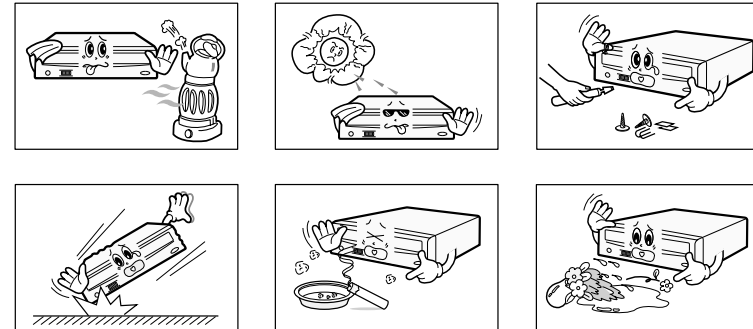


## Safety Precautions

The following diagrams illustrate the precautions to be taken when using your DVD-ROM drive.



## User's Guide

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

**CAUTION** Do not attempt to repair the DVD-ROM 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.

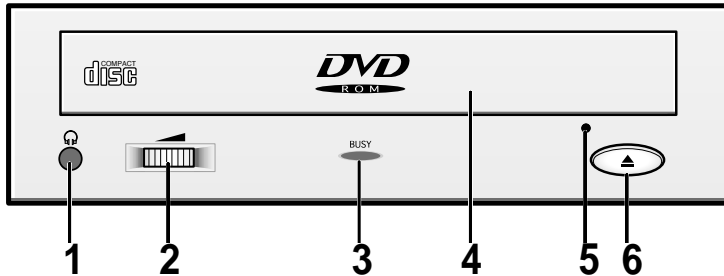
**Precautions**

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

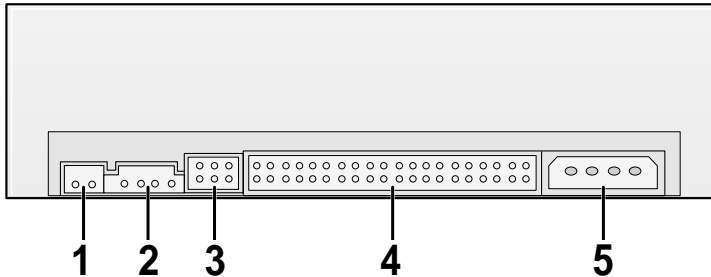
<http://www.samsungelectronics.com>

BG68-00163A Rev:01

## Your DVD-ROM Drive



1. Connector for stereo headphones with a 3.6 mm stereo mini-jack
2. Headphone volume control
3. Indicator light (when it is green, a disc is being read or recorded)
4. Disc compartment (the compartment opens and closes automatically when you press the Eject button)
5. 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)
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. Forty-pin host IDE interface connector
5. Four-pin 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.samsungelectronics.com>

## System Requirements

Before you install the DVD-ROM drive, we strongly recommend that you check that your setup meets the system requirements listed below.

Item	Description
Computer	Intel Pentium II (or higher), 32 MB of RAM (or higher) with an IDE interface
Free expansion unit	5.25 inch
Disk space	100 MB minimum
Windows version	Windows 95/98 OSR2 or Windows NT 4.0 (or higher)
Playback of DVD Video	PC with Window95 OSR2 DVD-Video playback software or appropriate hardware (MPEG2 card etc.)

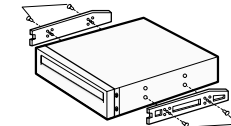
## Installing the DVD-ROM Drive

To install your DVD-ROM drive in the PC, proceed as follows.

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

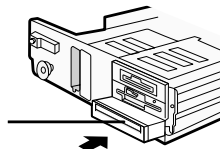
**2** If necessary, attach a horizontal bracket to both sides of the drive.

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

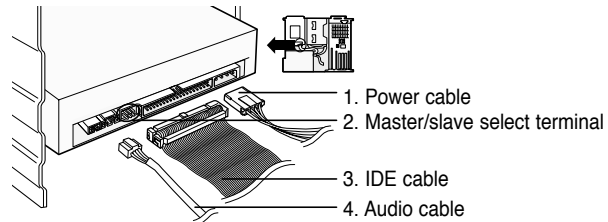


**3** Remove the cover from a free expansion slot and install the DVD-ROM drive, as shown in the illustration.

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



## Connecting the Cables

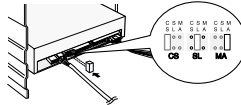


### 1 Connecting the power cable

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 DVD-ROM drive.

### 2 Installing a jumper on the master/slave select terminal

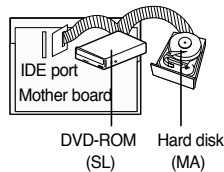
Install the jumper in the correct position on the terminal:  
 MA to use the device in the master mode  
 SL to use the device in the slave mode  
 CS to control the device via a CSEL host interface signal  
 See Step 3 for further details.



### 3 Connecting the IDE cable

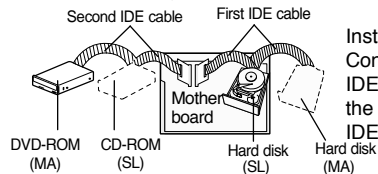
Two configurations are possible.

- The DVD-ROM drive is the only IDE device in addition to the hard disk.



Install the jumper in the SL position (Slave).  
 Connect the 40-pin flat IDE cable from the IDE port on the mother board, first to the DVD-ROM drive and then to the hard disk.

- You already have an additional IDE device installed in your computer.



Install the jumper in the MA position (Master).  
 Connect the 40-pin flat IDE cable from a second IDE port on the mother board directly to the DVD-ROM drive or first to another additional IDE drive and then to the DVD-ROM drive.

### 4 Connecting the audio cable from a sound card

Connect the 4-pin audio cable between the sound output terminal on the DVD-ROM drive and the audio input terminal on the sound card.



## Setting Up the Device Driver

### ◆ Automatic Setup

- 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]**.
- Type **CDSETUP** and press **[Enter]**.
- Reboot the computer.

### ◆ Manual Setup

- Make the **C:\SAMSUNG** directory.
- 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]**.
- 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
```

- Edit the **AUTOEXEC.BAT** file.  
 Add the **C:\SAMSUNG\MSCDEX /D:SSCD000** entry.

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

- Reboot the computer.



## Installing the Device Driver

*No additional device driver is needed for Windows 95/98/NT, as the default Windows device driver is used. You can check that the DVD-ROM 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 DVD-ROM SD - \*\*\*** device name is displayed.

The SAMSUNG device driver enables discs in the DVD-ROM 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.

### DVD Region Protection Coding (RPC):

The RPC feature is supported on DVD players and is used with DVD-video discs (such as movies). Currently, the motion picture industry has divided the world into different regions or zones that correspond to the regional markets into which the motion picture industry releases movies. Simply put, RPC codes are placed on movies marketed throughout the world, based on the region of the world in which they are being sold. These RPC codes help control and prevent pirating of new movies into other motion picture regions prior to their true release dates within those markets.

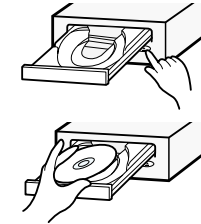
**The SD-610/612 DVD-ROM drive supports RPC phase II. In the RPC-2 mode, the local code can be changed by users. RPC-2 is selected by default for the SD-610/612 DVD-ROM drive. You can change the region code up to five times via an MPEG application.**

**Please contact your dealer or local SAMSUNG representative if you wish to change the local code more than five times.**

## Using the DVD-ROM Drive

*To play audio or video CDs in your DVD-ROM 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/DVD) 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/DVD).



### 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.

### Playing Video CDs

Set up and run the SOFT MPEG program.

## Storing and Cleaning Your Discs

*To ensure a long service life for your discs and drive, follow the precautions 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 Technical Problems

Problem	Meaning / Solution
The DVD-ROM drive is not detected by the computer. After installing the DVD-ROM drive, the PC gets slower.	<ul style="list-style-type: none"> <li>◆ Check that the power, audio and IDE cables are correctly connected to the computer.</li> <li>◆ Change the IDE cable and reconnect it to the computer. Preferably, connect a second IDE cable to the DVD-ROM drive in master mode; see page 7 for further details.</li> <li>◆ Check the position of the jumper in the master/slave select terminal.</li> </ul>
The DVD-ROM drive is not recognized by MS-DOS.	<ul style="list-style-type: none"> <li>◆ Reinstall the device driver or update it with the latest version by downloading it from the Samsung Web site.</li> </ul>
The DVD-ROM drive is not detected by Windows.	<ul style="list-style-type: none"> <li>◆ This case may occur when there is a Windows installation problem; reinstall Windows.</li> </ul>
No sound is heard from an audio CD.	<ul style="list-style-type: none"> <li>◆ Check whether the audio cable is correctly connected to the sound output terminal on the DVD-ROM drive and the sound card CD-IN terminal.</li> <li>◆ Check that the sound card is operational.</li> <li>◆ Adjust the volume control.</li> </ul>
A CD is not read or is read too slowly.	<ul style="list-style-type: none"> <li>◆ Install the latest version of the device driver.</li> <li>◆ Check whether the CD is of good quality and clean it, if necessary.</li> </ul>
The disc compartment will not open.	<ul style="list-style-type: none"> <li>◆ Check that the power cable is correctly connected.</li> <li>◆ 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.</li> </ul>
When the MPEG software plays a Video CD, the pictures are not regular and the running speed is too slow.	<ul style="list-style-type: none"> <li>◆ Adjust the size of the replay screen.</li> <li>◆ After checking the display resolution, adjust it, if necessary.</li> </ul>
The Disc is not in message is displayed even though a disc has been inserted.	<ul style="list-style-type: none"> <li>◆ 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.</li> <li>◆ Clean the disc and try again.</li> </ul>
The DVD-ROM drive is not detected after it is connected to a sound card.	<ul style="list-style-type: none"> <li>◆ The interface mode of the sound card is AT-BUS. You must therefore connect the DVD-ROM drive to the IDE port on the PC mother board, rather than to the sound card, or install an IDE-compatible sound card.</li> </ul>

## 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		SD - 610	SD - 612	
		DVD / CD		
DISC	Disc types supported	DVD-ROM, DVD-VIDEO, CD-DA(Audio), CD-ROM, CD-ROM XA, CD-Plus, CD-Extra, Photo-CD(Single,Multi-session), Video CD ready, Enhanced CD, CD-I/FMV, CD-R,CD-RW		
	Disc diameter	12cm or 8cm		
DRIVE PERFORMANCE	Data transfer rate	Sustained :	Sustained :	
		Max. 13,500KB/sec (10X) / Max. 6,000KB/sec (40X)	Max. 16,200KB/sec (12X) / Max. 6,000KB/sec (40X)	
	Access time(1/3stroke)	PIO Mode 4 : 16.6MB/sec Multiword DMA mode 2 : 16.6MB/sec UDMA mode 2 : 33MB/sec		
		Data buffer capacity	512KB	
		Laser	Semiconductor Laser	
		Slide mechanism	Stepping motor	
		Spindle motor	Brushless motor	
Loading mechanism	Tray. DC motor(Soft Eject). Horizontal/Vertical			
ERROR RATE		10 <sup>-15</sup> / MODE1:10 <sup>-12</sup> , MODE2:10 <sup>-9</sup>		
FRONT PANEL	Eject button	Auto eject or Auto inject		
	Indicator(LED)	BUSY		
	Headphone output	Stereo mini-jack(Ø3.6mm) 0.60±20%(rms) 33Ω		
	Volume control	Wheel knob		
REAR PANEL	Required power	+5VDC : 2.0A, +12VDC : 1.0A (Max)		
	Interface connector	ATAPI		
	Audio output	Line out 0.70 ± 20%(rms) : 47KΩ		
	Jumper block	Device configuration jumper		
OPERATING ENVIRONMENT	Operation	Temperature : 5 ~ 45°C,	Humidity : 8 ~ 80%	
	Storage	Temperature : -40 ~ 60°C,	Humidity : 5 ~ 90%	
GENERAL	Dimensions	149(W) x 42(H) x 200(D)mm		
	Net weight	880g		
RELIABILITY	MTBF	125,000 POH(Duty 20%)		

\* In case of the PC without UDMA, it may have a different DVD data transmission rate.