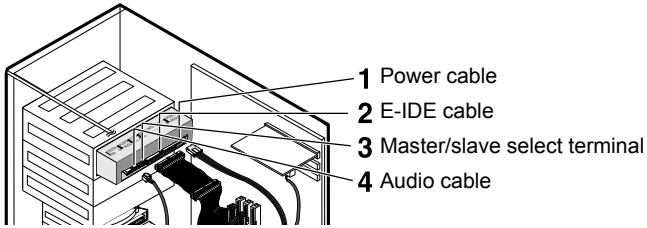


3 Remove the cover from a free expansion slot and install the CD-R/RW drive, as shown in the illustration.

- If you have no free expansion slot, install the drive in place of the diskette drive.

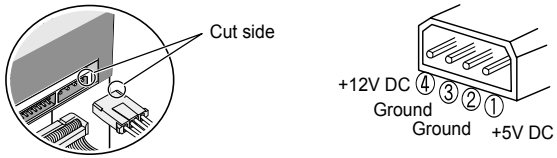


Connecting the Cables



1 Connecting the power cable

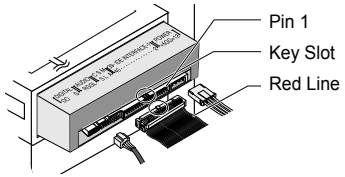
The 4-pin power cable from the internal power unit of your computer must be connected to the power terminal on the rear of the CD-R/RW drive.



Note: An improperly connected power cable may cause trouble. Check the direction of the power connector and the incline side of the CD-R/RW drive before connecting.

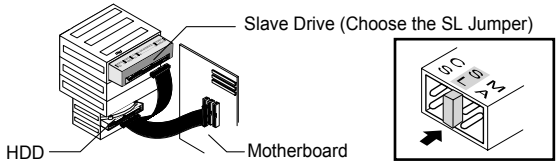
2 Connecting the E-IDE cable

Insert the IDE cable (40-pin), which is connected to the hard disk to the interface terminal. (Place the red line of the cable close to the Pin 1.)



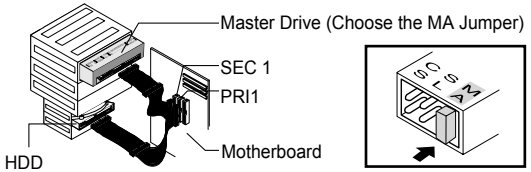
When using one E-IDE cable

Connect the cable to the SL (Slave) of the Master/Slave Select Terminal at the rear of the CD-R/RW drive.

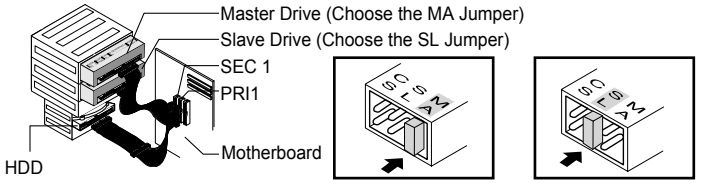


When using two E-IDE cable

- **If there is only one CD-R/RW drive, select MA (Master).**



- **If there is two CD-R/RW drive, select MA (Master) / SL (Slave).**



(Choose the MA jumper) (Choose the SL jumper)

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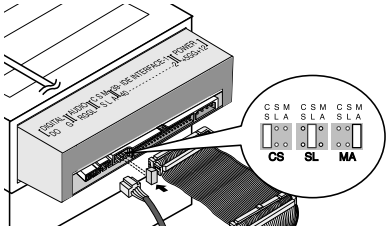
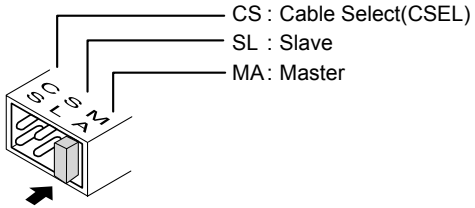
3 Installing a jumper on the master/slave select terminal

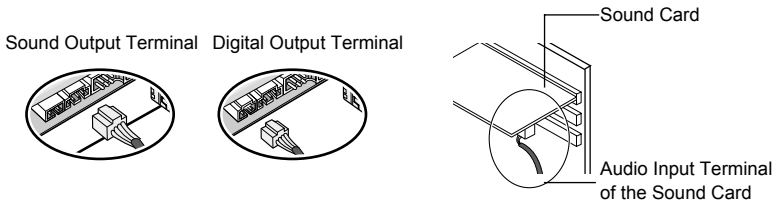
Connect a jumper to the rear side of the CD-R/RW.
If the jumper is connected to MA (Master), it will work in the Master mode.
If the jumper is connected to SL (Slave), it will work in the Slave mode.
If the jumper is connected to CS (CSEL), you can control the device by using the host interface signal CSEL. (In general, connection to MA is recommended.)





4 Connecting the audio cable from a sound card

- Connect the 4-pin audio cable between the sound output terminal on the CD-R/RW drive and the audio input terminal on the sound card.
- For clearer sound, use a digital output terminal.
  (Available only for the CAID that supports digital output)
  This may not be available for general sound cards.



Installing the CD Record Utility

To record data on a CD-R or CD-RW disc in the CD-R/RW drive, you must first install the CD record utility. For compatibility reasons, you are recommended to uninstall any existing software of the same type before installing this utility.

1 Insert the disc supplied with the CD-R/RW drive in the drive.

2 Follow the instructions displayed on the screen to install the utility.
Refer to the separate utility documentation for further details.

3 Store the utility disc in a safe place.

Installing the Device Driver

No additional device driver is needed for Windows 95/98/2000/ME/XP/NT4.0, as the default Windows device driver is used. You can check that the CD-R/RW drive has been correctly detected by Windows. To do so, proceed as follows.

1 Double-click on the **My Computer** icon on your desktop.

2 Double-click on the **Control Panel** folder.

3 Double-click on the **System** icon.

4 Click on the Device **Manager** tab.

5 Expand the CD-ROM branch.
The **SAMSUNG CD-R/RW SW - ***** device name is displayed.

The SAMSUNG device driver enables discs in the CD-R/RW drive to be read but not recorded in an MS-DOS environment; the driver is located in the D driver folder on the CD record utility disc.

Setting Up the Device Driver

◆ Automatic Setup

1 Insert the setup diskette in the diskette drive and change the directory to A:, where A: is the diskette drive.

To do so, type **A**: after the **C**:\ prompt and press **[Enter]**.

2 Type **CDSETUP** and press **[Enter]**.

3 Reboot the computer.

◆ Manual Setup

1 Make the **C:\SAMSUNG** directory.

2 Copy the files from the diskette to the **C:\SAMSUNG** directory.

To do so, type **COPY A: * . * C:\SAMSUNG** after the **C**:\prompt and press **[Enter]**.

3 Edit the **CONFIG.SYS** file.

Add the **DEVICE=C:\SAMSUNG\SSCDROM.SYS \D:SSCD000/V** entry.

```
LAST DRIVE = Z
----------------------------------
----------------------------------
DEVICE = C :\SAMSUNG\SSCDROM.SYS/D : SSCD000/V
```

4 Edit the **AUTOEXEC.BAT** file.

Add the **C:\SAMSUNG\MSCDEX/D:SSCD000** entry.

```
----------------------------------
----------------------------------
C :\SAMSUNG\MSCDEX /D:SSCD000
```

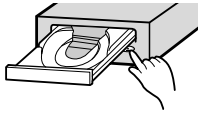
5 Reboot the computer.

Using the CD-R/RW Drive

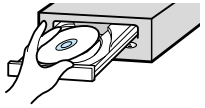
To play audio or video CDs in your CD-R/RW drive, proceed as follows.

1 Push the power button and boot the computer.

2 After booting the computer, open the disc compartment by pressing the Eject button.



3 Insert the disc (CD) with the label on the disc facing upwards and close the disc compartment by pressing the Eject button.
The indicator light comes on.



4 Play the disc (CD).

Playing Audio CDs

Run the CD player supplied with Windows or your sound card.
You can listen to the CD by connecting headphones to the appropriate connector.
If you have installed the appropriate player, such as Microsoft Windows Media Player, you can adjust the volume using the headphone volume control on the drive front panel.

If you select DIGITAL at CD Audio Play in Media Player of Windows ME, the earphone does not appear in the Digital Mode.

Storing and Cleaning Your Discs

To ensure a long service life for your discs and drive, follow the pre-cautions below when storing and cleaning your discs.

1 Do not place a disc in direct sunlight.

2 Store a disc vertically in a well-ventilated and stable location.

3 Do not write or attach a label on a disc.

4 Do not drop a disc or place heavy objects on it.

5 Do not touch the surface of a disc; hold it by the edges.

6 To clean a disc, polish lightly from the inside of the disc to the outside with a soft cotton cloth.

7 Do not leave the disc compartment open when you are not using it.

Solving Recording Problems

If you have any problems recording via your CD-R/RW drive,
follow the appropriate instructions below for the source that you are using.

◆ Hard Drive

1 Check whether the source file is corrupted.

2 Optimize the hard disk by using the Windows defragmenter feature:
START / PROGRAMS / ACCESSORIES / SYSTEM TOOLS / DISC DEFRAGMENTER

3 Decompress the hard disk if it is compressed.

4 Make sure that the space available on the hard disk is at least twice the size of the largest file to be recorded on the disc.

5 If you wish to record more than 1000 small files:
- First create an image file and copy the image file to the disc.
- Choose the low record speed
- Compress small files and then record them

◆ Network Drive

1 Copy the network drive contents to the hard disk and then from the hard disk to the CD-R/RW drive.

◆ CD-ROM Drive

1 Clean the source CD, if necessary.

2 Create an image file and then copy the image file to the CD-R/RW drive.

3 Check the CD-ROM drive record speed.
There are two recording methods :
- Low-speed (file by file)
- High-speed (transfer of an image file from the hard disk)

4 If the transfer speed of the CD-ROM drive is slower than the record speed, reduce the record speed.

Caution with errors

Every CD-R or CD-RW drive records data by applying recording laser onto a CD.
If the CD is damaged or recording data is not possible, you need to remove the following causes of the error before using the CD.

- It is recommended to set a CD-R or CD-RW drive as follows.

1 Do not work on a multi-tasking environment and remove screen savers.
- If you work on a multi-tasking environment while the CD-RW drive is recording/deleting data, Buffer Under-Run may occur.

2 Do not allow any external access to the Host PC while recording data.
- If another user accesses your printer through a network while you are recording data, errors may occur.

3 Remove the Auto-Run function of the CD.
- If you insert a CD that has the Auto-Run function to a drive connected to a PC while recording/deleting data, this may cause errors.

How to cancel (select) the Auto-Run function

Cancel (Select) the Auto-Run function in [Start > Setting > Control Panel > System > Device Manager > CD-ROM Setting]

4 Use image files when you record many small files.
- If you use a lot of small size files for recording, this may reduce the transaction rate of the PC. Although Justlink function is often run, the recording quality may become low.
- If you copy a CD from another, you do not require making available space in the hard disk. However, when you use image files, you need to copy them on the hard disk first and then copy to a CD. In this case, you need to ensure maximum 700MB of available space in the hard disk for reliable recording process.

5 Use an E-IDE cable, which has the specified length (46cm).
- Using E-IDE cables longer than 46cm may cause errors during data transaction.

6 Use only one recording software program.
- To install a software program for recording, uninstall any other types or versions of recording software programs first and then reboot the computer.

Make sure you use the recording software CD (Nero Burning Rom / Roxio Easy CD Creator) provided by us.
Using our software program with others may cause errors in recording.

- Not compatible with **Windows 95** in case of **Roxio Software**.

Recommended Disc Types

CD-R Ricoh, MCC, Ritek , CMC, MBI, PRINCO, PRODISC, PRINCO, BEALL

CD-RW H/S-RW : Ricoh, Ritek , CMC, ACER, MCC
CD-RW : Ricoh, Ritek , MCC, PRODISC, SKC

Term Description

What is Buffer Under-Run?
Every CD-R or CD-RW drive records the data that the Host PC wants to record until the data flow ends.
However, if the buffer becomes empty temporarily, this may cause errors in recording data.

What is Auto-Run?
If inserting a CD into a drive, the operating system executes the Autorun.inf file of the CD automatically.

What is Justlink?
This function is to check the buffer to see if there are data while recording.
If the buffer is empty, it waits at the address and then restarts recording after the buffer is full.
You can avoid Buffer Under-Run problems by applying the above-mentioned principle.

Solving Technical Problems

Problem	Meaning / Solution
The CD-R/RW drive is not detected by the computer. After installing the CD-R/RW drive, the PC gets slower.	Check that the power, audio and IDE cables are correctly connected to the computer.
	Change the IDE cable and reconnect it to the computer. Preferably, connect a second IDE cable to the CD-R/RW drive in master mode.
	Check the position of the jumper in the master/slave select terminal.
The CD-R/RW drive is not recognized by MS-DOS.	Reinstall the device driver or update it with the latest version by downloading it from the Samsung Web site. - www.samsungodd.com - www.samsungelectronics.com
The CD-R/RW drive is not detected by Windows.	This case may occur when there is a Windows installation problem; reinstall Windows.
No sound is heard from an audio CD.	Check whether the audio cable is correctly connected to the sound output terminal on the CD-R/RW drive and the sound card CD-IN terminal.
	Check that the sound card is operational.
	Adjust the volume control.
	Run the CD player supplied with Windows or your sound card. You can listen to the CD by connecting headphones to the appropriate connector. If you have installed the appropriate player, such as Microsoft Windows Media Player, you can adjust the volume using the headphone volume control on the drive front panel.
	If you select DIGITAL at CD Audio Play in Media Player of Windows ME/XP, the earphone does not appear in the Digital Mode.
A CD is not read or is read too slowly.	Check whether the CD is of good quality and clean it, if necessary.
The disc compartment will not open.	Check that the power cable is correctly connected.
	Power off and disconnect the PC. Insert a pin or unfolded paper clip in the emergency hole and push firmly until the disc compartment opens.

Problem	Meaning / Solution
When the MPEG software plays a Video CD, the pictures are not regular and the running speed is too slow.	Adjust the size of the replay screen.
	After checking the display resolution, adjust it, if necessary.
The Disc is not in message is displayed even though a disc has been inserted.	The computer may not recognize the disc if you start playback too quickly after inserting the disc. Open and close the disc compartment and try again.
	Clean the disc and try again.
The CD-R/RW drive is not detected after it is connected to a sound card.	The interface mode of the sound card is AT-BUS. You must therefore connect the CD-R/RW drive to the IDE port on the PC mother board, rather than to the sound card, or install an E-IDE compatible sound card.
IN CD has the Formatted Disc Eject function.	Right-click the mouse on TRAY ICON (right side of the menu bar at the bottom of the monitor) and then select "Eject" to take the CD out.
	Select the drive where the disc is inserted from Windows Explorer. Right-click the mouse and select "Eject" to take the CD out.
When recording NERO, it will be recorded not on a CD but a form of image file.	This seems to occur when you select the recording function as the system selects "Image Recorder" instead of SW-240. In this case, select a recorder from the menu items at the upper part of NERO and then select SW-240 from the Recorder Selection window.
	When installing the recording software, try not to install the software before the ROM drive as this makes the Image Recorder selected.
The Recorder cannot recognize the disc.	Use the firmware automatic upgrade function available at the ODD service website to download the newest firmware and then reinstall the recording software which is included in the bundle. - www.samsungodd.com - www.samsungelectronics.com

Technical Specifications

SAMSUNG continually strives to improve its products. Both the design specifications and these user instructions are thus subject to change without notice.

ITEM		SW-240	
DISC	Disc types supported in read mode	CD-DA, CD-ROM mode 1, CD-ROM XA mode 2, Form 1, Form 2, CD-Plus, CD-Extra, Photo-CD (Single, Multi-session), Video CD ready, Enhanced CD, CD-I/Fmv, CD-R, CD-RW, CD-TEXT	
	Disc types supported in write mode	CD-R, CD-RW	
	Erasing disc types	CD-RW	
	Disc diameter	120 mm or 80 mm	
DRIVE PERFORMANCE	Data transfer rate	Recording	CD-R : 600KB/sec. (4X), 1800 KB/sec. (12X), 1800 KB/sec. (12X), 2,400 KB/sec. (16X), 3600 KB/sec. (24X), 4,800 KB/sec. (32X), 6000 KB/sec. (40X),
			CD-R W : 1800 KB/sec. (12X), 1500 KB/sec. (10X), 600 KB/sec. (4X),
		Reading	CD: CAV 40 Access Time CD-RW : CAV 32 Access Time PIO Mode 4:16.6MB/sec, Multiword DMA mode 2:16.6MB/sec
	Access time (typical)	110ms (typical)	
	Data Buffer	8MB	
	Laser	Semiconductor laser	
	Slide mechanism	Stepping motor	
	Spindle motor	Brushless motor	
	Load mechanism	Tray. DC motor (Soft Eject).	
ERROR RATE		Mode 1: 1 block/10^{12}, Mode 2: 1 block/10^{9}	
FRONT PANEL	Eject button	Auto eject or Auto inject	
	Indicator	Play / Read (GREEN) Record (RED), Operation LED	
	Headphone output	Stereo mini-jack (Ø 3.6 mm) 0.65±20% (vrms) 33Ω	
	Volume control	Dial type	
REAR PANEL	Required power	+5 VDC: 1.5 A (max.), +12 VDC: 1.5 A (max.)	
	Interface connector	ATAPI (E-IDE)	
	Audio output	Line out 0.75±20% (vrms) : 47KΩ	
	Jumper block	Device configuration jumper	
OPERATING ENVIRONMENT	Operations	Temperature: 5~45°C Humidity: 10~80%	
	Storage	Temperature: -25~55°C Humidity: 10~90%	
GENERAL	Dimensions	148.2 (W) x 42 (H) x 184 (D) mm (including bezel)	
	Net weight	750 g	
RELIABILITY	MTBF	125,000 POH(Duty 20%)	