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# Safety Precautions

## Safety Precautions

Important to read and understand at all times



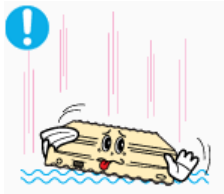
 Warning	This symbol indicates explanations about extremely dangerous matters. If users ignore this symbol and handle the device the wrong way, serious injury or death could result.
 Caution	This symbol indicates explanations about dangerous matters. If users ignore this symbol and handle the device the wrong way, damage to home or property could result.
	Important to read and understand at all times
	Do not disassemble

- 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.

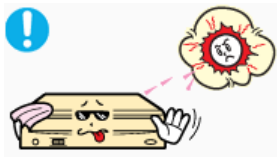
# Safety Precautions

## During Installation

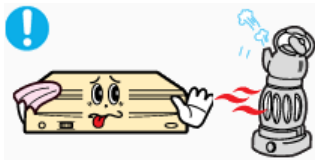
### Installation



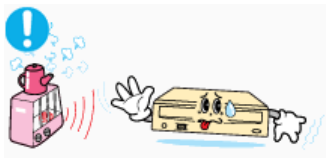
- ✧ Do not drop the drive, and protect it from severe shocks.
- It can damage the drive or cause it to malfunction.



- ✧ Do not place the drive in direct sunlight.



- ✧ Avoid low or high temperature environments.

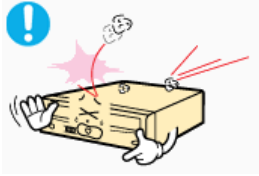


- ✧ Avoid high-humidity environments.

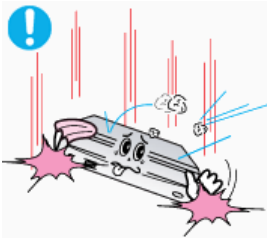
# Safety Precautions

## During Operating

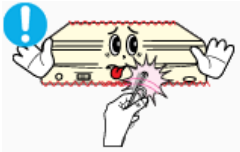
### Operating



✧ Handle with caution to prevent damage from external shock.



✧ Do not drop the drive, and protect it from severe shocks.  
- It can damage the drive or cause it to malfunction.



✧ Do not move the drive while in operation and do not attempt to open the disc tray by force.  
Make sure to close all working programs before attempting to open the tray and always use the open/close button.



Do not insert a pin into the emergency opening while in operation.

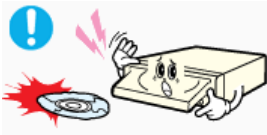
Caution



Do not insert hands in the tray while in operation.

This may cause damage to the product or human body

Caution



✧ Do not use cracked, distorted or damaged discs.


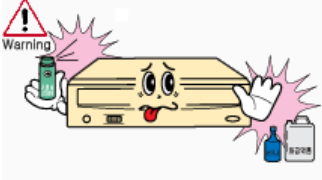
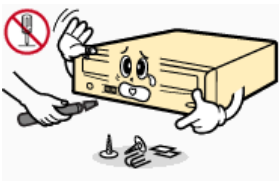


In particular, a disc with a crack on the inner tracks may break while in use.

Caution

# Safety Precautions

## Others

Others	
	<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>

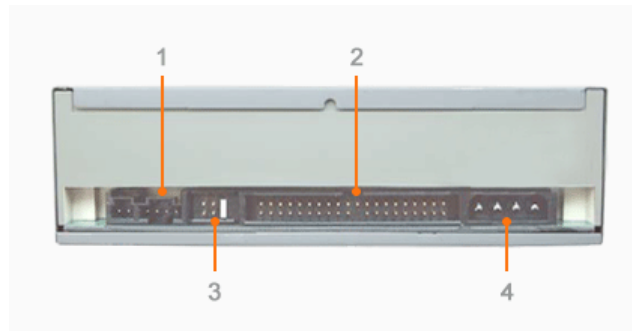
# Features

## Front



- |                      |                |
|----------------------|----------------|
| 1. Emergency Hole    | 2. On/Off Lamp |
| 3. Open/Close Button | 4. Disc Tray   |

## Back



- |                                |                   |
|--------------------------------|-------------------|
| 1. Sound Output Port           | 2. Interface Port |
| 3. Master/Slave Selection Port | 4. Power Port     |

## Components

- ▶ DVD R/RW Drive
- ▶ 40-pin interface cable
- ▶ audio cable
- ▶ four screws to install the drive
- ▶ drive installation instruction sheets
- ▶ software programs  
(software: Nero Express 6.3, InCD 4, WinDVD Creator, WinDVD Recorder, Intervideo DVD Copy, Acrobat Reader 5.0, DirectX 9.0)
- The type of accessories varies depending on product model.

# Features

## System Requirements

● You need to have an IBM-compatible PC with the following specifications.

Item	Description
OS	Microsoft Windows 98 SE/2000/Me/XP(SP 1.0 or higher)
CPU	700 MHz or greater IBM-compatible PC (Recommendation: Pentium4 2.0GHz or higher)
RAM	256Mbytes or greater
HDD	Access time 19 msec, Free space greater than 10 Gbytes

# Features

## Features

### Versatile Multimedia Features

- ▶ DVD-R : Read / Write
- ▶ DVD+R : Read / Write
- ▶ DVD-ROM : Read
- ▶ CD-RW : Read / Write / Rewrite allowed
- ▶ DVD-RW : Read / Write / Rewrite allowed
- ▶ DVD+RW : Read / Write / Rewrite allowed
- ▶ CD-R : Read / Write
- ▶ Supports Read (playback) for various types of discs

▶ See table below for details

	Disc Type	Writable	Rewritable	Read
CD	CD-STAMP	x	x	O
	CD-R	O	x	O
	CD-RW	(O)	O	O
DVD	DVD-STAMP	x	x	O
	DVD-R For General Ver 2.1	O	x	O
	DVD-RW Ver 1.1	(O)	O	O
	DVD+R Basic Ver 1.11	O	x	O
	DVD+RW Basic Ver 1.2	(O)	O	O

**Writable** : write once, read many times.

**Rewritable** : write data one or more times.

### DVD Recommended Disc Types

- ▶ **DVD-R Media (8X / 4X / 2X, 4.7GB For General DISC)**  
Taiyo-Yuden / Taiyo-Yuden, TDK, Mitsubishi Chemical, Hitachi Maxell, Fuji Film, PVC, Panasonic, RITEK, CMC, UNIFINO / Taiyo-Yuden, TDK, Mitsubishi Chemical, Hitachi Maxell, PVC, Panasonic, RITEK, CMC
- ▶ **DVD-RW Media (4X / 2X)**  
TDK, Mitsubishi Chemical, JVC, PVC, RITEK, CMC / TDK, Mitsubishi Chemical, JVC
- ▶ **DVD+R Media (12X / 8X / 4X / 2.4X)**  
Taiyo-Yuden / RICOH, Taiyo-Yuden, Mitsubishi Chemical, RITEK, CMC / RICOH, Mitsubishi Chemical, RITEK, CMC, Prodisc, Optdisc
- ▶ **DVD+RW Media (4X / 2.4X)**  
RICOH, Mitsubishi Chemical, RITEK, CMC / RICOH, Mitsubishi Chemical, RITEK, CMC

### CD Recommended Disc Types

- ▶ **CD-R Media (40X / 32X / 24X / 16X / 8X / 4X)**  
Taiyo-Yuden, RICOH, Mitsubishi Chemical, Hitachi Maxell, Fuji Film, RITEK(Phtharo), CMC / Pioneer, Mitsubishi Chemical, Princo, RITEK(Cyanine), Princo / TDK, Mitsubishi Chemical
- ▶ **CD-RW Media (4X)**  
RICOH, Mitsubishi Chemical, RITEK, CMC
- ▶ **HS CD-RW Media (10X / 4X)**  
RICOH, Mitsubishi Chemical, CMC
- ▶ **US CD-RW Media (24X / 16X)**  
Mitsubishi Chemical

### Buffer underrun prevention technology included

- ▶ What is " buffer underrun prevention technology " ?  
A technology to prevent "buffer underrun" errors in which the data transmission speed is not as fast as the data writing speed when data is being recorded on a CD.

### Reading / Recording Speed

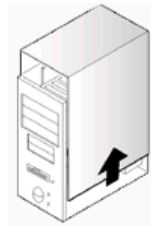
- ▶ Reading Speed(MAX)  
DVD-ROM(S)(12x), DVD-ROM(D)(8x), CD-ROM (40x),DVD-R (8x), DVD-RW (8x), DVD+R (8x), DVD+RW (8x), CD-R (40x), CD-RW (32x)
- ▶ Recording Speed(MAX)  
DVD+R (12x), DVD+RW (4x), DVD-R (8x), DVD-RW (4x), CD-R (40x), CD-RW (24x)



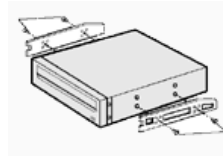
# Installing DVD R/RW Drive and Connecting Cables

## Installing Drive

1. Turn the PC off.
2. Open the cover as shown in the picture.



3. If necessary, attach the support devices on both sides of the drive  
- The support devices are PC accessories. Purchase a pair if necessary.  
(SCREW : M3 X 6 X 4 )

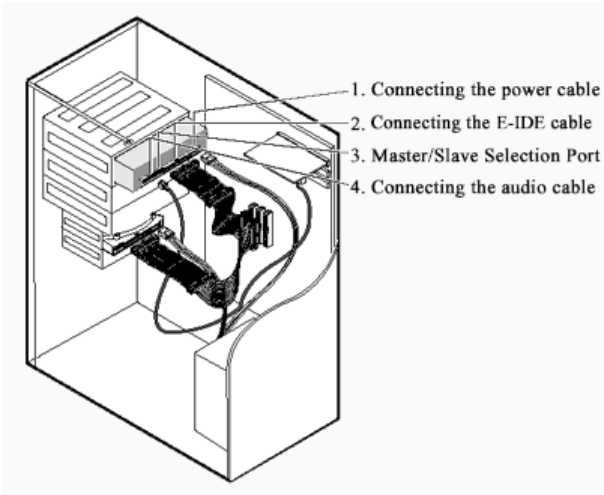


4. Insert the DVD R/RW Drive after removing the plate as below



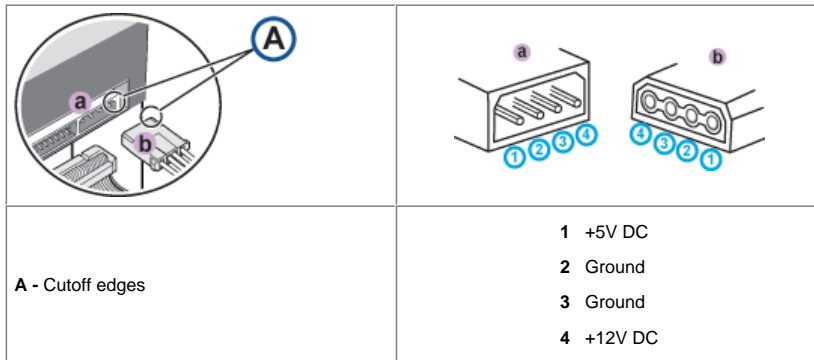
# Installing DVD R/RW Drive and Connecting Cables

## Connecting Cables



### Connecting the Power Cable

Hold the power cable (with four pins) in the power box within the computer with the cutoff edges (A) facing up and connect it to the power port in the back of the DVD R/RW Drive



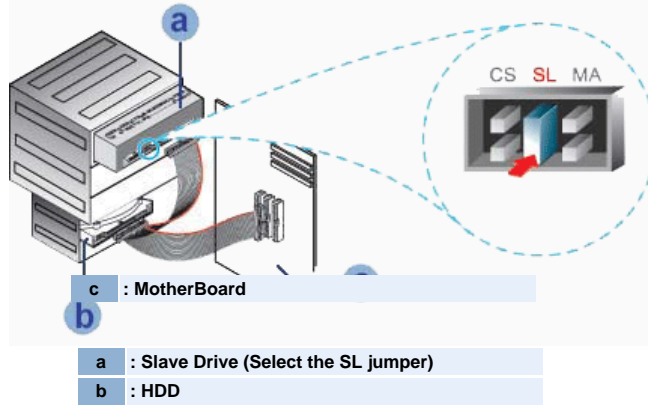
Improperly connected power cable may cause malfunction. Check the direction of the power cable and the cutoff edges before connecting the cable.

### Connecting E-IDE Cable

#### When you use one E-IDE cable

Set the jumper to SL (slave) in the Master/Slave port in the back of the DVD R/RW Drive.

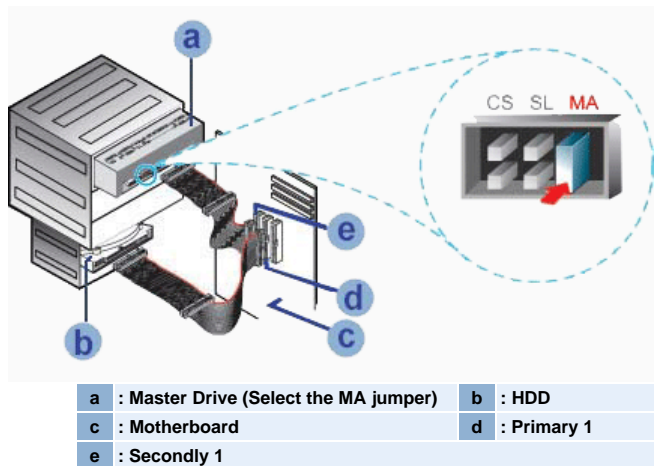
# Installing DVD R/RW Drive and Connecting Cables



▶ **When you use two E-IDE cables**

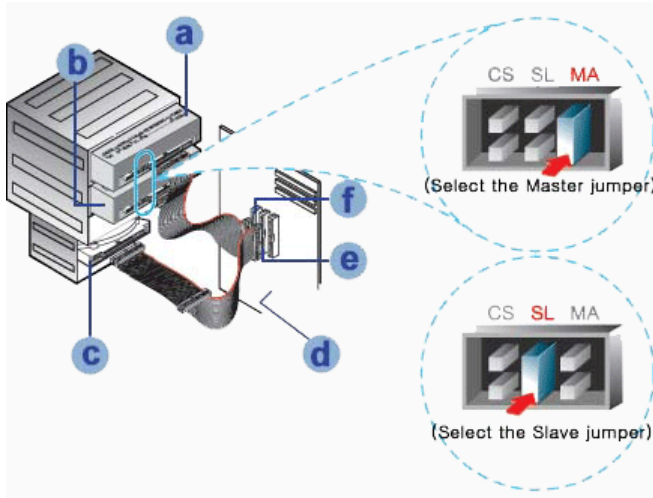
Set the jumper to MA (Master) in the Master/Slave port in the back of the DVD R/RW Drive.

⊕ **When you have one DVD R/RW Drive: Set it to MA (Master)**



⊕ **When you have one DVD R/RW Drive and the other ODD products: Set it to MA (Master) / SL (Slave),**

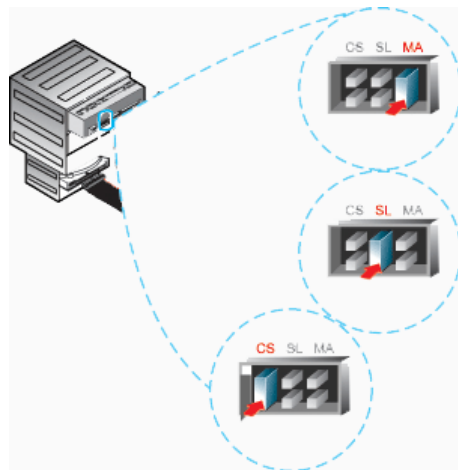
# Installing DVD R/RW Drive and Connecting Cables



a	: Master Drive (Select the MA jumper)	b	: Slave Drive (Select the SL jumper)
c	: HDD	d	: Motherboard
e	: Primary 1	f	: Secondly 1

## ● Connecting the Jumper to the Master/Slave Port

- ▶ Connect the jumper to the slot in the back of the DVD R/RW Drive.  
When you connect the jumper to MA (Master), the drive runs as the master, and when you connect it to SL (Slave), the drive runs as the slave.  
When you connect it to CS (CSEL), you can control the device using the host interface signal CSEL.  
(Connection to MA is recommended.)



MA	: Master
SL	: Slave
CS	: Cable Select(CSEL)

## ● Connecting the Audio Cable (When Connected to the Sound Card)

- ▶ To listen to the sound from the drive in Analog mode, connect the audio output on the DVD R/RW Drive to the audio input of the sound card using an audio cable (4-pin).

## Installing Device Driver and Confirming the Installation

### Firmware Update

1. Go to <http://samsung-ODD.com>
2. Click Firmware on the menu bar (in the upper right-hand corner).
3. Click "Download Live Update Full Version."

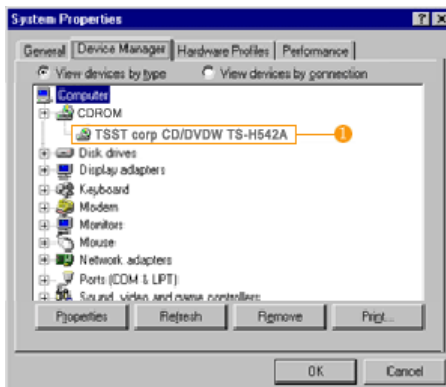
(Click Firmware Downloads to manually download Firmware; select a drive model from the list and click to start downloading.)

# Installing Device Driver and Confirming the Installation

## Confirming the Installation of Device Driver

### Confirming Using [Device Manager]

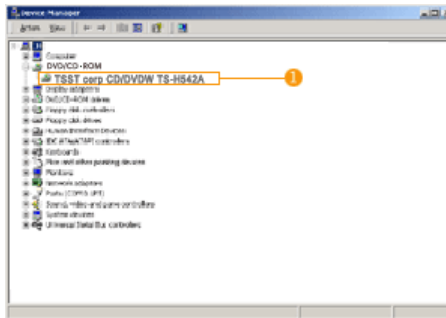
#### Windows 98/Me



1. Click [Start] - [Settings] - [Control Panel] - [System]
2. Click on the [Device Manager] tab in the System Properties window.
3. Click CDROM drive in the Device Manager window.

1 in the picture in the left appear if the driver is installed properly.

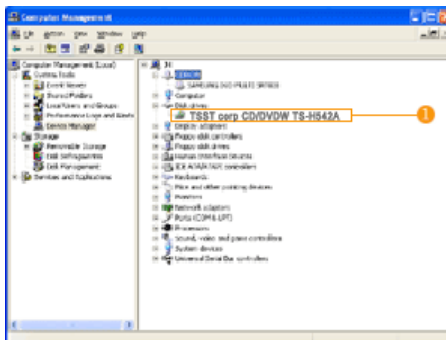
#### Windows 2000



1. Click [Start] - [Settings] - [Control Panel] - [System]
2. Click on the [Hardware] tab in the System Properties window and then click on the [Device Manager] tab.
3. Click DVD/CD-ROM drive in the Device Manager window.

1 in the picture in the left appear if the driver is installed properly.

#### Windows XP



1. Go to [Start] - [Settings] - [Control Panel] - [Performance and Maintenance]
2. Click [Administrative Tools] icon in the Performance and Maintenance window.
3. Click [Computer Management] icon in the Administrative Tools window.
4. Click [Device Manger] icon in the Administrative Tools window and then click DVD/CD-ROM drive.

1 in the picture in the left appear if the driver is installed properly.

## Installing Device Driver and Confirming the Installation

### Installing the MS-DOS device driver

#### Automatic Setup

The device driver is located in the '**Dos\_driver**' folder of the CD which is provided with the DVD R/RW Drive

1. Insert the CD provided with the DVD R/RW Drive and open the '**Dos\_driver**' folder.
2. Run the **CDSETUP.EXE** file in the '**Dos\_driver**' folder.
3. When Setup is successfully completed, click '**OK**' button or press the '**Enter**' key.
4. Reboot the computer.



Caution

**The MS-DOS device driver is used to detect a DVD-MULTI drive in MS-DOS and supports only the read function as in the case of a CD-ROM drive. We recommend that you not install the MS-DOS device driver when you use the record function.**

#### Manual Setup

1. Make the **C:\SAMSUNG** directory.
2. Copy the files from the CD provided with the DVD R/RW Drive to the **C:\SAMSUNG** directory.  
To do so, type "**COPY D:\Dos\_driver \*.\* C:\SAMSUNG**" after the **C:\** prompt and press [**Enter**].
3. Edit the '**CONFIG.SYS**' file.  
Add the **DEVICE=C:\SAMSUNG\SSCDROM.SYS /D:SSCD000 /UDMA** entry.

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

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

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

5. Reboot the computer.

## How To Use The DVD R/RW Drive

### How to Use the Drive

When the On/Off light is orange, do not turn the PC off or remove the DVD R/RW Drive as it may cause damage in the drive.

#### ● How to Use a Horizontally Installed Drive

You can use **3.15 Inch or 4.72 Inch (8cm or 12cm) discs.**

The drive cannot read the disc properly if any part of the disc is placed outside the tray guiding line.



#### ● How to Use a Vertically Installed Drive

This drive can be installed vertically.

You can use only the **4.72 Inch (12cm) discs.**  
**(You cannot use the 3.15 Inch (8cm) discs)**

The drive cannot read the disc properly if any part of the disc is placed outside the tray guiding line.





## How To Use The DVD R/RW Drive

### How to Use DVD R/RW and Other Discs



The DVD R/RW Drive allows writing DVD RW discs using Nero Express and enables "packet writing" (high-speed recording) using InCD. The drive also allows writing DVD R discs using Nero Express.



Caution

**Unauthorized copying of DVD or software titles is illegal and the individuals that make illegal copies will be held responsible for any copyright infringement. Using low-quality discs may lengthen the recording time or not supporting due to reduction in double speed.**

- ▶ You can use the DVD R/RW Drive to playback music CDs, CD-ROM, CD-R/RW, or DVD-ROM discs, like a CD-ROM drive or a DVD-ROM drive. If your computer recognizes the [CD-ROM] icon designated to the DVD R/RW Drive as the 'E:' drive, insert a CD-ROM or a DVD-ROM disc and access the 'E:' drive.  
(The actual drive letter of the DVD R/RW Drive may vary depending on the user's system environment.)

- ▶ To Playback a DVD Video Disc :
  - You need a DVD decoder board or the DVD decoder software program.  
(Provided with WinDVD Recorder)
  - Use WinDVD Recorder to change the region code of the DVD R/RW Drive.

#### 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 TS-H542A DVD R/RW 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 TS-H542A DVD R/RW drive. You can change the region code up to five times via an MPEG application.

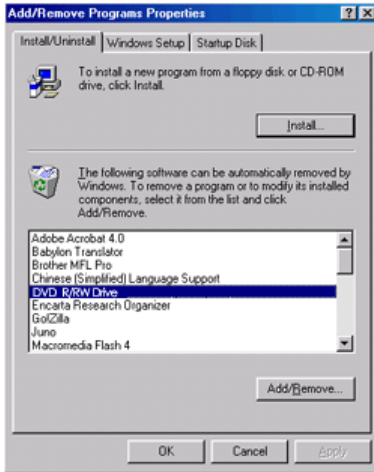
Please contact your dealer or local SAMSUNG representative if you wish to change the local code more than five times.

# Deleting Utilities



Click [Start] - [Setting] - [Control Panel] - [Add/Remove Programs] and a window as shown below appears.

## [ Windows 98 / Me ]



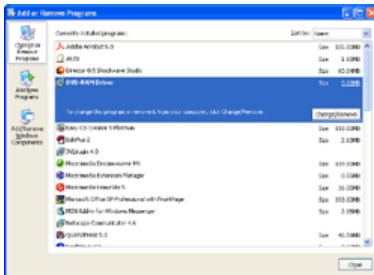
Click the [Add/Remove] button to remove the program.

## [ Windows 2000 ]



Click the [Add/Remove] button to remove the program.

## [ Windows XP ]



Click the [Add/Remove] button to remove the program.

## Storing/Cleaning Drive and Disc

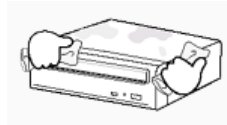
### Cleaning the Drive

- Turn the PC off and pull out the drive.
- Remove any foreign objects from the surface of the drive using soft cloth.



Caution

- Do not use benzene, paint thinner, or any other solvents.
- Cleaning the interior of the unit with such things as a cotton swab may cause failure or loss of functionality.



## Storing/Cleaning Drive and Disc



**This part of the manual is to prevent damages or data loss.  
Read carefully and use the device properly.**

### Storing the Disc

- ▶ Do not place it under the direct sunlight.
- ▶ Place it so that it sits on its side on a flat surface.
- ▶ Do not scratch or place a label on the disc.
- ▶ Handle the disc with caution to prevent damage from external shock.
- ▶ Do not expose it to severe temperature fluctuations.  
(Exposure to such environment may cause congealing.)



## Storing/Cleaning Drive and Disc



This part of the manual is to prevent damages or data loss.  
Read carefully and use the device properly.

### Cleaning the Disc

- Do not touch the surface of the disc.  
Place your fingers on the edge of the disc to hold.
- Clean the disc lightly with soft cotton cloth, starting from the center and move to the edge of the disc.
- Use only disc cleaning liquids. Do not use benzene, paint thinner, or any other solvents.



If the disc surface becomes dirty with fingerprints, foreign substances or dust, the disc may not function properly.

## Storing/Cleaning Drive and Disc

### When the on/off Light Blinks

On/Off Lamp	Meaning
Disc Lead-In	Green: Blinks every 0.3 seconds.
Writing	Green: Blinks every 0.3 seconds.
Reading	Green: Blinks every 0.3 seconds.
Audio Playback [Analog Mode]	Green: Blinks every 0.3 seconds.
Audio Playback [Digital Mode]	Green: Blinks every 0.3 seconds.
Standby	Off
No Disc	Off



The indicator light turns off when the drive is not in use (standby) after disc lead-in.

# Troubleshooting

## General Problems

Problem	Meaning / Solution
<b>The tray won't open.</b>	See if the PC on. Make sure the power cable within the PC is connected properly.
	If the tray still won't open with the power on, turn the power off and insert a pin(paper clip) into the emergency hole to open.
<b>The tray won't close.</b>	Make sure the disc has been inserted properly.
<b>The PC is not working properly.</b>	See if the jumper(s) is properly connected to the Master/Slave Selection port.
	See if the drive is properly connected to the PC. See if the floppy disc remains in the PC.
<b>The drive is not working properly.</b>	See if the drive is connected properly to the PC.
	See if the device drive program has been installed properly.
<b>No sound is heard from an audio CD.</b>	Check whether the audio cable is correctly connected to the sound output terminal on the drive and the sound card CD-IN terminal.
	Check that the sound card is operational.
	If the Digital CD Audio Output box is checked, no sound comes out of the analog audio output terminal of the driver. Check the condition of the CD and wipe the surface of the CD clean before use.
<b>The Window OS can't detect the drive.</b>	See if the device drive program has been installed properly.
	Can be an OS problem. Try reinstalling the Windows OS program.
<b>The system won't read the disc.</b>	See if the system detects the drive.
	Make sure you use the types of discs that are supported by the drive.
	See if the on/off light turns into green.
	Make sure you inserted the disc with the label facing up.
	Make sure you are using the right program for disc playback.
	See if the disc is clean.
<b>The drive is connected to the sound card but cannot seem to detect it.</b>	See if any congealing has occurred.
	Make sure the region code of the drive matches the disc number.
<b>The drive is connected to the sound card but cannot seem to detect it.</b>	Your sound card is using AT BUS interface.
	Connect the card to the E-IDE port or replace the card with a new card with the built-in E-IDE interface capacity.

# Specifications

Category		TS-H542A	
		DVD R/RW Drive	
DISC	Usable Discs	<b>DVD</b> : DVD-R, DVD-RW, DVD+R, DVD+RW, DVD-ROM, DVD-Video <b>CD</b> : CD-ROM, CD-R, CD-RW, CD-DA, CD+E(G), CD-MIDI, CD-TEXT, CD-ROM XA, Mixed Mode CD, CD-I, CD-I Bridge (Photo-CD, Video-CD), Multisession CD (Photo-CD, CD-EXTRA, Portforio)	
	Disc Diameter	4.72 Inch or 3.15 Inch (120mm or 80mm)	
Interface Support	Interface Port	ATA/ATAPI (E-IDE)	
	PIO mode	PIO Mode 4: 16.7MB/sec	
	DMA mode	Ultra DMA Mode 2: 33.3MB/sec	
ACCESS TIME (Random)	CD-ROM	90ms (typ)	
	DVD-ROM	110ms (typ)	
Data Transfer Speed (Max)	<b>Media Type</b>	<b>Write</b>	<b>Read</b>
	DVD+R	PCAV 12X (16.2MB/sec)	CAV 8X (10.8MB/sec)
	DVD+RW	CLV 4X (5.4MB/sec)	CAV 8X (10.8MB/sec)
	DVD-R	PCAV 8X (10.8MB/sec)	CAV 8X (10.8MB/sec)
	DVD-RW	CLV 4X (5.4MB/sec)	CAV 8X (10.8MB/sec)
	DVD-ROM(Single)	-	CAV 12X (16.2MB/sec)
	CD-ROM	-	CAV 40X (6.0MB/sec)
	CD-R	PCAV 40X (6.0MB/sec)	CAV 40X (6.0MB/sec)
	US-RW	PCAV 24X (3.6MB/sec)	CAV 32X (4.8MB/sec)
	HS-RW	CLV 10X (1.5MB/sec)	CAV 32X (4.8MB/sec)
CD-RW	CLV 4X (0.6MB/sec)	CAV 32X (4.8MB/sec)	
Buffer Memory	2MB		
Drive Installation	Horizontal / Vertical (cannot use 3.15 Inch(80mm) discs)		
Operating Environment	Temperature	41°F ~ 113°F (5°C ~ 45°C)	
	Humidity	10% ~ 80% (RH)	
Size(Width x Height x Length)	5.34 X 1.65 X 7.24 Inch (148.2 X 42 X 184mm)		
Weight	760g		
MTBF	125,000 POH(Duty 20%)		

## Note

- ▶ Does not support DVD-R for Authoring, DVD-RAM
- ▶ Cannot playback or record on both sides of a two-sided disc simultaneously.
- ▶ The read/write capacity of the supported discs depends on the condition of the disc and the recording format of the drive. Therefore, the read/write quality may not be perfect.

## Fcc information to the user

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 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 into an outlet on a circuit different from that to which the receiver is connected.
- ▶ Consult the dealer or experienced radio TV technician for help.

### CAUTION

Change or modifications not expressly approved by the manufacturer responsible for compliance could void the user's authority to operate the equipment.

## Laser Standard

IEC 60825-1 : 1993 + A1 : 1997 + A2 : 2001



The product specifications above may be changed improve device performance without prior notice.