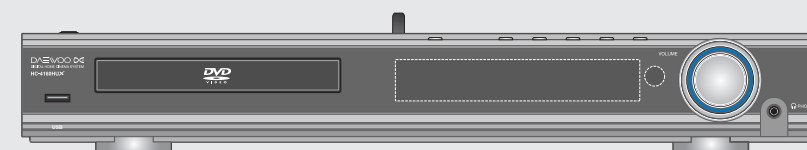
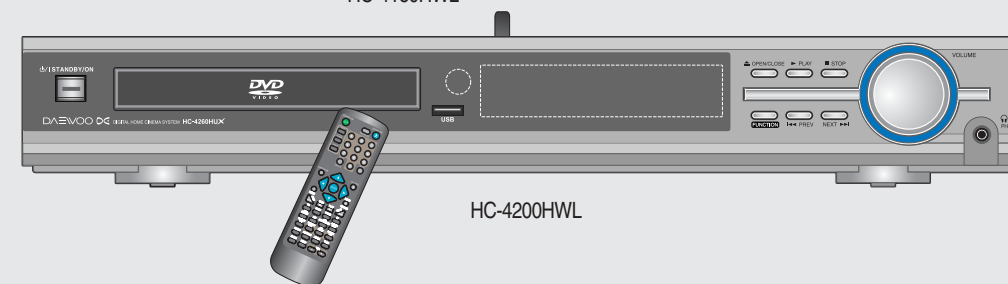


Instruction manual



HC-4180HWL



HC-4200HWL






Disposal of Used Electrical & Electronic Equipment

The meaning of the symbol on the product, its accessory or packaging indicates that this product shall not be treated as household waste. Please, dispose of this equipment at your applicable collection point for the recycling of electrical & electronic equipments waste. In the European Union and Other European countries which there are separate collection systems for used electrical and electronic product. By ensuring the correct disposal of this product, you will help prevent potentially hazardous to the environment and to human health, which could otherwise be caused by unsuitable waste handling of this product. The recycling of materials will help conserve natural resources. Please do not therefore dispose of your old electrical and electronic equipment with your household waste. For more detailed information about recycling of this product, please contact your local city office, your household waste disposal service or the shop where you purchased the product.

Thank you for purchasing the Digital Home Cinema System.
Please read this manual thoroughly before making connections and turning on the power.
Following the instructions in this manual will enable you to obtain optimum performance and listening enjoyment from your Digital Home Cinema System.
Please retain this manual for future reference.

Important Safeguards

WARNING : TO PREVENT FIRE OR ELECTRIC SHOCK, DO NOT EXPOSE THIS APPLIANCE TO RAIN OR MOISTURE.

	CAUTION RISK OF ELECTRIC SHOCKS DO NOT OPEN
CAUTION : TO REDUCE THE RISK OF ELECTRIC SHOCK, DO NOT REMOVE COVER(OR BACK). NO USER SERVICEABLE PARTS INSIDE. REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.	
	THIS SYMBOL IS INTENDED TO ALERT THE USER TO THE PRESENCE OF UNINSULATED "DANGEROUS VOLTAGE" WITHIN THE PRODUCT'S ENCLOSURE THAT MAY BE SUFFICIENT MAGNITUDE TO CONSTITUTE A RISK OF ELECTRIC SHOCK TO PERSONS.
	THIS SYMBOL IS INTENDED TO ALERT THE USER TO THE PRESENCE OF IMPORTANT OPERATING AND MAINTENANCE(SERVICING) INSTRUCTIONS IN THE LITERATURE ACCOMPANYING THE APPLIANCE.

CAUTION

TO PREVENT ELECTRIC SHOCK, DO NOT USE THIS POLARIZED AC PLUG WITH AN EXTENSION CORD, RECEPTACLE OR OTHER OUTLET UNLESS THE BLADES CAN BE FULLY INSERTED TO PREVENT BLADE EXPOSURE.

LASER SAFETY

THIS UNIT EMPLOYS A LASER. ONLY QUALIFIED SERVICE PERSONNEL SHOULD REMOVE THE COVER OR ATTEMPT TO SERVICE THIS DEVICE DUE TO POSSIBLE EYE INJURY.
CAUTION : USE OF ANY CONTROLS, ADJUSTMENTS, OR PROCEDURES OTHER THAN THOSE SPECIFIED HEREIN MAY RESULT IN HAZARDOUS RADIATION EXPOSURE.

CAUTION : TO PREVENT ELECTRIC SHOCK, MATCH WIDE BLADE OF PLUG TO WIDE SLOT, FULLY INSERT.

ATTENTION : POUR EVITER LES CHOCs ELECTRIQUES, INTRODUIRE LA LAME LA PLUS LARGE DE LA FICHE DANS LA BORNE CORRESPONDANTE DE LA PRISE ET POUSSER JUSQU'AU FOND.

Important Safeguards

Important Safety Instructions

- All the safety and operating instructions should be read before the appliance is operated.
- The safety and operating instructions should be retained for future reference.
- All warnings on the appliance and in the operating instructions should be adhered to.
- All operating and use instructions should be followed.

PORTABLE CART WARNING



FIGURE 2

1. Water and Moisture - The appliance should not be used near water - for example, near a bathtub, washbowl, kitchen sink, laundry tub, in a wet basement, or near a swimming pool, and the like.
2. Carts and Stands - The appliance should be used only with a cart or stand that is recommended by the manufacturer.
3. An appliance and cart combination should be moved with care. Quick stops, excessive force, and uneven surfaces may cause the appliance and cart combination to overturn.
4. Wall or Ceiling Mounting - The appliance should be mounted to a wall or ceiling only as recommended by the manufacturer.
5. Ventilation - The appliance should be situated so that its location or position does not interfere with its proper ventilation. For example, the appliance should not be situated on a bed, sofa, rug, or similar surface that may block the ventilation openings; or, placed in a built-in installation, such as a bookcase or cabinet that may impede the flow of air through the ventilation openings.
6. Heat - The appliance should be situated away from heat sources such as radiators, heat registers, stoves, or other appliances (including amplifiers) that produce heat.
7. Power Sources - The appliance should be connected to a power supply only of the type described in the operating instructions or as marked on the appliance.
8. Grounding or Polarization - The precautions that should be taken so that the grounding or polarization means of an appliance is not defeated.
9. Power - Cord Protection - Power-supply cords should be routed so that they are not likely to be walked on or pinched by items placed upon or against them, paying particular attention to cords at plugs, convenience receptacles, and the point where they exit from the appliance.
10. Protective Attachment Plug - If the appliance is equipped with an attachment plug having overload protection. This is a safety feature. See Instruction Manual for replacement or resetting of protective device. If replacement of the plug is required, be sure the service technician has used a replacement plug specified by the manufacturer that has same overload protection as the original plug.
11. Cleaning - The appliance should be cleaned only as recommended by the manufacturer.
12. Power Lines - An outdoor antenna should be located away from power lines.
13. Nonuse Periods - The power cord of the appliance should be unplugged from the outlet when left unused for a long period of time.
14. Object and Liquid Entry - Care should be taken so that objects do not fall and liquids are not spilled into the enclosure through openings.
15. Damage Requiring Service - The appliance should be serviced by qualified service personnel when:
 - a) The power-supply cord or the plug has been damaged; or
 - b) Objects have fallen, or liquid has been spilled into the appliance; or
 - c) The appliance has been exposed to rain; or
 - d) The appliance does not appear to operate normally or exhibits a marked change in performance; or
 - e) The appliance has been dropped, or the enclosure damaged.
16. Servicing - The user should not attempt to service the appliance beyond that described in the operating instructions. All other servicing should be referred to qualified service personnel.

1. Warranty Claim

You can find the serial number on the rear panel of this unit. In case of warranty claim, please report this number.

2. Recording Copyright

Recording of copyrighted material for other than personal use is illegal without permission of the copyright holder.

3. AC Fuse

The fuse is located inside the chassis and is not user-serviceable. If power does not come on, contact your authorized service center.

4. Power

WARNING
BEFORE PLUGGING IN THE UNIT FOR THE FIRST TIME, READ THE FOLLOWING SECTION CAREFULLY.
The voltage of the available power supply differs according to country or region. Be sure that the power supply voltage of the area where this unit will be used meets the required voltage (e.g., Free Voltage: AC 100 - 240V, 50/60Hz) written on the rear panel.

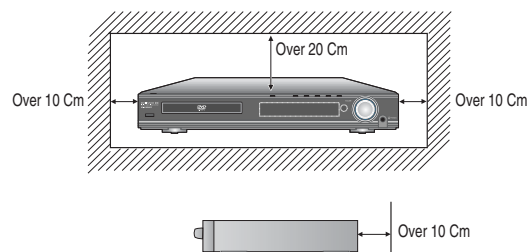
Worldwide models are equipped with a voltage selector to conform to local power supplies. Be sure to set this switch to match the voltage of the power supply in your area before plugging in the unit.

5. Do not touch this unit with wet hands

Do not handle this unit or power cord when your hands are wet or damp. If water or any other liquid enters the case, take this unit to an authorized service center for inspection.

6. Location of this unit

- Place this unit in a well-ventilated location. Take special care to provide plenty of ventilation on all sides of this unit especially when it is placed in an audio rack. If ventilation is blocked, this unit may overheat and malfunction.



- Do not expose this unit to direct sunlight or heating units as this unit's internal temperature may rise and shorten the life of the pickup.
- Avoid damp and dusty places and places directly affected by vibrations from the speakers. In particular, avoid placing the unit on or above one of the speakers.
- Be sure this unit is placed in a horizontal position. Never place it on its side or on a slanted surface as it may malfunction.
- When you place this machine near a TV, radio, or VCR, the playback picture may become poor and the sound may be distorted. In this case, place the machine away from the TV, radio, or VCR.

7. Care

From time to time you should wipe the front and rear panels and the cabinet with a soft cloth. For heavier dirt, dampen a soft cloth in a weak solution of mild detergent and water, wring it out dry, and wipe off the dirt. Following this, dry immediately with a clean cloth.

Do not use rough material, thinners, alcohol or other chemical solvents or cloths since these could damage the finish or remove the panel lettering.

8. Notes on Handling

- Any changes or modifications in construction of this device which are not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.
- When shipping the machine, use the original shipping carton and packing materials. For maximum protection, repack the unit as it was originally packed at the factory.
- Do not use volatile liquids, such as insect spray, near the machine. Do not leave rubber or plastic products in contact with the machine for a long time. They will leave marks on the finish.
- The top and rear panels of the machine may become warm after a long period of use. This is not a malfunction.
- When the machine is not in use, be sure to remove the disc and turn off the power.
- If you do not use the machine for a long period, the unit may not function properly in the future. Turn on and use the machine occasionally.

9. To Obtain a Clear Picture

The machine is a high technology, precision device. If the optical pick-up lens and disc drive parts are dirty or worn down, the picture quality becomes poor. To obtain a clear picture, we recommend regular inspection and maintenance (cleaning or parts replacement) every 1,000 hours of use depending on the operating environment.
For details, contact your nearest dealer.

10. Notes on Moisture Condensation

Moisture condensation damages the machine.
Please read the following carefully.

Moisture condensation occurs, for example, when you pour a cold drink into a glass on a warm day. Drops of water form on the outside of the glass. In the same way, moisture may condense on the optical pick-up lens inside this unit, one of the most crucial internal parts of the machine.



- Moisture condensation occurs in the following cases.
 - When you bring the machine directly from a cold place to a warm place.
 - When you use the machine in a room where you just turned on the heater, or a place where the cold wind from the air conditioner directly hits the unit.
 - In summer, when you use the machine in a hot and humid place just after you move the unit from an air conditioned room.
 - When you use the machine in a humid place.



- Do not use the machine when moisture condensation may occur. If you use the machine in such a situation, it may damage discs and internal parts. Remove the disc, connect the power cord of the machine to the wall outlet, turn on the machine, and leave it for two or three hours. After a few hours, the machine will have warmed up and evaporated any moisture. Keep the machine connected to the wall outlet and moisture condensation will seldom occur.



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Features

◆ A/V Digital Receiver Features

- 60W/80W RMS into 6 Ohm single channel driven, 1KHz with 10% THD(Front, Center, Rear) - refer to power table at 37 page
- 100W/120 RMS into 4 Ohm subwoofer channel driven, 60Hz with 10% THD - refer to power table at 37 page
- Dolby® Digital & Dolby Pro LogicTM, Pro Logic II Decoders
- 6 DSP Listening Modes (PCM, Dolby Digital, Dolby Pro Logic, Dolby Pro Logic II Decoders, Stadium)
- 3 Equalizer Modes(Rock, Pop, Jazz) for Stereo source (Audio CD, Video CD, MP3 CD only)

◆ Wireless Rear Speaker System Features

- 2.4 GHz Wireless speaker system include receiver and transmitter.
- Proprietary delay minimization scheme
- Proprietary interference reduction scheme applicable to microwave oven, WLAN, Bluetooth environment

◆ High Fidelity FM Tuner Features

- 40 FM Random Presets
- Auto Scan Preset
- FM Indoor Antenna

◆ USB Device Playback Features

- USB 1.0/ 2.0(Full Speed) Device Support
- MP3 and JPEG File on the USB Device Playback Capability

* Manufactured under license from Dolby Laboratories. "Dolby", "Pro Logic", and the double-D **DD** symbols are trademarks of Dolby Laboratories. Confidential Unpublished Works. ©1992-2004 Dolby Laboratories, Inc. All rights reserved.

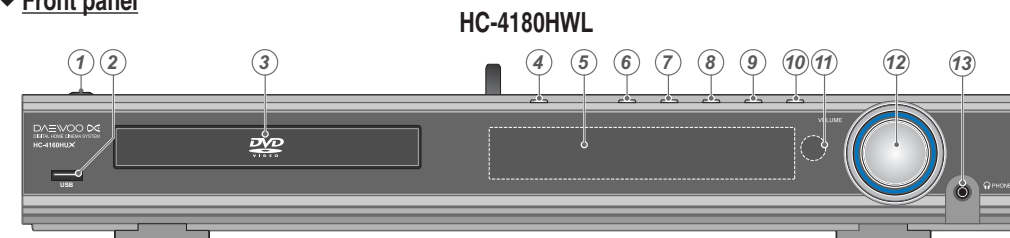
◆ Player Features

- Video CD and CD Disc Playback Capability
- Official DivX® certified product
- Plays all version of DivX® video (including DivX® 6) with standard playback of DivX® media files
- JPEG File Playback Capability
- Digital Audio Output for MD or CD Recording
- Digital Audio Input
- On-screen Display (DVD only)
- 10-Bit Video D/A Conversion
- 3-Mode "Zoom-In" Function (Off, x1.5, x2)
- Search (DVD: title, chapter, time / VCD: time)
- Resume Play(DVD only)
- Random Playback (Audio CD and MP3 only)
- 5-Mode Repeat (title, chapter, track, all tracks, A-B section)
- Slow Motion DVD Playback (SF x1/2, x1/4, x1/8, x1/16, SR x1/2, x1/4, x1/8, x1/16 and normal speed)
- Fast Forward/Reverse (x2, x4, x8, x16, x32, x64, x128 and normal speed)
- Multi Aspect Ratio (16:9 and 4:3)
- Multi Camera Angle
- Multi-Language Soundtrack Capability
- Multi Subtitle Languages Capability
- Parental Viewing Control
- 1 HDMI** Output
- 1 S-Video Output
- 1 Dedicated Line-Level Subwoofer Pre Out
- 1 Video and Audio Inputs (STEREO)
- Full Input/Output Video Tape Loops For Easy Dubbing
- Headphone Jack (3.5)
- Sleep Timer (Remote Control)

** HDMI, the HDMI Logo and High-Definition Multimedia Interface are trademarks or registered trademarks of HDMI Licensing LLC.

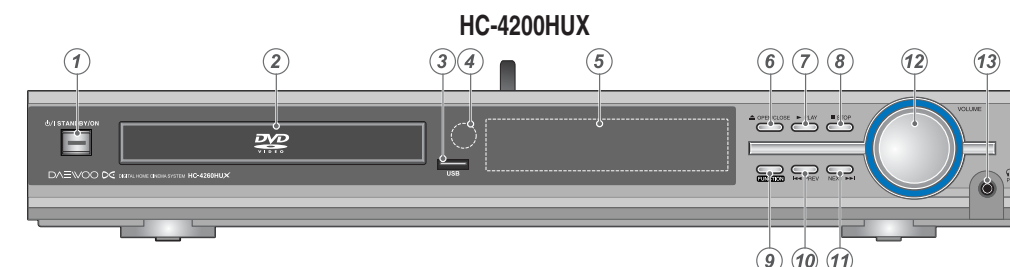
Index to Parts and Controls

◆ Front panel



1. STANDBY/ON button with LED lamp
2. USB Port
3. DISC Tray
4. OPEN/CLOSE (▲) button
5. Display
6. PLAY (▶) button
7. STOP (■) button

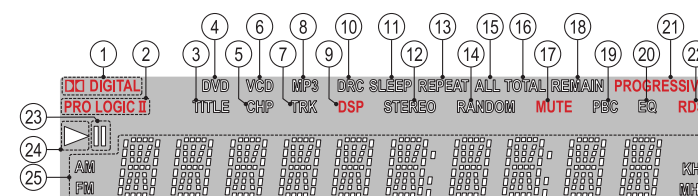
8. PREV (◀◀) button
9. NEXT (▶▶) button
10. FUNCTION button
11. Remote Control Sensor
12. MASTER VOLUME Control
13. PHONES jack



1. STANDBY/ON button with LED lamp
2. DISC Tray
3. USB Port
4. Remote Control Sensor
5. Display
6. OPEN/CLOSE (▲) button
7. PLAY (▶) button

8. STOP (■)/BAND button
9. FUNCTION button
10. PREV (◀◀) button
11. NEXT (▶▶) button
12. MASTER VOLUME Control
13. PHONES jack

◆ Display



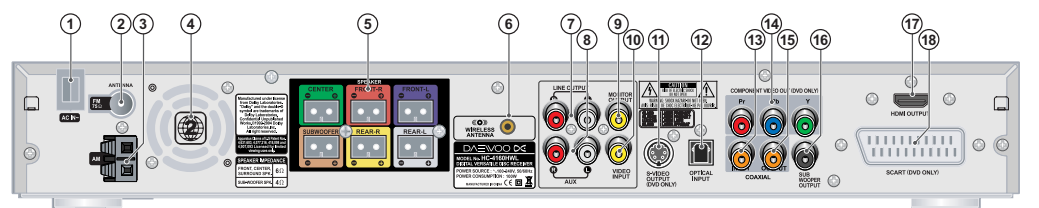
1. DOLBY DIGITAL indicator
2. Pro Logic II indicator
3. TITLE indicator
4. DVD indicator
5. CHAPTER indicator
6. VCD indicator
7. TRACK indicator
8. MP3 indicator
9. DSP indicator

10. DRC indicator
11. SLEEP indicator
12. STEREO indicator
13. REPEAT indicator
14. RANDOM indicator
15. ALL indicator
16. TOTAL indicator
17. MUTE indicator
18. REMAIN indicator

19. PBC(Playback Control) indicator
20. EQ indicator
21. PROGRESSIVE indicator
22. RDS indicator
23. PAUSE indicator
24. PLAY indicator
25. Multi-Function Information Displaying Area

Index to Parts and Controls

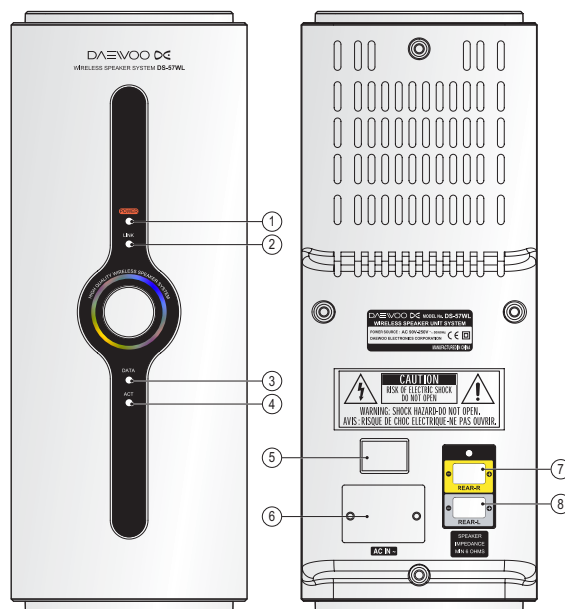
◆ Rear Panel



1. Power cord
2. FM ANTENNA connector
3. MW(AM) ANTENNA connectors(Optional)
4. Region Code
5. SPEAKER connectors
6. LINE OUTPUT jacks
7. AUX jacks
8. MONITOR OUTPUT jack
9. VIDEO INPUT jack
10. S VIDEO OUT jack(DVD Only)
11. OPTICAL INPUT jack
12. COAXIAL INPUT jack
13. COMPONENT VIDEO OUTPUT (Pb/Pr/Y) jacks
14. COAXIAL OUTPUT jack
15. SUB WOOFER OUTPUT jack
16. HDMI jack
17. SCART jack(Optional)

For operational instructions, refer to the page indicated in brackets.

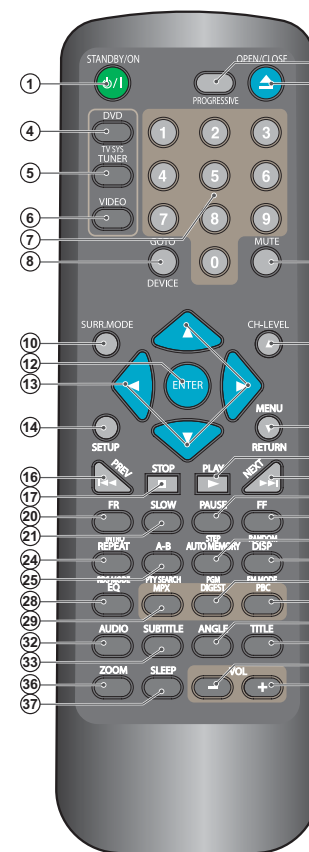
□ Wireless Rear Speaker System



1. Power indicator
2. Link indicator
3. Data indicator
4. Action indicator
5. POWER ON/OFF switch
6. Power cord
7. REAR-R SPEAKER connectors
8. REAR-L SPEAKER connectors

Index to Parts and Controls

◆ Remote controller



1. POWER ON/STANDBY button ----- 14
Switches the unit ON or OFF.
2. PROGRESSIVE/INTERLACE Scan button ----- 15
Selects video signal scan mode.
3. OPEN/CLOSE button ----- 15/19
Ejects or inserts disc from the slot loader.
4. DVD/TV SYSTEM(PAL/NTSC: DVD only) button ----- 15
Selects a DISC mode or change the video signal type(PAL/NTSC)
5. TUNER button ----- 24
Selects an FM or AM broadcast.
6. VIDEO button ----- 25
Selects a AUX(VIDEO).
7. Number(0-9) buttons ----- 21
Enter the number directly.
8. GOTO/ DEVICE(USB) button ----- 22/20
Accesses Goto mode/Selects an USB mode.
9. MUTE button ----- 26
Turns the sound on and off temporarily.
10. SURR. MODE button ----- 26
Selects a Surround sound mode.
11. CH-LEVEL button ----- 26
Adjusts channel level.
12. ENTER button ----- 15
Confirms menu or item selections.
13. Direction(◀▶▲▼) buttons ----- 15
Selects an option in the menu.
14. SETUP button ----- 15
Accesses or removes Setup menu.
15. MENU/RETURN button ----- 22
Accesses menu on a DVD disc.
16. SKIP PREV (◀◀) button ----- 19
Go to previous chapter or track.
17. STOP (■)/BAND button ----- 20
To stop the playback/Selects an FM or AM broadcast.
18. PLAY (▶) button ----- 19
Starts playback.
19. SKIP NEXT (▶▶) button ----- 19
Go to next or previous chapter or track.
20. FAST REVERSE/INTRO button ----- 21/28
Search for backward/Intro playback mode
21. SLOW button ----- 21
Go to next or previous chapter or track.
22. PAUSE/STEP button ----- 20
Pauses playback temporarily/Step playback
23. FAST FORWARD/RANDOM button ----- 21/28
Search forward/Selects a Random playback mode.
24. REPEAT/RDS MODE button ----- 28/25
Repeat chapter, track, title or all/Selects a RDS mode
25. A-B Repeat/PTY SEARCH button ----- 28/25
Repeats sequence between two points (A and B)/Search a Program Type for RDS.
26. AUTO MEMORY/PGM button ----- 24
Stores a radio station's frequency in the tuner's memory automatically/Accesses or removes program menu.
27. DISPLAY/FM MODE button ----- 30/24
Accesses On-Screen Display/Selects a Mono or Stereo FM broadcast.
28. EQ button ----- 26
Selects an EQ sound mode..
29. MPX button ----- 30
Selects MPX mode.
30. DIGEST button ----- 28
Accesses Digest menu.
31. PBC button ----- 22
Accesses PBC menu on a VCD disc.
32. AUDIO button ----- 30
Selects an audio language or audio channel.
33. SUBTITLE button ----- 29
Selects a subtitle language.
34. ANGLE button ----- 28
Selects a camera angle.
35. TITLE button ----- 21
Displays the disc's Title menu, if available.
36. ZOOM button ----- 24
Enlarges video image.
37. SLEEP button ----- 26
Set the system to turn off automatically at a specified time.
- 38/39. VOLUME +/- button ----- 26
Adjusts speaker volume.

Preparing the Remote Controller

Inserting the Batteries

1. Detach the battery cover.
2. Insert the batteries.
Be sure to match the + and - ends of the batteries with the diagram inside the battery compartment.
3. Attach the battery cover.

Notes

- Do not mix new batteries with old batteries or different kinds of batteries.
- To avoid corrosion, remove the batteries if the remote controller is not to be used for a long time.
- Remove dead batteries immediately to avoid damage from corrosion. If the remote controller does not operate smoothly, replace both the batteries at the same time.
- The life of the batteries supplied is about six months but this will vary depending on usage.

Using the Remote Controller

Point the remote controller towards the remote control sensor on the machine.
The remote controller will operate to approximately 4 ~ 7 meters directly from the remote control sensor and within angle of 30 degrees from the each side of the remote control sensor.

Notes

- Place the unit away from strong light such as direct sunlight or inverted fluorescent light which can prevent proper operation of the remote controller.
- Using another remote controller of the same type in the same room or using the unit near equipment which uses infrared rays may cause operational interference.
- Do not put any object such as a book on the remote controller. The buttons of the remote controller may be pressed by mistake and drain the batteries.
- Make sure the audio rack doors do not have colored glass. Placing the unit behind such doors may prevent proper remote controller operation.
- If there is any obstacle between the remote controller and the remote control sensor, the remote controller will not operate.

About This Instruction Manual

This instruction manual explains the basic procedures for operating of the machine. Some DVD videos are produced in a manner that allows specific or limited operation during playback. As such, the machine may not respond to all operating commands. Refer to instruction notes on discs.

A "INVALID KEY" mark may appear on the TV screen during operation.

The "INVALID KEY" mark means that the operation is not permitted by the machine or the disc.

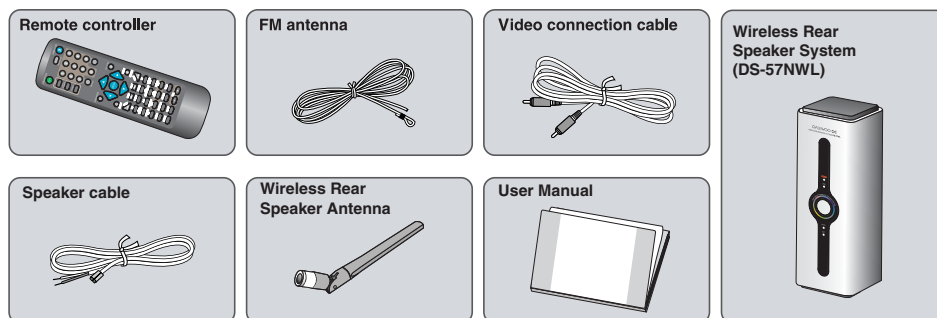
Note on Copyright

It is forbidden by law to copy, broadcast, show, broadcast on cable, play in public, and rent copyrighted material without permission.

DVD videos are copy protected, and any recordings made from these discs will be distorted.

This product incorporates copyright protection technology that is protected by method claims of certain U.S. patents and other intellectual property rights owned by Macrovision Corporation and other rights owners. Use of this copyright protection technology must be authorized by Macrovision Corporation, and is intended for home and other limited viewing uses only unless otherwise authorized by Macrovision Corporation. Reverse engineering or disassembly is prohibited.

Accessories



Notes on Discs

This section shows you how to handle, clean, and store discs.

On Handling Discs

- Do not touch the playback side of the disc.
- Do not attach paper or tape to discs.

On Cleaning Discs

- Fingerprints and dust on the disc cause picture and sound deterioration. Wipe the disc from the center outwards with a soft cloth. Always keep the disc clean.
- If you cannot wipe off the dust with a soft cloth, wipe the disc lightly with a slightly moistened soft cloth and finish with a dry cloth.
- Do not use any type of solvent such as thinner, benzene, commercially available cleaners or antistatic spray for vinyl LPs. It may damage the disc.

On Storing Discs

- Do not store discs in a place subject to direct sunlight or near heat sources.
- Do not store discs in places subject to moisture and dust such as a bathroom or near a humidifier.
- Store discs vertically in a case. Stacking or placing objects on discs outside of their case may cause warping.

Note on Region Numbers

The region number are allocated to machine and software according to where they are sold.
DVDs can be played on this machine if their region number is the same or includes the same number, or if the DVD is marked "ALL".

Confirm the region number for this machine before choosing discs. The number for machine is indicated on the rear panel.

On VIDEO CDs

This machine supports VIDEO CDs equipped with the PBC(Version 2.0) function. (PBC is the abbreviation of Playback Control.)

You can enjoy two playback variations depending on the type of disc.

- VIDEO CD not equipped with PBC function(Version 1.1)
Sound and movies can be played on this machine in the same way as an audio CD.

• VIDEO CD equipped with PBC function (Version 2.0)

In addition to operation of the VIDEO CD not equipped with the PBC function, you can enjoy playback with interactive software and with search function by using the menu displayed on the TV screen (Menu Playback). Some of the functions described in this Instruction Manual may not work with some discs.

Playable Discs

This machine can play back the following discs.

Disc Type	Contents	Disc size	Maximum playback time
DVD videos with an suitable region number or ALL	Digital Audio + Digital Video (MPEG2)	12 Cm	Approx. 240minutes (Single sided disc)
			Approx. 480minutes (Double sided disc)
		8 Cm	Approx. 80minutes (Single sided disc)
			Approx. 160minutes (Double sided disc)
VIDEO CDs (Version 1.0 / 1.1 / 2.0) or SVCD	Digital Audio + Digital Video (MPEG1)	12 Cm	Approx. 74 minutes
		8 Cm	Approx. 20 minutes
Audio CDs (PCM)	Digital Audio	12 Cm	Approx. 74 minutes
		8 Cm (CD Single)	Approx. 20 minutes
CD-Rs, CD-RWs	Digital Video(MPEG1), Digital Audio or Only MP3 files	12 Cm	Approx. 74 minutes
		8 Cm (CD Single)	Approx. 20 minutes
CD-ROMs	MP3, JPEG Files	12 Cm	Approx. 640 MBytes
		8 Cm	Approx. 200 MBytes

- You cannot play back discs other than those listed above.
 - DVD with an un suitable region number
 - DVD-Audio
 - VSD
 - CVD
 - DivX Video Disc
 - DVD-ROM
 - CD-ROM
 - CD-G
 - DVD-RAM
 - CDV
 - SACD

- This machine uses the PAL/NTSC color system, and cannot play back DVD videos recorded in any other color system (SECAM, etc.).
- Avoid using heart-shaped or octagonal discs. Playing irregularly shaped discs may damage the internal mechanism of the machine.
- Do not use discs on which adhesive from adhesive tape or a disc label (if it is a rental disc) remains. Otherwise, you may not be able to eject the discs or the machine may become inoperative.

Notes : playing MP-3 CD

- The machine can play only single session made CD-R/RW for ISO9660, Joliet format.
For other format, it may not play the discs.

Notes : Using the USB Device

- The machine can play flash memory type of USB device only. For other type of USB device, it may not be played.
- The USB devices may not playback. If this is the case, refer also to instruction manual of USB device.
- The machine can play FAT16 or FAT32 file system of USB device. Should formatting become necessary, be sure to always use the FAT16 or FAT32 file system.

Connecting to a TV

◆ Before connecting

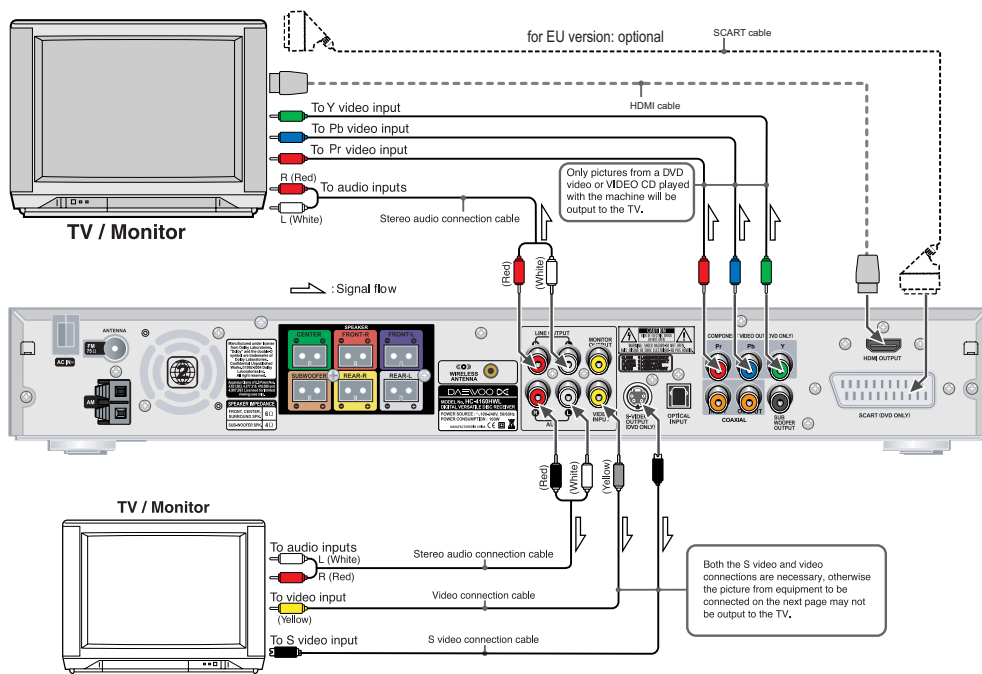
- Refer also to the instruction manual of the TV.
- When you connect the machine to the TV, be sure to turn off the power and unplug both the units from the wall outlets before making any connections.
- Connect the machine to the TV directly. If you connect the machine to a VCR, TV/VCR combination, or video selector, the playback picture may be distorted as DVD videos are

copy protected.

- Note that one video connection cable for monitor out is supplied.
- Automatically switched to the TV set A/V mode(DVD, Video)
- Do not change to Video Aspect Ratio.

Connecting to a TV without Color Difference Inputs

- 21-Pin SCART Cable(not included) to 21-pin SCART input terminal on TV
- SCART Specification : Composite and Component Video output(DVD, Video)Audio L/R Output(DVD only)



- If the TV or monitor is equipped with an S video input, make the S video connection in addition to the normal video connection. The S video connection will provide higher quality picture playback.
- HDMI Connector :**
 - HDMI (High Definition Multimedia Interface) supports both video and audio on a single digital connection for use with DVD Players, Set-Top Boxes, and other AV devices.
 - If you have a HDMI TV or monitor, you can connect it to this unit using a HDMI cable.
 - When you use HDMI connection, you can change the resolution (480p, 720p, or 1080i) for the HDMI output by setting the RESOLUTION in SETUP function.

Connecting to a TV with Color Difference Inputs

If the TV or monitor is equipped with the color difference inputs, select the connection on the above. Connecting to these inputs allows you to enjoy higher quality picture playback compared to the above connection.

Notes

- Actual labels for color difference inputs may vary depending on the TV manufacturer (ex. Y/Cb/Cr, Y/R-Y/B-Y, Y/Pb/Pr or Component video).
- In some TVs or monitors, the color levels of the playback picture may be reduced slightly or the tint may change. In such a case, adjust the TV or monitor for optimum performance.

Caution

- You may need to maximize the volume of the TV speaker(s) when you carry out steps in "Speaker Setup".
- Be sure to turn down the volume of the TV speaker(s) before changing the TV source input and using the TV speaker(s) as a normal TV speaker(s).

Connecting Speakers

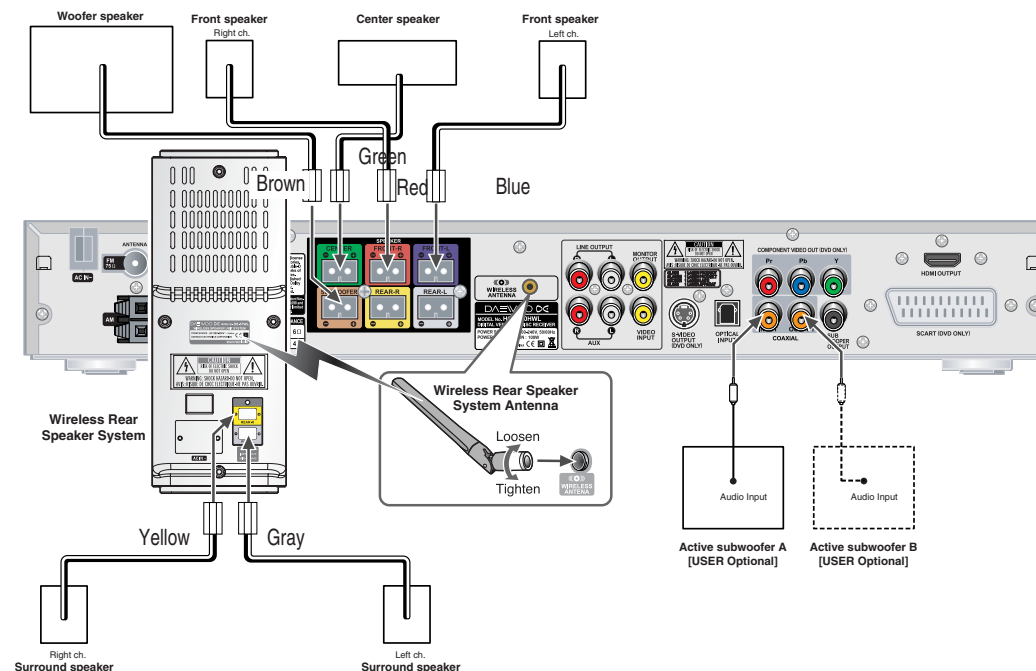
◆ Before connecting

- This machine is designed to reproduce optimum sound quality when speakers with the specified impedance below are connected. Please check the following information and choose speakers with appropriate impedance for the connections.

Front speakers / Center speaker / Surround Speakers : 6 ohms min. per speaker

Woofer speaker : 4 ohms min.

- To prevent damage to circuits, never short-circuit the positive (+) and negative (-) speaker wires.
- Do not connect the speaker cable to the L and R connectors at the same time and do not connect more than one speaker to the same speaker connectors.



Positioning Speakers

Speaker placement plays an important role in the reproduction of Surround sound. The placement of the speakers varies depending on the size of the room and the wall coverings used in the room. The illustration below shows an example of a layout for standard speaker placement. Refer to this example when you position the speakers in order to experience the best of Surround sound.

◆ Standard speaker placement

For ideal Surround effects, all speakers should be installed.

Front

The left, right, and center speakers should face the seated listener and be placed at ear level. The center speaker reproduces a richer sound image by enhancing the perception of the sound's source and movement.

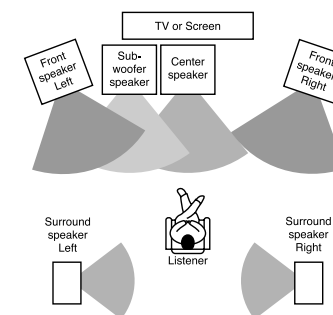
Surround

Place the left and right Surround speakers 1 meter (3 feet) above the listener's ear level and facing toward the sides of the room, making sure that the listener is within the speakers' dispersion angle. These speakers reproduce the feel of a moving sound while creating the sensation of being in the middle of the action.

Woofer

Install a subwoofer for powerful bass sounds. The placement of the subwoofer does not affect the final quality of the sound image too much, so you can install it wherever it is convenient.

*Note that installing too close to the TV may make a distortion the TV screen.



Connecting to USB Device of Fresh memory type

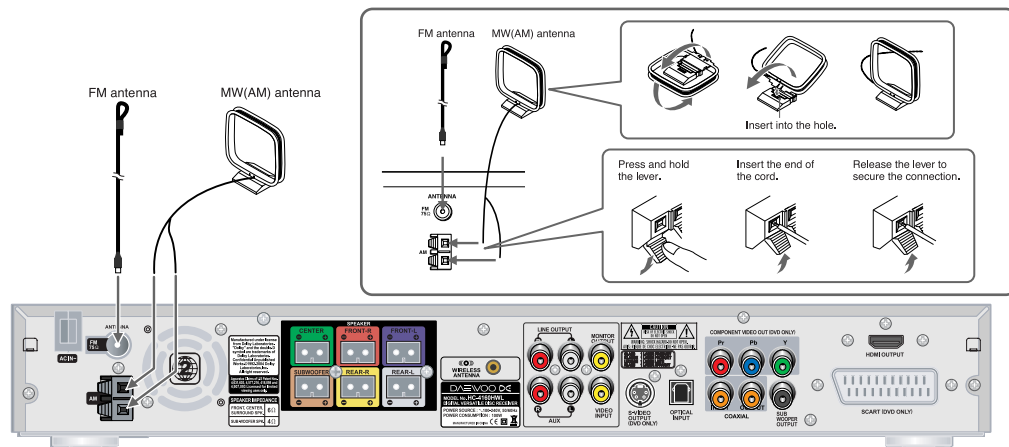
◆ Before connecting

- Refer also to the instruction manual of each USB Device to be connected.
- Before using the USB devices, make sure there is no disc on the machine. USB function works only under the condition that the display shows "NO DISC" at DVD function mode.
- Connect the plugs securely.



Making Antenna Connections

Connecting the Supplied FM Antennas



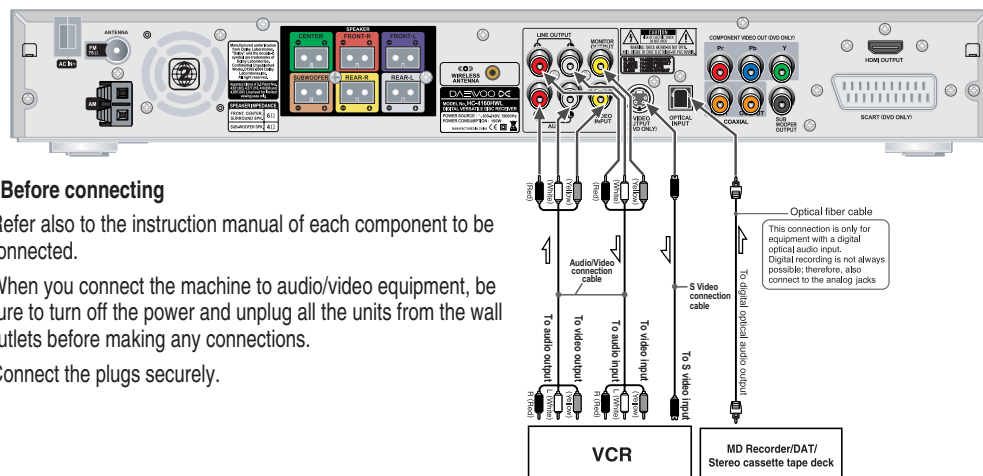
◆ Adjusting the position of the FM antenna

While listening to an FM program, extend the antenna and move it in various directions until the clearest signal is received, then secure the antenna with push pins in the position with the least distortion.

Connecting to Audio/Video Equipment

◆ Before connecting

- Refer also to the instruction manual of each component to be connected.
- When you connect the machine to audio/video equipment, be sure to turn off the power and unplug all the units from the wall outlets before making any connections.
- Connect the plugs securely.



Connecting the Power/Turning on the machine

◆ Before connecting

- Turning on the machine may cause a momentary power surge, which might interfere with other electrical equipment such as computers. If this happens, use a wall outlet on a different circuit.

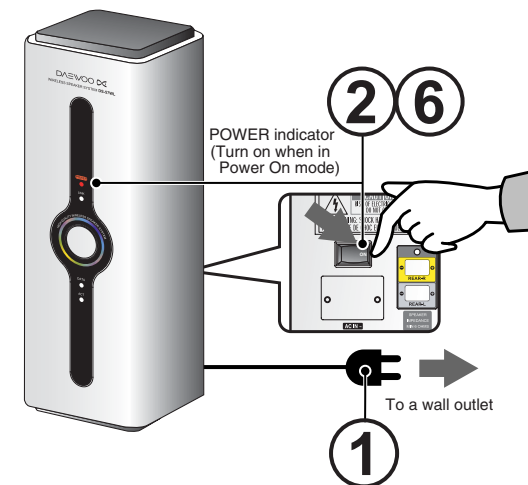
Turning on the wireless rear speaker system

1. Connect the power cord to a wall outlet.

2. Press POWER ON on the rear panel.
The Wireless Rear Speaker System turns on.
The POWER indicator turns ON.

Note

- To turn off the wireless rear speaker system, push the POWER switch to OFF direction.



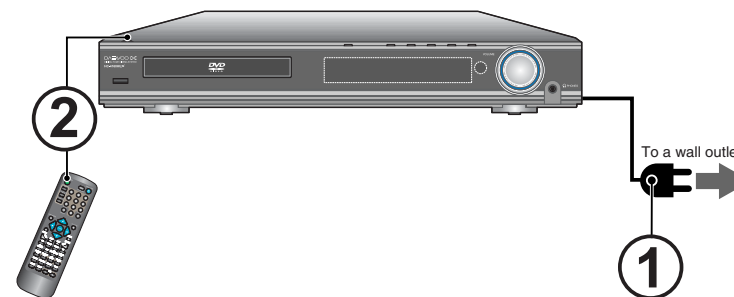
Turning on the machine

1. Connect the power cord to a wall outlet.

2. Push POWER ON/OFF button on the machine.
If the machine is in standby mode, press POWER ON/STANDBY button on the remote controller.
The machine turns on.

Note

- To enter standby mode the machine, press POWER button on the remote controller. The machine enters standby mode.
- To turn off the machine, push POWER ON/OFF button on the machine. The machine turn off.
- The buttons on the remote controller do not operate if the POWER ON/OFF button is set to OFF.



⚠ CAUTION

- Do not neglect the machine for a long period in standby mode. Doing so may cause the machine to malfunction or overheating.
- When the machine is not in use, be sure to remove the disc or USB device and turn off the power by pushing the POWER ON/OFF on the machine.

Preparation for TV System Setup

◆ Before setting

- Turn the TV on. Switch the video input mode of TV to suit the type of connection you have made(e.g., VIDEO)
- The setup function is available only for the PRE-STOP or STOP mode. Press STOP to stop playback.



1. Press **SETUP** button while the disc is stopped. The setup MAIN PAGE appears on the TV screen.



2. Press **▲/▼** button to select the "TV DISPLAY", then press **▶** button to move. The TV DISPLAY setting menu appears on the display.



3. Press **▲/▼** button to select the required size, then press **ENTER** to confirm.



3. To stop the TV Aspect, press **◀** button to exit.
4. To exit the **SETUP**, press **SETUP** button.

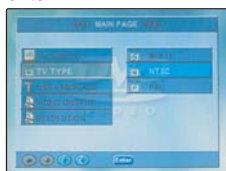
Note :

- Some of the item can not be changed while a disc is playing. Retry while a disc is stopped, no disc or tray opened.

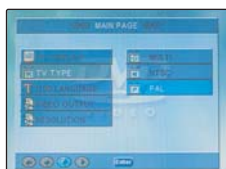
Selecting a Video Signal Type



1. Press **▲/▼** button to select the "TV TYPE" while the "SET UP" menu is displayed on the TV screen, then press **▶** button to enter.



2. Press **▲/▼** button to select the required Signal type, then press **ENTER** to confirm.



3. To stop the TV TYPE, press **◀** button to exit.

4. To exit the **SETUP**, press **SETUP** button.

Note : To select the Video Signal Type directly. Press DVD/TV SYS button repeatedly to select the required Signal type while disc tray opened.



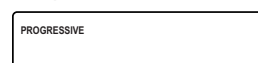
Switching Scan Mode Type



1. Press **OPEN/CLOSE**. The disc tray opens.



2. Press **PROGRESSIVE** button repeatedly to select the required Scan mode type. (SD Interlace → SD Progressive → 720P → 1080i)



Note :

- If you select the progressive scan mode, the "PROGRESSIVE" indicator lights up in the display.
- If the TV cannot handle the progressive scan, then there will be no picture displayed. To exit the progressive mode, press the **PROGRESSIVE** button again during the tray opened.

This VIDEO OUTPUT function is used to determine which output will be used. It has two selection YPbPr or RGB at the setup menu.

◆ Before setting

- Turn the TV on.
- Switch the video input mode of TV to suit the type of connection you have made(e.g., VIDEO)

Selecting the Video Output



1. Press **SETUP** button while the disc is stopped. The setup MAIN PAGE appears on the display.



2. Press **▲/▼** button to select the "VIDEO OUTPUT", then press **▶** button to move. The VIDEO OUTPUT setting menu appears on the display.



3. Press **▲/▼** button to select "YPBPR" or "RGB", then press **ENTER**.



4. Press **◀** button to go to the menu. Press **◀** button to exit.
5. To exit the **SETUP**, press **SETUP** button.

Selecting the Video Resolution



1. Press **SETUP** button while the disc is stopped. The setup MAIN PAGE appears on the TV screen.



2. Press **▲/▼** button to select the "RESOLUTION", then press **▶** button to move. The video resolution setting menu appears on the display.



3. Press **▲/▼** button to select the required resolution, then press **ENTER** to confirm.



3. To stop the video resolution, press **◀** button to exit.
4. To exit the **SETUP**, press **SETUP** button.

Note

- When you set the resolution to 720P or 1080i, the MONITOR OUTPUT and S-VIDEO OUTPUT port is disabled on the rear panel.
- If HDMI cable is connected, the SD Interlace does not select on the setup menu.

Speaker Setup

Before operating your machine, you need to set up the speaker configuration and the delay time from the listening position to each speaker.

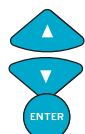
Selecting the audio output signal type



1. Press **SETUP** button while the disc is stopped. The setup MAIN PAGE appears on the display.



2. Press **▲/▼** button to select the "SPEAKER", then press **ENTER** button to move the speaker setup menu. The SPEAKER SETUP menu appears on the display.



3. Press **▲/▼** button to select "AUDIO OUT", then press **▶** button to enter.



4. Press **▲/▼** button to select the "SPDIF/RAW", "SPDIF/PCM" or "OFF", then press **ENTER** button to confirm.



5. To stop the AUDIO OUT setting, press **◀** button to go to SPEAKER SETUP menu.
6. To finish the SPEAKER SETUP menu, press **◀** button to exit.
7. To exit the SETUP, press **SETUP** button.

Adjusting Speaker's Position(Delay time)



1. Press **▲/▼** button to select the "CENTER or REAR DELAY" while the "SPEAKER SETUP" menu is displayed on the TV screen, then press **▶** button to enter. The speaker delay time setting menu appears on the display.



2. Press **▲/▼** button to select the Center or Rear speaker's delay time. The speaker's delay time can be adjusted from OFF to 5 mSEC for Center speaker and OFF to 15 mSEC for Rear speaker.



3. Repeat step 1~2 to adjust other speaker's position.



5. To stop the CENTER/REAR DELAY time setting, press **◀** button to go to the SPEAKER SETUP menu.



6. To finish the SPEAKER SETUP, press **◀** button to exit.



7. To exit the SETUP, press **SETUP** button.

Note :

- To sound the TV speaker system by HDMI connection, select the SPDIF/PCM.
- The default setting for the AUDIO OUTPUT is "SPDIF/PCM".
- The AUDIO OUT settings are provided both the Coaxial output and HDMI jack.

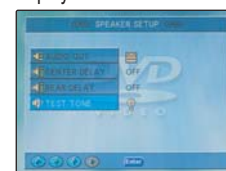
Speaker Setup

Adjusting each speaker's relative volume balance - Test Tone

If headphones are connected, remove the headphones.



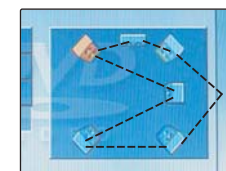
1. Press **▲/▼** button to select the "TEST TONE" while the "SPEAKER SETUP" menu is displayed on the TV screen, then press **▶** button to enter. The speaker config diagram appears on the display.



2. Press **◀** button while the Test tone is stopped.



Each speaker emits the test tone (pink noise) in the following order:



3. Press **▲/▼** button to raise or lower the volume level until you have an equal volume balance with the other speakers at your listening position.



4. When you have completed the adjustment, press **SETUP** button.

Playing DVD Videos / VIDEO CDs / MP3 CDs / Audio CDs

This section shows you the basics on how to play discs.

Before playing

- DVD Videos, VIDEO CDs, MP3/JPEG/DivX CDs, audio CDs or MP3/JPEG file on USB device can be played with the machine.
- Do not play anything else.
- When playing DVD videos and VIDEO CDs, MP3 CDs turn on the TV and set the TV to the machine's input.

About the disc or file icons in the pages related to DVD video/DVD audio, VIDEO CD, MP3 CD, DivX CD, audio CD, MP3 file, and JPEG file operation

- e.g. means "The function or title is related to DVD operation."
 means "The function or title is related to MP3 disc operation."
 means "The function or title is related to JPEG file operation."

Tip to obtain a higher quality picture

Occasionally, some picture noise not usually visible during a normal broadcast may appear on the TV screen while playing a DVD video because the high resolution pictures on these discs include a lot of information. While the amount of noise depends on the TV you use, you should generally adjust the TV to reduce sharpness when viewing DVD videos.

Basic Playback

◆ In case of Disc used



1. Press OPEN/CLOSE.
The disc tray opens.

2. Place the disc on the disc tray.

Put the disc on the tray with the label side facing up. There are two different disc sizes. Place the disc in the correct guide on the disc tray.



CAUTION

Keep your fingers well clear of the disc tray as it is closing. Neglecting to do so may cause serious personal injury.

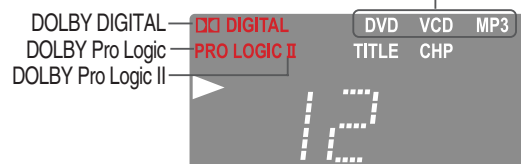


3. Press PLAY.

The disc tray is closed and playback starts. If you press OPEN/CLOSE to close the tray after step 2, playback may automatically start depending on the disc.

One of the indicators which indicate the digital sound format of the playing source lights.

The type of the inserted disc lights



If a title menu appears on the TV screen

The DVD video has a title menu, or the VIDEO CD is equipped with the PBC (Playback Control) function. Follow steps 2 and 3 in "Locating a title using the title menu".

◆ Select desired folder



1. Press repeatedly to select the folder and an MP3 file you want to play.

2. Press ENTER after selecting your favorite song.
When you know the title number, enter the MP3 title number using the numeric buttons on the remote controller and then press the ENTER button.



Press PREV button for previous title. Press NEXT button on remote controller to choose next title.

Note : Using the MP3/JPEG/DivX disc with SMART NAVI

- When an MP3/JPEG/DivX disc is loaded, SMART NAVI screen is displayed automatically depending on the disc's folder (directory) structure as shown below. (Refer to SMART NAVI)



Note :

- The machine can not play a DivX file of high resolution or big capacity.
- The maximum resolution and bitrate for DivX home theater profile as follows;
 NTSC : 720 x 480 @ 30 fps.
 PAL : 720 x 576 @ 25 fps.

Playing DVD Videos / VIDEO CDs / MP3 CDs / Audio CDs

◆ In case of USB Device used

Before using the USB devices, make sure there is no disc on the machine. USB function works only under the condition that the display shows "NO DISC" at DVD function mode.

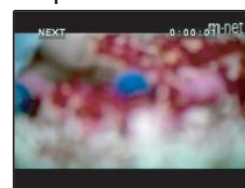
1. Plug the USB Device in the USB port while no disc on the machine
The machine starts loading from USB Device.



When the USB device loading is completed, the File Explorer screen is displayed automatically depending on USB device's folder(directory) structure as shown below.



2. Press to select a Search icon for Audio (MP3/WMA), Picture(JPEG) or Video files then press ENTER to search the files.



3. Press repeatedly to select the folder and a file you want to play.

4. To start playback, press PLAY.
The machine starts playback from the selected file.

Note : Switching the USB or DVD function

When a disc is loaded with the USB device

- 1) Press GOTO/DEVICE during the stop mode.
- 2) Press to select the "DVD DRIVE" or "USB DEV 1".
- 3) Press ENTER or PLAY.

To pause playback (still mode)



Press PAUSE/STEP during playback.

To start playback, press PLAY.



To play frame by frame

Press the PAUSE/STEP button repeatedly during pause. Each time you press the button the picture advances one frame.



To resume normal playback, press PLAY.

Note :

- The sound is muted during still mode and frame by frame playback. If press PAUSE/STEP during CD/MP3/JPG playback, the playback is paused

To stop playback



Press STOP.

When you press PLAY to restart playback, playback starts from the location where you stopped playback because the location index is stored in memory. (This state is called PRE-STOP: DVD only.)

Note

- The location where playback resumes may vary depending on the disc or the stopped scene.

Resuming playback from the beginning

Press STOP again after stopping playback to clear the location index memory, then press PLAY to start playback.

Playback starts from the beginning of the current title.

To start playback from the beginning of the DVD video, open and close the disc tray (press OPEN/CLOSE twice) then press PLAY to start playback.

Playback starts from the beginning of the disc.

Notes

- The location index memory will also be cleared when:
 - The power cord is unplugged,
 - The machine has entered standby mode,
 - The disc tray is opened, and
 - The parental lock setting is changed or a disc menu language is selected.

Notes

- When you start playing a CD, the sound may not be reproduced briefly while the machine recognizes the sound system. If this happens, stop playback by pressing STOP, then press PLAY to restart playback. The sound will be reproduced from the beginning of the disc.
- Do not move the machine during playback. Doing so may damage the disc.
- Use OPEN/CLOSE on the remote controller or machine to open and close the disc tray. Do not touch the disc tray while it is moving. Doing so may cause the machine to malfunction.
- Do not press down on the disc tray or put any objects other than playable discs on the disc tray. Doing so may cause the machine to malfunction.
- In many instances, a menu screen appears when playback of a movie is complete. Prolonged display of an on-screen menu may damage your television set, permanently etching that image onto its screen. To avoid this, be sure to press STOP once the movie is complete.

To remove the disc



Press OPEN/CLOSE to open the disc tray.

Remove the disc after the disc tray opens completely. After removing the disc, be sure to press the button again to close the tray.

To remove the USB Device

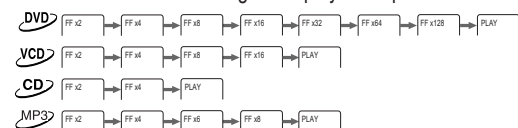
Disconnect the USB Device from the USB port during the stop mode.

Playing DVD Videos/VIDEO CDs/MP3 CDs/Audio CDs

Fast Searching

FR **FF**
INTRO **RANDOM**

Press FR(Fast Reverse)/INTRO or FF(Fast Forward)/RANDOM during playback or pause. The playback speed becomes two times the normal speed. Each press of FR/INTRO or FF/RANDOM changes the playback speed as follows:



PLAY

To resume normal playback, press PLAY or press FR/INTRO or FF/RANDOM repeatedly until "PLAY" displayed.

Notes

- No sound is reproduced and no subtitles appear during fast forward or reverse playback while playing back a DVD or a VIDEO CD, whereas the sound is reproduced while playing back an audio CD.
- The x2, x4, x8, x16, x32, x64 and x128 speeds are only approximate speeds.
- These speeds may vary slightly depending on disc.

Slow searching

SLOW

Press **SLOW** during playback. Each press of [SLOW] changes the slow-motion speed as follows:



Notes

- The sound is muted during slow-motion playback.
- To resume normal playback, press PLAY or press SLOW repeatedly until "PLAY" displayed.

Notes : Advanced playback modes of audio CD

- FR** **FF**
INTRO **RANDOM**
- INTRO playback** : Press FR/INTRO during stop mode. Start intro scan playback each track on the disc for 10 seconds. To cancel the intro mode, press FR/INTRO.
 - RANDOM playback** : Press FF/RANDOM during stop mode. Start playback all tracks in the disc randomly. To cancel the random mode, press STOP.
 - PROGRAMM playback** :
 - Press AUTO MEMORY/ PGM during stop mode.
 - Press the number button(s) to select the track,
 - Press ENTER to store to program 1. With the last two steps select up to 99 tracks for your programme.
 - Press PLAY to start your programme.
 - To cancel the programme play, press AUTO MEMORY /PGM during programme stop mode.

Locating a Specific Title/Chapter/Track by Disc Menu

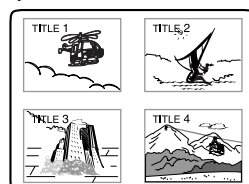
Normally, DVD videos are divided into titles, and the titles are subdivided into chapters. VIDEO CDs, and audio CDs are divided into tracks. Certain MP3 CDs are divided into MP3 files or folders, and the folders are subdivided into MP3 files or subfolders. You can quickly locate any specific title, chapter, track or MP3 file.

Locating a title using the title menu

If a DVD video contains a title menu, you can locate a specific title using the title menu function.

- TITLE**
MENU
RETURN
- Press TITLE.** (Depending on the DVD video, press MENU/RETURN.) The title menu appears on the TV screen.

e.g. DVD Title



- 2. Press ▲/▼/◀/▶ to select the title, MP3 file or directory you want.**
- If the titles in the title menu are assigned a number, you can also directly locate a specific title by entering its assigned number using the number buttons.

- ENTER**
PLAY
- Press ENTER or PLAY.** The machine starts playback from chapter 1 of the selected title
 - In case of MP3 CD, repeat steps 2 and 3 to select MP3 file.** The machine start playback the selected MP3 file.

Notes

- The instructions above describe basic procedures which may vary depending on the contents of the DVD video. If different instructions appear on the TV screen, follow those instructions.
- If you display the title menu during playback and press TITLE again without selecting any title, the machine usually resumes playback from the point where you first pressed TITLE. (There may be exceptional cases depending on the discs.)
- This method of locating a title is available only on a disc that contains a title menu.
- Instruction notes of discs may refer to the button that displays the title menu as "TOP MENU".

Locating a Specific Title/Chapter/Track by Disc Menu

Locating a track using the PBC menu

If a Video CD has "Playback Control" written on its disc or jacket, it means that particular scene or information can be selected for viewing interactively with the TV monitor using the PBC menu screen.

- PBC**
- Press PBC to select**
- [ON] : To view the PBC menu screen when playing a PBC featured Video CD.
- [OFF] : For playing a PBC featured Video CD without using the menu PBC screen.

- MENU**
RETURN
- Press the MENU/RETURN to return to the preceding PBC menu.**
- If there is no preceding menu(in case of the first menu), this function may not be executed.

Locating a Specific Title/Chapter/Track/MP3 File/Location

Locating a specific location by entering the time

You can locate a specific location by entering its corresponding time (hours, minutes, and seconds).

- GOTO**
DEVICE
- Press GOTO/DEVICE.** Make sure that the number next to "TIME" is highlighted.(DVD: Press it twice)
 - Press the number button(s) to enter the title number for the desired time.**
 - Press ENTER or PLAY.** The machine starts playback from the selected time.

Notes

- Some discs may not respond to this procedure.
- Some scenes may not be located precisely.
- When VCD Stop, this method for accessing specific locations is available only within the current title of the VIDEO CD.

Locating a specific title

- GOTO**
DEVICE
- Press GOTO/DEVICE to select TITLE.** Make sure that the number next to "CHAPTER" is highlighted.
 - Press ◀ to find the TITLE what you want.**
 - Press the number button(s) to enter the chapter number for the desired chapter.** e.g. To select title 2

Locating a specific chapter

If a DVD video contains the numbers corresponding to the titles and chapters, you can locate a specific chapter in a specific title directly by entering the numbers.

- GOTO**
DEVICE
- Press GOTO/DEVICE to select CHAPTER.** Make sure that the number next to "CHAPTER" is highlighted.
 - Press the number button(s) to enter the chapter number for the desired chapter.**
 - Press ENTER or PLAY.** The machine starts playback from the selected chapter.



Notes

- Some title may not display chapter numbers.
- This location method is available only on a disc that contains the numbers corresponding to the titles and chapters.
- To cancel the entered title and chapter numbers, press STOP before pressing ENTER.

Locating a Specific Title/Chapter/Track/MP3 File/Location

Locating a specific track directly VCD MP3

You can locate the desired track by entering the number.

1. Press the number button(s) to enter the track number for the desired track.
e.g. To select track 10

2. Press ENTER or PLAY.
The machine starts playback from the selected track.

Locating a specific chapter, track or MP3 file consecutively DVD VCD MP3 CD

You can locate consecutive chapters, tracks or MP3 files.

1. Press or (repeatedly) to select the chapter, track or MP3 file you wish to start playing
 - Press once to start playback from the beginning of the current chapter, track or MP3 file.
 - Press repeatedly to select the former chapters, tracks or files in reverse order.
 - Press repeatedly to select the next chapter, track or MP3 file in order.

Using the SMART NAVI MP3 JPG MP3 JPG

Before using the SMART NAVI function, be sure to select the SMART NAVI ON in the Customizing the function settings. (Refer to 32 page) When an MP3/JPEG/DivX disc or USB Device is loaded, SMART NAVI screen is displayed automatically depending on the disc's folder (directory) structure.

To enjoy the Smart Navigation

1. Press / to select a MP3, JPEG or DivX file, then auto play is started except JPEG. In case of JPEG, press ENTER or PLAY to start playback.

Tip : To select previous or next file, press / button during the playback mode.

To select previous or next file list, press / button during the stop mode.

2. To enter the folder
Press / to select the folder, then press ENTER.

Tip : If you want to move cursor to the top position, press MENU button.

3. To exit the folder
Press / to select the current folder, then press ENTER.

Selecting a picture using preview

Press ANGLE, when JPEG is played.
9 Pictures are displayed all the same time.
Press PAUSE, when JPEG is played, picture is stopped in slide mode.

If you want to select one picture, move the cursor pressing / / / , then press ENTER or PLAY.

To select the Play Mode

1. Press / to select the Play Mode Window at stop status, then press ENTER.

2. Press / to select a Play Mode.

Notes : Play modes of MP3, JPEG and DivX files.

- SINGLE : Play a file then stop.
- REPEAT : Play a file repeatedly.
- FOLDER : Play all files in the folder then stop.
- FOLDER REPEAT : Play a file repeatedly in the folder.
- DISC SCAN : Play the first 10 seconds of all files in the disc then stop.
- DISC : Play all files in the disc then stop.
- DISC REPEAT : Play all files repeatedly in the disc.
- RANDOM : Play all files in the folder randomly.
- SHUFFLE ON : Play all files in the folder randomly one time then stop.

Note :
Using the MP3/JPEG/DivX disc without the SMART NAVI

- When an MP3/JPEG/DivX disc is loaded, the machine is playback start automatically
- The machine is shows number of file or folder.
- To select previous or next file, press / button during the playback mode.
- To select previous or next file list, press / button during the stop mode.
- You can use the number buttons to select a file directly.

Using the SMART NAVI

To enjoy variety shows, when a picture is displayed on screen



- To rotate, press (counter-clockwise 90 by each pressing) or (clockwise 90) or (180).

- To flip press .



- To zoom
1. Press ZOOM button. (OSD zoom on)



2. Press FR/INTRO or FF/ RANDOM to zoom JPEG file.
You can magnify the JPEG file by 25, 50, 100, 150 and 200%.



Notes

- Press / / / to enjoy pan scan mode.
- To change slide show pressing ANGLE. Each 12 different slide can be displayed.

Radio Listening

There are two ways to select radio stations: one is manual tuning and the other is presetting radio stations then selecting the preset channels.

Tuning Stations



1. Press TUNER.



2. Press FR/INTRO or FF/ RANDOM to tune to the station.
Station select mode will be changed from PRESET to Manual Tuning.



3. Press FR/INTRO or FF/ RANDOM to change the frequency. To find weak station too, press FR or FF repeatedly while tuning.
If this button is held continuously for more than 0.5 seconds, the frequencies are scanned automatically. When a broadcast is received, scanning stops.

Notes : Tuning in a weak frequency (for FM stations)

When you tune in a stereo FM station, the "STEREO" indicator lights up if the signal is normal. If the signal is weak, you may not be able to tune to the station. In this case, tune in as follows.



Press DISP/FM MODE to select FM Mono.

The "STEREO" indicators turn off. At this time, the station will be in mono and interstation noise will be heard. Select the station to which you want to listen.

Programming Station Preset Automatically

- You can store up to 40 FM and 20 MW(AM) stations.
- You can preset radio stations only with the buttons on the remote controller.



1. Press TUNER to select FM or MW(AM).



2. Press AUTO MEMORY/PGM.
Preset number and Frequency displayed on the display.

Programming Station Preset manually

- You can store up stations manually.



1. Tune in the radio station you wish to preset using FR/INTRO or FF/ RANDOM.



2. Select the preset number.



3. Press PAUSE/STEP button.

Selecting Preset Stations

Before selecting preset stations, you need to preset the radio stations.



1. Press TUNER to switch the input source to the tuner.
"FM" appears in the machine's display.



2. Press FR/INTRO or FF/ RANDOM repeatedly to select a station you want.
The channel and frequency indicators appears in the machine's display.
You can use the number buttons to select a preset radio station directly. For example, to listen to the preset station 4, press 4. To listen to the preset station 19, press 1 and then 9 (within 3 seconds).

Deleting Preset Stations

Before selecting preset stations, you need to preset the radio stations.



Keep press STOP for more 1 second at the station you want to delete.

Receiving FM stations with RDS (Europe only)

RDS(Radio Data System) is a broadcasting service which a growing number of FM stations are now providing. It allows the FM stations to send additional signals along with their regular program signals. For example, the stations send their station names and informations about what type of program they broadcast, such as sports or music, etc. When tuned to an FM station which provides the RDS service, the RDS indicator lights up, the station frequency(and then the station name if sent)is displayed.

Not all FM stations provide RDS service, nor do all RDS stations provide same services. If in doubt, check with local radio stations details on RDS services in your area.

This unit can use the following RDS service.

PS (Programme Service name) : Identifies each station by a name.

PTY (Programme Type) : Identifies the type of RDS programme. This allows you to locate a specific type name of program being broadcast.

Switching the display contents



To view RDS information on the display. Each time you press the button, the display changes to show the following information.

PS(Programme Service), PTY(Programme Type) and Station frequency

Before the above information is displayed, "WAIT PS" or "WAIT PTY" may be appear on the display.

Searching for a desired programme by PTY codes

One of the advantages of the RDS service is that you can locate a particular kind of program by specifying the PTY codes.

The PTY Search function is applicable to preset stations only. To search for a programme using the PTY codes, follow this procedure Using the remote control unit.



1. Press A-B/PTY SEARCH to search the PTY.
"PTY" and "SELECT" appear alternately on the display.



2. Press ◀◀ or ▶▶ to select PTY.

The display changes with each press of the button as shown below:
NEWS → AFFAIRS → INFO → SPORT →
EDUCATE → DRAMA → CULTURE →
SCIENCE → VARIED → POP M → ROCK M
→ EASY M → LIGHT M → CLASSICS →
OTHER M → WEATHER → FINANCE →
CHILDREN → SOCIAL A → RELIGION →
PHONE IN → TRAVEL → LEISURE → JAZZ →
COUNTRY → NATIONAL → OLDIES → FOLK
M → DOCUMENT →



3. Press the PTY SEARCH button again.

While the search function is running, the selected program type and "SEARCH" is displayed alternately on the display.

Once the station which is broadcasting the selected PTY(Program type) is located, searching will stop. Then the PTY will be indicated and the broadcast will commence.

If a station broadcasting a selected PTY cannot be found, "NOT" and "FOUND" are displayed just one time alternately on the display. The unit will then return to the station to which it was tuned prior to the start of the PTY Search.

- RDS may not work correctly if the station to which you are tuned is not transmitting properly or if the signal strength is weak.
- RDS information have to be changed with only remote control unit.
- If no adjustment are made in PTY Select mode, "PTY" and "SELECT" will continuously appear on the display. Perform the next step while "PTY" and "SELECT" are being displayed.

Playing the Connected Source

This section shows you how to play the sources connected to the machine. You may need to see "Connecting to a TV" on page 11 and "Connecting to Audio/Video Equipment" on page 13 while following the steps in this section.



1. Press repeatedly the VIDEO button to select the input video source.

The display changes with each press of the button as shown below:

VIDEO AN → VIDEO OP → VIDEO CO → ...
(AUX Input) (Optical Input) (Coaxial Input)

2. Start playing the selected source.

Various Common Functions to all the Sources

This section shows you how to play the sources connected to the machine.

Adjusting the Volume

The volume of the front left, right, center, surround left and right, and subwoofer speakers will be adjusted at the same time. When headphones are connected, you can adjust the volume of the sound.



Press VOLUME +/- on the remote controller or turn VOLUME on the machine.
The volume level increases or decreases.

Notes :

- To avoid damage to the speakers, do not keep operating the volume with distorted strong sound.
Adjust the volume to the optimum listening level.

Readjusting Each Speaker's Relative Volume Balance



1. Press CH-LEVEL button repeatedly to select the speaker.



2. Press ▲/▼ button to adjust the volume level of the selected speaker.
The channel volume level can be adjusted.



3. Press CH-LEVEL button to set the volume level and select the next speaker.
Each press of the button selects the next speaker to be adjusted.
Repeat step 2 if necessary.

Notes :

- The value set in "Adjusting Each Speaker's Relative Volume Balance-Test Tone" in page 17 will be replaced by the readjusted values.

Selecting the Surround mode

You can enjoy surround sound simply by selecting one of the pre-programmed sound fields according to the program you want to listen to.



Press SURR.MODE repeatedly.

The sound mode is changed in the display window in the following order.

- Dolby Digital 5.1 ch : Downmix
- Dolby Digital 2 ch : Pro Logic → Music →
Movie ...
- CD/MP3 2 ch : Pro Logic → Music → Movie →
Stadium ...

Selecting the sound style(EQ)

You can enjoy sound style simply by selecting one of the pre-programmed sound style according to the program you want to listen to. (2 ch. sound only)



Press EQ repeatedly.

The sound mode is changed in the display window in the following order.

FLAT → POP → ROCK → JAZZ → ...

Listening Through Headphones

Connect the plug of the stereo headphones to the PHONES jack on the machine.

Notes :

- The speakers will not reproduce sound while headphones are connected. Sound will automatically be switched to STEREO after connecting the headphones to the PHONES jack.

Muting the Sound

Connect the plug of the stereo headphones to the PHONES jack on the machine.



Press MUTE.

MUTE indicator in the machine's display is displayed. To restore the sound, press MUTE or Volume - / +.

Using the Sleep Timer



Press SLEEP on the remote controller.

"SLEEP 10" and SLEEP indicator appears on the machine's display, which means the machine will turn off and enter standby mode in 10 minutes.

Each time the button is pressed, the sleep time is changed to 10, 20, 30, 60, 90 minutes and OFF.

When Sleep Timer is on, system's display is dimmered.

- To cancel the Sleep Timer



Press SLEEP repeatedly until the SLEEP indicator is disappeared.

Playing Repeatedly

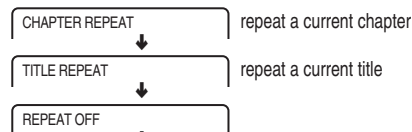
You can play a specific title, chapter, track/file, folder or segment repeatedly.

Repeating a Title, Chapter, Track or Folder

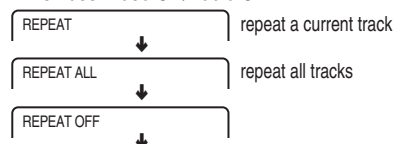
You can play the same title, chapter, track/file or folder repeatedly.

 **Press repeatedly REPEAT to select the repeat function.**

 When use DVD :



  When use Video CD/Audio CD :






◆ To resume normal playback

Keep on pressing REPEAT button until "REPEAT OFF" is displayed on the TV or disappear REPEAT indicator on the machine's display. The repeat function becomes cleared and the playing state changes to normal.

Notes

- Some discs may not permit repeat operation.
- Repeat play works only with discs for which the elapsed playing time appears in the machine's display during playback.

Notes : Advanced playback modes of Audio CD

-  **INTRO playback :** Start or cancel intro scan playback each track on the disc for 10 seconds.
-  **RANDOM playback :** Start or cancel playback all tracks in the disc randomly.
-  **PROGRAMM playback :** Playback begins in the order in which you programmed the tracks.

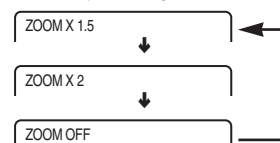
Zooming a Picture

You can zoom in on a picture. You can also shift the zoom point.

Zooming a Picture and Shifting the Zoom Point

 **1. Press ZOOM during normal or still playback.**

The picture is enlarged. If you press ZOOM repeatedly, the magnification level increases.




◆ **To shift the zoom point.**
Press ///.



Repeating a Specific Segment

You can play a specific segment repeatedly (A-B repeat).

 **1. Press A-B/PTY SEARCH at the beginning of the segment (point A) you want to play repeatedly.**

A-B SET A

 **2. Press A-B/PTY SEARCH again at the end of the segment (point B).**

The machine automatically returns to point A and starts repeat playback of the selected segment (A-B).

A-B SET B





◆ To resume normal playback

Press A-B/PTY SEARCH repeatedly until "A-B CANCEL" displayed on screen.

Notes

- Some discs may not permit A-B repeat operation.
- You can play a specific segment only within the current title or track.
- You cannot set the A-B repeat function for segments that include multiple camera angles.
- There may be a slight difference between point A and the location where playback actually resumes depending on the disc.


Notes

- Some discs may not permit to zoom operation.
- During some scenes, the buttons may not work as described above.
- Zooming does not work on subtitles or menu screens included on DVD videos.
- Zooming does not operate for 1080i resolution mode.
- During zoom playback, /// does not work on menu screens included on DVD videos. If you want to view the menus, cancel zoom playback.
- The magnification level varies depending on the picture size you select.

◆ To resume normal playback


 Press ZOOM repeatedly until "ZOOM OFF" display.

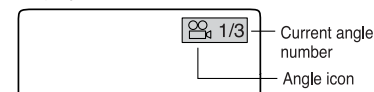
Selecting the Camera Angle


Some DVD discs may contain scenes, which have been shot simultaneously from a number of different angles. For these discs, the same scene can be viewed from each of these different angles using the ANGLE button. If the loaded disc supports multiple angles, you can see  indicator on the machine's display and TV screen.

Changing the Camera Angle

If the scene was recorded from multiple angles, you can easily change the camera angle of the scene you are watching.

 **1. Press ANGLE while playing a scene recorded with multiple angles.**
Press ANGLE while the angle icon is displayed.



 **2. Press ANGLE or while the angle number is displayed on the TV screen.**
Each time you press ANGLE, the camera angle changes.

◆ To turn off the angle number display

 Press ANGLE repeatedly to select the Original Angle Number.

Selecting the Digest

This function helps speedy search to the desired track by displaying 9 different small screens per page showing information regarding the tracks recorded on the disc.



1. Press STOP button.

Press the STOP button for normal VCD or PBC button for VCD, SVCD and VCD 2.0 with PBC to stop playing because this function is valid only for the STOP state.



2. Press DIGEST button.

If the DIGEST button is pressed, 4 submenus are displayed on the TV screen as shown right. Select the submenu, which you want, by pressing the appropriate number button and the SELECT button. If you don't want this function, press number 4 for exit.

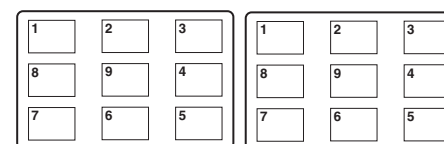
3. When you choose INTRO.

All the tracks on the disc are played for 10 seconds if no key is pressed. After all the tracks are played, it stops and displays STOP on the TV.

4. When you choose DISC or TRACK.

Digest function will play and display in the small screen in the center. Each screen plays approximately five seconds while displaying a total of nine screens as shown in the figure. Press NEXT button to see the next page and press PREV button to see the previous page.



Digest - DISC

Digest - TRACK

5. Press the desired screen number

If you press the desired number of small screen, it starts playing from the position where the small screen begins. You don't need to press the SELECT button.



1. INTRO plays each track for 10 seconds (VCD only)

2. DISC shows digest screen based on the disc. It plays each track on the thumbnail screen for about 5 seconds (VCD only).

3. TRACK shows digest screen based on the track. It plays partitioned track on thumbnail screen for about 5 seconds (VCD only).

4. EXIT just exits digest function

Using information on the On-Screen display

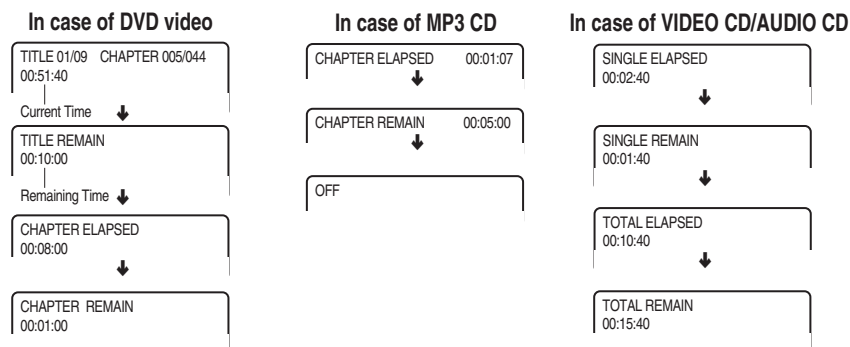
You can view information about a disc and its operational status on the TV screen.

Checking the Total Number of the Titles/Tracks, Current Title/Chapter/Track, Remaining and Elapsed Time, etc. DVD VCD MP3 CD



Press **DISPLAY/FM MODE** while the disc is stopped or playback.

Each time you press DISPLAY, the on-screen display on the TV screen changes as follows.



Selecting Subtitles Included on the DVD

You can display subtitles on the TV screen and select a subtitle language from those included on the DVD video.

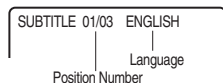
Selecting a Subtitle Language DVD

You can select a subtitle language from those included on the DVD video and DivX file.



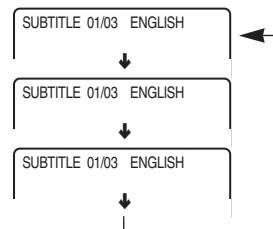
1. Press **SUBTITLE** during playback.

The subtitle setting is displayed for about 3 seconds.



2. Press **SUBTITLE**.

Each time you press SUBTITLE, the subtitle language changes to the next language included on the DVD video.



Notes

- This function is a disc dependent. There are some DVD discs that prevent selecting subtitle even though the disc supports multiple subtitles. In this case, the subtitle should be selected via the disc menu.
- When you select a subtitle language which is not included on the disc, the machine plays the prior language programmed on the disc.
- During some scenes, the subtitles may not appear immediately after you change the subtitle language.

◆ To turn subtitles off



During playback, press **SUBTITLE** repeatedly until the [OFF] displayed on the TV screen.

◆ Viewing a subtitle for DivX



1. Before selecting a DivX move file, place cursor to folder that have a subtitle.
2. Select a proper subtitle file by cursor and then press ENTER button.
3. Lastly, select and play a DivX move file same as the above.

- Supportable format for DivX subtitle :
*.SMI, *.SRT, *.SUB, *.TXT

Notes

- Some DVD videos are set to display subtitles automatically, and you cannot turn them off even if you set the subtitle function to off.
- During some scenes, the subtitles may not appear immediately after you select "On".
- Some DVD videos will allow you to make subtitle selections and turn subtitles on or off only by using the disc menu.
- If you want to see subtitle against DivX file, you make sure either DivX move file must contain proper subtitle or both of them should be in same disc.
- Some AVI files made of Windows Media format can't playback.

Selecting the Audio Language/Sound Included on the Disc

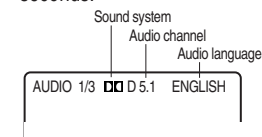
Selecting a Playback Audio Setting DVD

You can select the preferred audio language and sound system as a set from those included on the DVD video. This function lets you temporarily change the audio language which you selected as the automatic setting in the setting menu, and choose the sound system if the DVD video is recorded in more than one sound format.



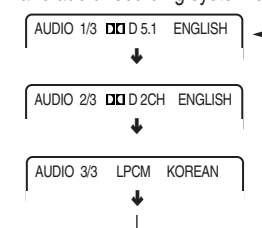
1. Press **AUDIO** during playback.

The audio setting is displayed for about 3 seconds.



2. Press **AUDIO**.

Each time you press AUDIO, the language and audio recording system set changes.



◆ About recording systems

This machine uses the Dolby Digital and PCM systems and cannot play DVD videos recorded in any other sound system.

Notes

- Some discs allow you to change audio selections only by using the disc menu. If this is the case, press MENU and choose the appropriate language from the selections in the disc menu.
- Some discs may have only one audio language and sound recording system set and you cannot change this selection.
- The "Audio Language" setting in the setting menu is for automatic selection of the audio language among those included on the DVD video when the DVD is inserted. Therefore, the selection in this section will not change the setting of "Audio Language" in the setting menu. (Occasionally, the audio language and sound system are selected by the disc.)

Notes

Dolby Digital 5.1 Channel sound may be displayed as "D 5.1".

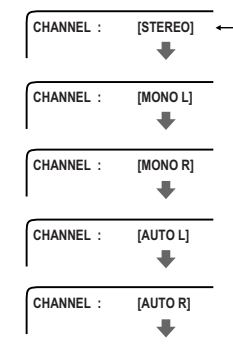
Selecting Sound Channels VCD

A Video CD may left and right channels which contain sounds or languages on each channel. You can switch these two channels to hear a preferred sound or language.



During playback, press **MPX** (repeatedly) to select the sound channel.

STEREO → LEFT VOCAL → RIGHT VOCAL
→ MONO LEFT → MONO RIGHT



Customizing the Function Settings

When you insert a DVD Video, VIDEO CD, the various functions of the machine will be set (reset) according to the setting menu. You can customize this setting menu according to your preference.

Selecting a Setting DVD VCD MP3 CD

The setting menu asks you to select a setting category from among SYSTEM, LANGUAGE, AUDIO, VIDEO, SPEAKER, and DIGITAL.. Each selected setup menu will provide you with setting details.

1. Press **SETUP** while the disc is stopped.
The on-screen display appears.
2. Press **▲/▼** button to select the setup menu.
3. Press **▶** or **ENTER** button to move the setting item.
4. Press **▲/▼** button to select the setting item.
In case of the password setup menu.
Press **▲/▼/◀/▶** and **ENTER** to set 4 digits password number.
5. Press **ENTER** button on the selected item.
6. Press **◀** button to select the setup menu.
7. To finish the setup, Press **SETUP** or select **MAIN PAGE**.
Repeat 1~6 Steps to select your desired setting.

<SETUP MENU>



<SPEAKER SETUP PAGE>



Notes

Preferences can only be selected/accessed in STOP mode.

Customizing the Function Settings

This function is to disable the playing of specified DVD that are unsuitable for children. As each disc has slightly different codes, please refer to the disc instruction. There are 8 levels. If the level is 8, the contents of the disc are suitable for adult. If the level is 1, the contents of the disc are suitable for child. If you didn't set a new password and level, there is no restriction playing discs. When you turn on this unit for the first time, setting the new password is recommended.

PASSWORD DVD

You can change the password for the parental lock.
To change the current password to the new one, do the following instruction.

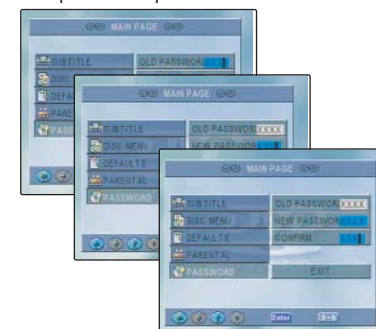
1. Press **▲/▼** button to move the cursor to **PASSWORD** on **SETUP MENU**.



2. Press **▶** or **ENTER** button.



3. Input your current password on **OLD PASSWORD**.
Input the new password what you want to use from now on **NEW PASSWORD**.
Re-input the new password on **CONFIRM**.



If it is the first time changing password, Input "0000" on **OLD PASSWORD**.

PASSWORD DVD

You can set the parental lock level what you want.
Once selected, whenever you play a disc, the selected parental is compared to the level on the disc, if the level you selected is greater then the level of the disc, you may play the loaded disc. If not, you may not play the disc.
To set appropriate parental level, do the following instruction.

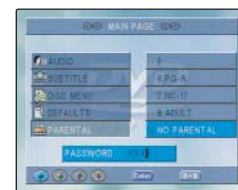
1. If you move the cursor to **PARENTAL** using **▲/▼** button on **SETUP MENU**, you can see the level of **PARENTAL**.



2. You can move the cursor to the level position by pressing the **▶** or **ENTER** button.



3. Input your password.
If it is the first time inputting password, the password is "0000".



4. Move to the level what you want using **▲/▼** button.
The parental level will be changed by pressing the **ENTER** button.



Customizing the Function Settings

Once the initial settings have been completed, the player can always be operated under the same conditions whenever the power is switched on. These settings call SETUP data that are easily modified and stored using the SETUP menu. The SETUP menu includes the information for AUDIO and other system controls.

Menu	Item	Description
TV DISPLAY	NORMAL/PS	Set up TV aspect according to your TV set. If WIDE screen is supported on your TV, select WIDE.
	NORMAL/LB	If your TV supports only 4:3, you may select both NORMAL/ PS (Pan & Scan) and NORMAL/LB (Letter Box).
	WIDE	<p>When using a wide screen TV (16:9 aspect ratio) Select WIDE in the TV ASPECT value. Discs may be recorded in more than one screen format. Following the chart below, make screen aspect adjustments in your wide screen TV according to the aspect ratio on the disc you are viewing.</p> <p>When using a standard TV (4:3 aspect ratio) Select NORMAL/LB (Letter Box) or NORMAL/PS (Pan & Scan) in the TV ASPECT value. Following the chart below, make screen aspect adjustments according to the aspect ratio on the disc you are viewing.</p>
TV TYPE	MULTI NTSC PAL	Set up TV type according to type supported by your TV or monitor. When you select MULTI, the output video type is dependent on the disc loaded. If the recorded video type is PAL then it outputs PAL. If NTSC then NTSC.
OSD LANGUAGE	ENGLISH FRENCH GERMAN DUTCH ITALIAN SPANISH PORTUGUESE	<p>This item is to select the language for On-Screen Display messages that will be displayed on the TV screen. When your desired language is selected, all OSD messages are displayed in the selected language.</p> <p>Note : Selecting languages in the SET UP can be changed/added/deleted in accordance with region.</p>
VIDEO OUTPUT	Y, Pb, Pr R, G, B	Select the video output signal formats from the machine. Because VIDEO OUTPUT is useful only for selected signal format, select the appropriate item matching with TV input function. The selection of VIDEO OUTPUT is YPbPr and RGB.
RESOLUTION	SD INTERLACE SD PROGRESSIVE 720P 1080I	<p>When you use HDMI connection, you can change the resolution (480p, 720p, or 1080i) for the HDMI output.</p> <p>When you set the resolution to 720P or 1080I, the MONITOR OUTPUT and S-VIDEO OUTPUT port are disabled on the rear panel.</p>
SMART NAVI	ON (Default) OFF	<p>ON : When an MP3/JPEG/DivX disc or USB Device is loaded, SMART NAVI screen is displayed automatically depending on the disc's folder (directory) structure as shown below.</p> <p>OFF : The SMART NAVI function is disabled.</p> <p>• When you set the SMART NAVI ON or OFF, be sure to reload the disc by pressing twice the OPEN/CLOSE button.</p>
DivX REGISTRATION		<p>Use this procedure to display the registration code for leasing or purchasing DivX VOD format video files using the DivX VOD(Video On Demand) service.</p> <p>For details, go to the URL://www.divx.com/vod</p>

Customizing the Function Settings

Menu	Item	Description
SPEAKER SETUP	AUDIO OUT	OFF SPDIF/RAW SPDIF/PCM Control the output condition of the audio out.
	CENTER DELAY	Center Delay (OFF 5mSEC)
	REAR DELAY	Rear Delay (OFF ... 15mSEC)
	TEST TONE	Turn on the TEST TONE for the speaker's relative volume balance from the listening position to each speaker. To exit TEST TONE, press the ◀ button.
AUDIO SUBTITLE DISC MENU		<p>ENGLISH GERMAN FRENCH DUTCH ITALIAN SPANISH PORTUGUESE SWEDISH</p> <p>AUDIO : Select a preferred language for the sound track. SUBTITLE : Select a preferred language for subtitles. DISC MENU : Select a preferred language for menus.</p> <p>Note : Selecting languages in the SET UP can be changed / added / deleted in accordance with region.</p>
DEFAULT	RESET	Change the your settings to defaults.
DYNAMIC	FULL : 6/8 : 4/8 : 2/8 : OFF	<p>Dynamic Range Control. (Valid for Dolby Digital DVD disc) When programs with wide dynamic range, such as movie soundtracks, are played at low volume or from smaller speakers, the system can apply appropriate compression to preserve low-level content and prevent dramatic passages from getting too loud. The degree of compression can be made to vary according to need. If you want to hear the original dynamic range recorded on disc, set the DYNAMIC to OFF. Otherwise If you set the DYNAMIC to FULL, then the dynamic range is reduced by bringing down the level of the loud sounds and bringing up the level of the quiet sounds.</p> <p>• If you set the DYNAMIC to activation, the "DRC" indicator lights up in the display.</p>
PARENTAL (DVD only)	1G 2 3PG 4 PG13 5 6PG-R 7 NC-7 8 ADULT 9 NO-PARENTAL	<p>This function is to disable the playing of specified DVD that are unsuitable for children. As each disc has slightly different codes, please refer to the disc instruction. There are 8 levels. If the level is 8, the contents of the disc are suitable for adult. If the level is 1, the contents of the disc are suitable for child. If you didn't set a new password and level, there is no restriction playing discs.</p> <p>When you turn on this unit for the first time, setting the new password is recommended</p>
PASSWORD (DVD only)	CHANGE	Set/Change the password for the parental lock. If it is the first time changing password, input "0000" on old PASSWORD.

Troubleshooting

Check the following guide for the possible cause of a problem before contacting service. Refer also to the respective instruction manuals of the connected components and TV.

	Symptoms	Causes	Remedies
Amplifier	The machine doesn't switch on.	<ul style="list-style-type: none"> The power cord is disconnected. The main power is set to OFF. There is external noise in the computer circuits of the machine. The AC fuse is blown. 	<ul style="list-style-type: none"> Check the connection of the power cord. Turn on the main power. Switch off the main power, then switch it on again. If not recovered, disconnect the power cord, then connect it again. Contact your nearest service center.
	No sound is reproduced.	<ul style="list-style-type: none"> The muting function is activated. The machine is not properly connected. The amplifier protection circuitry has activated. 	<ul style="list-style-type: none"> Deactivate the muting function. Check the connections to the machine. Contact your nearest service center.
	No sound or very little sound is reproduced from the center speaker.	<ul style="list-style-type: none"> The speakers are not properly connected. The surround mode is set to "STEREO". The volume level of the center speaker "CENTER" is set to minimum. 	<ul style="list-style-type: none"> Check the speaker connections. Select the appropriate surround mode. No sound is output from the center speaker when the surround mode is set to either of them.
	The sound of the playback source is not heard.	Another input source is selected.	Select the appropriate input source.
	The buttons on the remote controller and machine do not operate.	Power supply fluctuations or other abnormalities such as static electricity may interrupt correct operation.	Switch off the main power, then switch it on again. If not recovered, disconnect the power cord, then connect it again.
	No sound from the TV sound system at the HDMI connection.	The Audio output signal type is set to "SPDIF/RAW" or "OFF".	Change the selection of the Audio output signal type from the SETUP menu, to "SPDIF/PCM".
DVD (VIDEO CD / Audio CD)	The machine does not start playback.	<ul style="list-style-type: none"> No disc is inserted. No CD palying The region number of the disc is unmatched to the machine. An unplayable disc is inserted. The disc is placed upside down. The disc is not placed within the disc tray guide. The disc is dirty. The parental lock function is activated. 	<ul style="list-style-type: none"> Insert a disc. (Check that "DVD", "VCD", or "CD" is lit in the machine's display.) Pick up dirty or dusty? Regularly clean the machine with a special cleaning disc (available from your local dealer). CD pick up dirty or dusty? Regularly clean the machine with a special cleaning disc (available from your local dealer). Only discs with the machine's playable region code(See region code of the machine's rear panel) Ⓜ, or with no region number can be played by the machine. Check the playable discs. The machine can not playback a DVD-R/RW disc with CSS copyright protection. Place the disc with the playback side down. Place the disc within the proper guide on the disc tray. Eject the disc and clean it. Deactivate the parental lock function or change the parental lock level.
	Brightness is unstable or noise is visible on playback picture.	Copy protection is activated.	Connect the machine directly to the TV. Avoid connecting the machine to the TV through a VCR.
	The playback picture is occasionally distorted.	<ul style="list-style-type: none"> The disc is dirty. It is in fast forward or fast reverse playback. 	<ul style="list-style-type: none"> Eject the disc and clean it. Sometime a small amount of picture distortion may appear. This is not a malfunction.
	Playback doesn't follow the course of the disc's programs.	The machine is in repeat playback mode, memory playback mode, or random playback mode, etc.	Resume normal playback.
	The picture from the machine doesn't appear on the TV screen.	The TV is not set to receive the output signals from the machine.	Set the TV to the machine's input.
	No picture appears on the TV screen.	<ul style="list-style-type: none"> The TV is not set to receive the output signals from the machine. The video cable is not connected securely. Only S video connection is made. 	<ul style="list-style-type: none"> Set the TV to the machine's input. Check the connections between the machine and TV set. Make also video connection.

Troubleshooting

	Symptoms	Causes	Remedies
DVD (VIDEO CD / Audio CD)	No colour in the picture at Component input or S-Video input.	<ul style="list-style-type: none"> Video output signal selection at SETUP menu is selected YPbPr(or RGB), while the AV connector is connected to S-Video. Video output signal selection at SETUP menu is selected to S-Video, while the AV connector is connected to YPbPr(or RGB). 	<ul style="list-style-type: none"> Change the selection of the Video output from the SETUP menu, to match with the AV connector output. (See page 16)
	There is no picture.	Progressive is set to ON, while the TV cannot handle progressive mode.	Switch the Progressive to Off and change it to "interface TV" (See page 15)
	No picture, when AV input is connected.	The TV is connected to the AV OUT connector of this player, not the MONITOR OUT. (See page 13)	Change the TV connection using MONITOR OUT jack.
	No picture, when the HDMI is connected.	<ul style="list-style-type: none"> The TV is not set to receive the output signals from the machine. The HDMI cable is not connected securely. 	<ul style="list-style-type: none"> Set the TV to the machine's input. Check the HDMI connection between the machine and a TV set.
Tuner	Too much noise is heard or sound is interrupted occasionally. ("STEREO" indicator does not light steadily.)	<ul style="list-style-type: none"> FM stereo waves may produce a hiss noise when a certain level is reached. The position or direction of the FM antenna is incorrect. The station is too weak. 	<ul style="list-style-type: none"> Switch the frequency receiving mode to mono. Lower the treble level. Adjust the position, height, and direction of the FM antenna. Connect an outdoor FM antenna. Try to use an antenna with more elements. (For installation of the outdoor antenna, consult your nearest dealer as it requires special skills and experience.)
	Sound is distorted or sound volume decreases.	<ul style="list-style-type: none"> The radio wave is distorted. Cars are running or airplanes are flying near the house. 	-
	Sound is excessively distorted.	There is a tall building or a mountain nearby. [The waves transmitted from the transmission center (direct waves) and the waved diffracted by buildings or mountains (diffraction waves) interfere with each other causing multi pass distortion.]	-
Remote Controller	The buttons on the machine operate but the buttons on the remote controller do not operate.	<ul style="list-style-type: none"> No batteries are inserted in the remote controller. The batteries are worn out. The remote controller is not pointed at the remote sensor of the machine. The remote controller is too far from the machine. 	<ul style="list-style-type: none"> Insert new batteries. Replace with new batteries. Point the remote controller at the remote sensor of the machine. Operate the remote controller within 5 m.

Specifications

General specifications

Power supply	
Operating Voltage	AC 100 - 240 V, 50/60 Hz
Power consumption	Standby : under 1 Watt
	Operating : 100 Watt
Dimensions(WxDxH) / Weight	
HC-4100HWL/4200HWL	430 x 350 x 60 mm / 4.0 kg
DS-57NWL	408 x 118 x 265 mm/ 0.9 kg

Power output Table

Model	Power output at 10%THD(RMS)		
	Front / Center	Rear	Woofer
HC-4160HWL HC-4260HWL	60 W, 6 ohm	60 W, 6 ohm	100 W, 4 ohm
HC-4180HWL HC-4280HWL	80 W, 6 ohm		120 W, 4 ohm

Amp. Section

Front Amp	Power Output at 10% THD(RMS)	at 1 KHz, 6 ohms	60 W / 80 W
	THD(Total Harmonic Distortion)	at 1 KHz, 1 W	0.3 %
	Input Sen. / Impedance @ 1KHz, 47K ohms	VIDEO	200 mV / 47 K
	Output Level/Impedance @ 1KHz	Tape Rec.	200 mV / 2.2 K
	Frequency Response(Analogue)	at 1 W : VIDEO -3 dB	100 Hz ~ 20 KHz
	S/N Ratio IHF-A Weighted	DVD	70 dB
	Subwoofer Turnover Frequency		120 Hz
Center Amp	Channel Separation	1 KHz	50 dB
	Power Output at 10% THD(RMS)	at 1 KHz, 6 ohms	60 W / 80 W
	THD(Total Harmonic Distortion)	at 1 KHz, 1 W	0.3 %
Rear Amp	S/N Ratio, IHF-A Filter	Rated Output	70 dB
	Power Output at 10% THD(RMS)	at 1KHz, 6 ohms	60 W
	THD(Total Harmonic Distortion)	at 1KHz, 1 W	0.3 %
Woofer	S/N Ratio DOLBY	Rated Output	70 dB
	Power Output at 10% THD(RMS)	at 60 Hz, 4 ohms	100 W / 120W
	S/N Ratio IHF-A Weighted		60 dB
	Frequency Response	1 W	20 Hz ~ 100 Hz

Video Section

Input Sen./Impedance	Composite Video(Video)	1.0 Vp-p / 75 ohm	±0.5 dB
Output Level/Impedance	Composite 75 ohm	1.0 Vp-p / 75 ohm	±0.5 dB
	S-Video(Y/C) 75 ohm(DVD only)	1 Vp-p / 0.286Vp-p	±0.5 dB
	Component Out(Y/ Cb/ Cr) : Option	1V p-p / 0.7 Vp-p / 0.7 Vp-p	±0.5 dB
Frequency Response	Ref. 500 KHz		5 Hz ~ 5.7 MHz
Crosstalk	@ 1 MHz	45 dB	40 dB
S/N Ratio	DVD	60 dB	

FM Tuner Section (FM ANT Impedance : 75 ohms)

Tuning Range	USA Version	87.5 ~ 108.0 MHz
	Australia / Europe Version	87.5 ~ 108.0 MHz
Scanning Frequency Interval	USA Version	100 KHz
	Australia / Europe Version	50 KHz
Usable Sensitivity, 75 ohms	S/N = 30 dB, USA Version	2 uV (17.2 dBf)
	S/N = 26 dB, Australia / Europe Version	3 uV (20.8 dBf)
S/N Ratio @1mV IHF-A Filter	Mono USA Version	60 dB
	Mono Australia / Europe Version	60 dB
	Stereo USA Version	55 dB
	Stereo Australia / Europe Version	55 dB

Specifications

General specifications

Power supply	
Operating Voltage	AC 100 - 240 V, 50/60 Hz
Power consumption	Standby : under 1 Watt Operating : 100 Watt
Dimensions(WxDxH) / Weight	
HC-4100HWL/4200HWL	430 x 350 x 60 mm / 4.0 kg
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HC-4180HWL HC-4280HWL	80 W, 6 ohm		120 W, 4 ohm

■ **USB storage** Power supply : DC 5V max. 400mA

Amp. Section

Front Amp	Power Output at 10% THD(RMS)	at 1 KHz, 6 ohms	60 W / 80 W
	THD(Total Harmonic Distortion)	at 1 KHz, 1 W	0.3 %
	Input Sen. / Impedance @ 1KHz, 47K ohms	VIDEO	200 mV / 47 K
	Output Level/Impedance @ 1KHz	Tape Rec.	200 mV / 2.2 K
	Frequency Response(Analogue)	at 1 W : VIDEO -3 dB	100 Hz ~ 20 KHz
	S/N Ratio IHF-A Weighted	DVD	70 dB
	Subwoofer Turnover Frequency		120 Hz
Center Amp	Channel Separation	1 KHz	50 dB
	Power Output at 10% THD(RMS)	at 1 KHz, 6 ohms	60 W / 80 W
	THD(Total Harmonic Distortion)	at 1 KHz, 1 W	0.3 %
Rear Amp	S/N Ratio, IHF-A Filter	Rated Output	70 dB
	Power Output at 10% THD(RMS)	at 1KHz, 6 ohms	60 W
	THD(Total Harmonic Distortion)	at 1KHz, 1 W	0.3 %
Woofer	S/N Ratio DOLBY	Rated Output	70 dB
	Power Output at 10% THD(RMS)	at 60 Hz, 4 ohms	100 W / 120W
	S/N Ratio IHF-A Weighted		60 dB
	Frequency Response	1 W	20 Hz ~ 100 Hz

Video Section

Input Sen./Impedance	Composite Video(Video)	1.0 Vp-p / 75 ohm	± 0.5 dB
Output Level/Impedance	Composite 75 ohm	1.0 Vp-p / 75 ohm	± 0.5 dB
	S-Video(Y/C) 75 ohm(DVD only)	1 Vp-p / 0.286Vp-p	± 0.5 dB
	Component Out(Y/ Cb/ Cr) : Option	1V p-p / 0.7 Vp-p / 0.7 Vp-p	± 0.5 dB
Frequency Response	Ref. 500 KHz		5 Hz ~ 5.7 MHz
Crosstalk	@ 1 MHz	45 dB	40 dB
S/N Ratio	DVD	60 dB	

FM Tuner Section (FM ANT Impedance : 75 ohms)

Tuning Range	USA Version	87.5 ~ 108.0 MHz
	Australia / Europe Version	87.5 ~ 108.0 MHz
Scanning Frequency Interval	USA Version	100 KHz
	Australia / Europe Version	50 KHz
Usable Sensitivity, 75 ohms	S/N = 30 dB, USA Version	2 μ V (17.2 dBf)
	S/N = 26 dB, Australia / Europe Version	3 μ V (20.8 dBf)
S/N Ratio @1mV IHF-A Filter	Mono USA Version	60 dB
	Mono Australia / Europe Version	60 dB
	Stereo USA Version	55 dB
	Stereo Australia / Europe Version	55 dB

FCC Information to 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 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 an experienced radio/TV technician for help.

Caution

Modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

FCC Compliance Information : This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation

IMPORTANT SAFETY INSTRUCTIONS

- 1) Read these instructions.
- 2) Keep these instructions.
- 3) Heed all warnings.
- 4) Follow all instructions.
- 5) Do not use this apparatus near water.
- 6) Clean only with dry cloth.
- 7) Do not block any ventilation openings. Install in accordance with the manufacturer's instructions.
- 8) Do not install near any heat sources such as radiators, heat registers, stoves, or other apparatus (including amplifiers) that produce heat.
- 9) Do not defeat the safety purpose of the polarized or grounding-type plug. A polarized plug has two blades with one wider than the other. A grounding type plug has two blades and a third grounding prong. The wide blade or the third prong are provided for your safety. If the provided plug does not fit into your outlet, consult an electrician for replacement of the obsolete outlet.
- 10) Protect the power cord from being walked on or pinched particularly at plugs, convenience receptacles, and the point where they exit from the apparatus.
- 11) Only use attachments/accessories specified by the manufacturer.
- 12) Use only with the cart, stand, tripod, bracket, or table specified by the manufacturer, or sold with the apparatus. When a cart is used, use caution when moving the cart/apparatus combination to avoid injury from tip-over.
- 13) Unplug this apparatus during lightning storms or when unused for long periods of time.
- 14) Refer all servicing to qualified service personnel. Servicing is required when the apparatus has been damaged in any way, such as power-supply cord or plug is damaged, liquid has been spilled or objects have fallen into the apparatus, the apparatus has been exposed to rain or moisture, does not operate normally, or has been dropped.



< The main plug is used as the disconnect device, the disconnect device shall remain readily operable.

CAUTION Regarding Placement

To maintain proper ventilation, be sure to leave a space around the unit (from the largest outer dimensions including projections) equal to, or greater than, shown below.

Left and Right Panels: 20 cm (8")
Rear Panel: 10 cm (4")
Top Panel: 5 cm (2")