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Samsung's OMS (Optical Media Solution) Customer Support Website ([Http://samsung-odd.com](http://samsung-odd.com)) offers the latest versions of firmware for ODD products, user instructions and product information.

Select Model  
SH-D162C(TS-H352C) ▼

The Statement of Warranty

[Http://samsung.com](http://samsung.com)  
[Http://samsung-odd.com](http://samsung-odd.com)

# SH-D162C (TS-H352C)

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# Safety Precaution

The following are basic precautions to ensure user safety and reduce the risk of property damage. Please read this carefully and follow the precautions at all times for proper use of the device.



## Warning / Caution

- Warning** : This symbol indicates explanations about extremely dangerous matters.  
If users ignore this symbol and handle the device the wrong way, serious injury or death could result.
- Caution** : This symbol indicates explanations about dangerous matters.  
If users ignore this symbol and handle the device the wrong way, damage to home or property could result.


## Notational


	Failure to follow directions noted by this symbol could result in bodily harm or damage to equipment.
	Prohibited
	Important to read and understand at all times
	Do not disassemble
	Any change or modification not expressly approved by designated qualified personnel could void your authority to operate this device.
	Always make sure that the disc does not have a crack before use. If the disc has a crack (especially around the center hole), it is recommended to make a copy immediately and use the copy instead. When a cracked disc is used continuously, the size of the crack is likely to grow and this will eventually result in irreparable damage to the disc.
	Important to read and understand at all times.

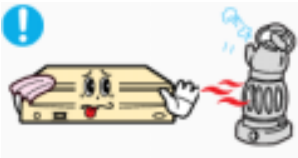
# Safety Precaution


## Installation

When you install the drive

!  ⌘ Place the drive on a level surface.  
- Failure to do so may cause the device to fall onto a hard surface, resulting in damage or malfunction.


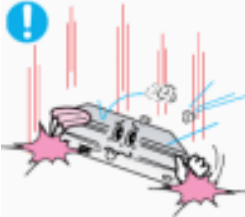


!  ⌘ Do not place the drive in direct sunlight.

!  ⌘ Avoid low- or high-temperature environments.

!  ⌘ Avoid high-humidity environments.


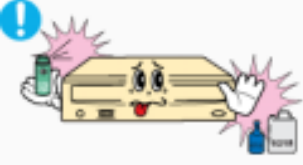

# Safety Precaution

## While Operating

While Operating	
	<ul style="list-style-type: none"><li>⌘ Handle with caution to prevent damage from external shock.</li></ul>
	<ul style="list-style-type: none"><li>⌘ Do not drop the drive, and protect it from severe shocks.</li><li>- It can damage the drive or cause it to malfunction.</li></ul>
	<ul style="list-style-type: none"><li>⌘ Do not move the drive while in operation and do not attempt to open the disc tray by force.</li><li>Make sure to close all working programs before attempting to open the tray and always use the open/close button.</li><li>- Do not insert a pin into the emergency opening while in operation.</li></ul>
	<ul style="list-style-type: none"><li>⌘ Do not use cracked, distorted or damaged discs.</li><li>- In particular, a disc with a crack on the inner tracks may break while in use.</li></ul>

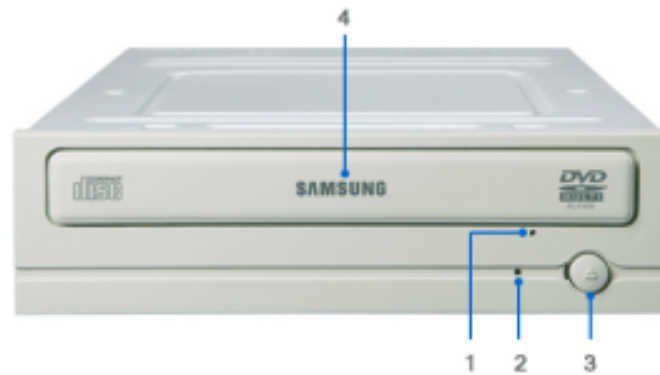
# Safety Precaution

## Other

Other	
	<ul style="list-style-type: none"><li>⌘ Never allow food particles or foreign substances to enter the drive casing.</li></ul>
	<ul style="list-style-type: none"><li>⌘ To protect against the risk of fire, do not spill such liquids as alcohol and benzene on the drive.</li></ul>
	<ul style="list-style-type: none"><li>⌘ Do not disassemble, attempt to repair or modify the device without express approval as directed in the manual.</li><li>- To reduce the risk of damage, electric shock, and fire,</li></ul>

# Introduction

## Front



1. 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)
2. Indicator Light. (When it is green, a disc is being read.)
3. Eject button.
4. Disc compartment. (the compartment opens and closes automatically when you press the Eject button)

# Introduction

## Rear



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 IDE interface connector.
5. 4pin power terminal.  
(A : +5V DC)  
(B : +12V DC)



# Setup

## ● Installing the DVD-ROM Drive



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

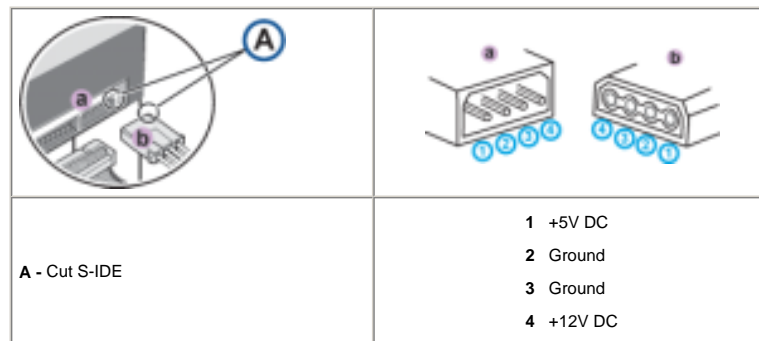
# Setup

## ● 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 Optical drive.



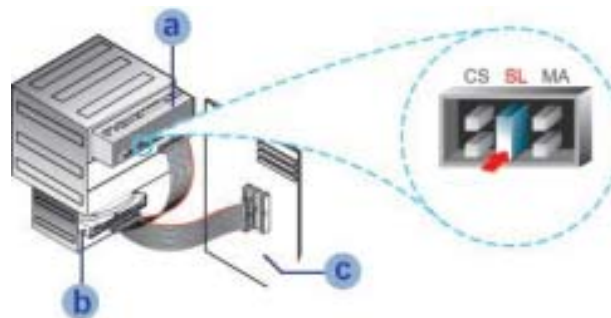
**Note:** An improperly connected power cable may cause trouble. Check the direction of the power connector and the incline S-IDE of the Optical drive before connecting.

### 2. Connecting the E-IDE cable

Insert the E-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 Optical drive.

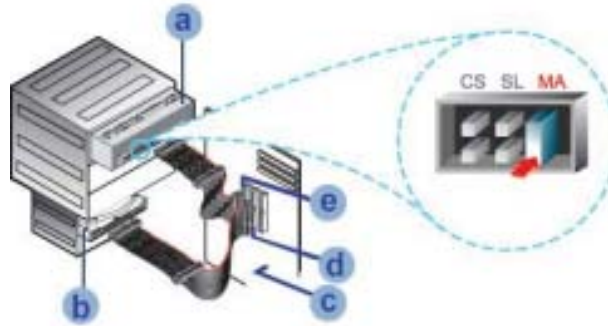


a	: Slave Drive (Choose the SL Jumper)
b	: Hard Drive
c	: MainBoard

#### ● When using two E-IDE cable

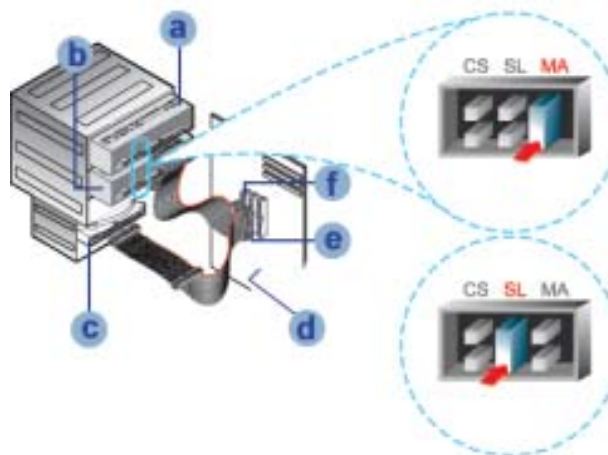
- ✦ If there is only one Optical drive, select MA (Master).

# Setup



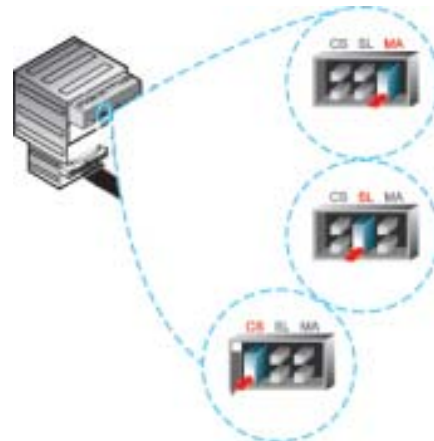
a : Master Drive (Choose the MA Jumper)	b : Hard Drive
c : MainBoard	d : Primary 1
e : Secondly 1	

※ If there is two Optical drive, select MA (Master) / SL (Slave).



a : Master Drive (Choose the MA Jumper)	b : Slave Drive (Choose the SL Jumper)
c : Hard Drive	d : MainBoard
e : Primary 1	f : Secondly 1

### 3. Installing a jumper on the master/slave select terminal



# Setup

Connect a jumper to the rear S-IDE of the Optical drive.

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 Optical drive and the audio input terminal on the sound card.
- ⊕ For clearer sound, use a digital output terminal. (Available only for the CARD that supports digital output) This may not be available for general sound cards.

# Setup

## ● Installing the Device Driver

This Device Driver is an installation driver that can detect ODD (Optical Disc Drive) products in DOS mode. It provides only the reading function in Dos mode.  
(For recording, it is recommend not to install the Device Driver designed for DOS mode)

The Device Driver for DOS mode is included in the Ddriver or DOS Driver folder of the disc enclosed with the product that you purchased.



For Windows98/2000/ME/XP or higher version that uses a device driver provided by Windows, there is no need to set up an extra device driver.

Refer to the steps below to see if Windows detects the drive.

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 **Installing the Device Driver** device name is displayed.

# Setup

## ● Setting Up the Device Driver



The device driver is located in the Ddriver folder of the User's Guide disc with is provided in the package.



This device driver is to recognize a DVD-ROM drive on Dos mode.



This driver should be applied for DOS mode user to install on Windows 98 or Windows ME only.

### ➤ Automatic Setup

1. Insert the **User's Guide** disc into the CD-ROM drive and open the **Ddriver** folder.
2. Run the **CDSETUP.EXE** file in the **Ddriver** folder.
3. When Setup is successfully completed, click **OK** button or press the **Enter** key.
4. Reboot the computer.

### ➤ Manual Setup

1. Make the **C:\SAMSUNG** directory.
2. Copy the files from the User's Guide disc to the **C:\SAMSUNG** directory.  
To do so, type **COPY D:\Ddriver \*.\* C:\SAMSUNG** after the **C:\**prompt and press **[Enter]**.
3. Edit the **CONFIG.SYS** file.  
Add the **DEVICE=C:\SAMSUNG\SSCDROM.SYS ID:SSCD000/V** entry.

```
LAST DRIVE - Z
*****
DEVICE=C:\SAMSUNG\SSCDROM.SYS ID: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 Drive

## Using the DVD-ROM Drive

To play audio or video CDs and / or DVDs 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).
5. Accessories
  - The type of accessories varies depending on product model.



User Manual & Setup Guide.



Software.



Screws.

### Playing Video CDs

Set up and run the SOFT MPEG program.



**Design and specifications are subject to change without prior notice.**

# Using the Drive

## ● 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.



# Using the Drive

## ● Upgrading the Firmware Flash Memory

The product firmware can be upgraded by downloading the updated file from the following Web site:  
<http://samsung-ODD.com>  
[Http://samsung.com](http://samsung.com)

# Using the Drive

## 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), 128 MB of RAM (or higher) with an IDE interface
Disk space	100 MB minimum
Windows version	Windows 98 / 2000 / ME / XP Windows (or higher)

### 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 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 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.

# Troubleshootin

Problem	Meaning / Solution
<p>The DVD-ROM drive is not detected by the computer.</p> <p>After installing the DVD-ROM drive, the PC gets slower.</p>	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 DVD-ROM drive in master mode.
	Check the position of the jumper in the master/slave select terminal.
The DVD-ROM 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. - <a href="http://samsung-odd.com">Http://samsung-odd.com</a> - <a href="http://samsung.com">Http://samsung.com</a>
The DVD-ROM drive is not detected by Windows.	This case may occur when there is a Windows installation problem; reinstall Windows.
<p>No sound is heard from an audio CD.</p>	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.
	Check that the sound card is operational.
	Adjust the volume control of windows.
A CD is not read or is read too slowly.	Check whether the CD is of good quality and clean it, if necessary.
<p>The disc compartment will not open.</p>	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.
<p>When the MPEG software plays a Video CD, the pictures are not regular and the running speed is too slow.</p>	Adjust the size of the replay screen.
	After checking the display resolution, adjust it, if necessary.
<p>The Disc is not in message is displayed even though a disc has been inserted.</p>	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 DVD-ROM 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 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.

# Specifications



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

## Technical Specifications

ITEM	
<b>Model Name</b>	SH-D162C(TS-H352C)
<b>ITEM</b>	DVD   CD
<b>Disc</b>	
<b>Disc types supported in read mode</b>	CD-DA(Audio), CD-ROM, CD-R, CD-RW, Photo-CD(Single, Multi-session), Video CD ready, Enhanced CD, CD-I/FMV, CD-TEXT, CD-Plus, DVD-ROM, DVD-VIDEO, DVD+R, DVD-R, DVD+RW, DVD-RW, DVD-RAM
<b>Disc diameter</b>	120mm or 80mm
DRIVE PERFORMANCE	
<b>Data transfer rate</b>	
Sustained :	Max. 21,600KB/sec(16X)   Max. 7,200KB/sec (48X)
PIO mode 4 :	16.6MB/sec
Multiword DMA mode 2 :	16.6MB/sec
UDMA mode 2 :	33MB/sec
<b>ACCESS TIME (typical)</b>	100ms
<b>Data Buffer capacity</b>	512KB
<b>Laser</b>	Semiconductor laser
<b>Slide mechanism</b>	Stepping motor, Sensorless
<b>Spindle motor</b>	Brushless motor
<b>Load mechanism</b>	Tray. DC motor (Soft Eject). Horizontal/Vertical.
ERROR RATE	
<b>ERROR RATE</b>	$10^{-15}$   Mode 1: $10^{-12}$ , Mode 2: $10^{-9}$
FRONT PANEL	
<b>Eject button</b>	Auto eject or Auto inject
<b>Indicator(LED)</b>	BUSY
REAR PANEL	
<b>Required power</b>	1.5A (rms)
<b>Interface connector</b>	ATAPI
<b>Audio output</b>	Line out 0.7V $\pm$ 20%(rms) : 47Kohm
<b>Jumper block</b>	Molex 70203 or other compatible models
OPERATING ENVIRONMENT	
<b>Operations</b>	Temperature: 5~45°C Humidity: 10~80%
<b>Storage</b>	Temperature: -25~60°C Humidity: 10~90%
GENERAL	
<b>Dimensions</b>	148.2 (W) x 42 (H) x 184 (D) mm (including bezel)
<b>Net weight</b>	750 g
RELIABILITY	
<b>MTBF</b>	125,000 POH(Duty 20%)