



DVD MINI HOME THEATER SYSTEM

OWNER'S MANUAL

MODEL : LM-D2930
(LM-D2930A/D/X, LMS-D2930V)



Please read this manual carefully before operating your set.
Retain it for future reference.

Designs and specifications are subject to change without
notice for improvement.





CAUTION
RISK OF ELECTRIC SHOCK
DO NOT OPEN



WARNING: 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 lightning flash with arrowhead symbol within an equilateral triangle is intended to alert the user to the presence of uninsulated dangerous voltage within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.



The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

WARNING: TO REDUCE THE RISK OF FIRE OR ELECTRIC SHOCK, DO NOT EXPOSE THIS PRODUCT TO RAIN OR MOISTURE.

CLASS 1 LASER PRODUCT
KLASSE 1 LASER PRODUKT
LUOKAN 1 LASER LAITE
KLASS 1 LASER APPARAT
CLASSE 1 PRODUCT LASER

CAUTION:

This Digital Video Disc Player employs a Laser System. To ensure proper use of this product, please read this owner's manual carefully and retain for future reference, should the unit require maintenance, contact an authorized service location-see service procedure.

Use of controls, adjustments or the performance of procedures other than those specified herein may result in hazardous radiation exposure.

To prevent direct exposure to laser beam, do not try to open the enclosure. Visible laser radiation when open. DO NOT STARE INTO BEAM.

CAUTION: The apparatus shall not be exposed to water, dripping or splashing and that no objects filled with liquids, such as vases, shall be placed on the apparatus.

Notes on copyrights:

It is forbidden by law to copy, broadcast, show, broadcast via cable, play in public, or rent copyright material without permission.

This product is equipped with copy protection measures developed by Macrovision. Copy protection signals are recorded on some discs. When recording these discs on a VCR, picture noise will appear during playback.

This product incorporates copyright protection technology that is protected by certain U.S. patent claims 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.

SERIAL NUMBER: The serial number is found on the back of this unit. This number is unique to this unit and not available to others. You should record requested information here and retain this guide as a permanent record of your purchase.

Model No. _____

Serial No. _____

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About the symbols for instructions

 Indicates hazards likely to cause harm to the unit itself or other material damage.

 Indicates special operating features of this unit.

 Indicates tips and hints for making the task easier.

Playable Discs

	DVD (8 cm / 12 cm disc)
	Video CD (VCD) (8 cm / 12 cm disc)
	Audio CD (8 cm / 12 cm disc)

In addition, this unit can play a DVD-R, DVD±RW, Kodak PICTURE CD, SVCD, and CD-R or CD-RW that contains audio titles, MP3, WMA or JPEG files.

Notes

- Depending on the conditions of the recording equipment or the CD-R/RW (or DVD-R/±RW) disc itself, some CD-R/RW (or DVD-R/±RW) discs cannot be played on the unit.
- Do not attach any seal or label to either side (the labeled side or the recorded side) of a disc.
- Do not use irregularly shaped CDs (e.g., heart-shaped or octagonal). It may result in malfunctions.

Notes on DVDs and Video CDs

Some playback operations of DVDs and Video CDs may be intentionally fixed by software manufacturers. As this unit plays DVDs and Video CDs according to disc content designed by the software manufacturer, some playback features of the unit may not be available or other functions may be added. Refer also to the instructions supplied with the DVDs and Video CDs. Some DVDs made for business purposes may not be played on the unit.

Regional code of the DVD player and DVDs

This DVD player is designed and manufactured for playback of region “5” encoded DVD software. The region code on the labels of some DVD discs indicates which type of player can play those discs. This unit can play only DVD discs labeled “5” or “ALL”. If you try to play any other discs, the message “Check Regional Code” will appear on the TV screen. Some DVD discs may not have a region code label even though their playback is prohibited by area limits.



Note on DTS-encoded CDs

When playing DTS-encoded CDs, excessive audio level may be heard from the analog stereo output. To avoid possible damage to the audio system, turn down the volume before playing back such discs, adjust the volume gradually, and keep the volume level low. To enjoy DTS Digital Surround™ playback, an external 5.1 channel DTS Digital Surround™ decoder system must be connected to the digital output of the unit.

Disc-related terms

Title (DVD only)

The main film content or accompanying feature content or additional feature content, or music album.

Each title is assigned a title reference number enabling you to locate it easily.

Chapter (DVD only)

Sections of a picture or a musical piece that are smaller than titles. A title is composed of one or several chapters. Each chapter is assigned a chapter number, enabling you to locate the chapter you want. Depending on the disc, chapters may not be recorded.

Track (Video CD and audio CD only)

Sections of a picture or a musical piece on a video CD or an audio CD. Each track is assigned a track number, enabling you to locate the track you want.

Scene

On a video CD with PBC (Playback control) functions, moving pictures and still pictures are divided into sections called “Scenes”. Each scene is displayed in the menu screen and assigned a scene number, enabling you to locate the scene you want.

A scene is composed of one or several tracks.

Types of video CDs

There are two types of video CDs:

Video CDs equipped with PBC (Version 2.0)

PBC (Playback control) functions allow you to interact with the system via menus, search functions, or other typical computer-like operations. Moreover, still pictures of high resolution can be played if they are included in the disc.

Video CDs not equipped with PBC (Version 1.1)

Operated in the same way as audio CDs, these discs allow playback of video pictures as well as sound, but they are not equipped with PBC.

Precautions

Handling the unit

When shipping the unit

The original shipping carton and packing materials come in handy. For maximum protection, re-pack the unit as it was originally packed at the factory.

When setting up the unit

The picture and sound of a nearby TV, VCR, or radio may be distorted during playback. In this case, position the unit away from the TV, VCR, or radio, or turn off the unit after removing the disc.

To keep the exterior surfaces clean

Do not use volatile liquids, such as insecticide spray, near the unit. Do not leave rubber or plastic products in contact with the unit for a long period of time. They will leave marks on the surface.

Cleaning the unit

To clean the cabinet

Use a soft, dry cloth. If the surfaces are extremely dirty, use a soft cloth lightly moistened with a mild detergent solution. Do not use strong solvents such as alcohol, benzene, or thinner, as these might damage the surface of the unit.

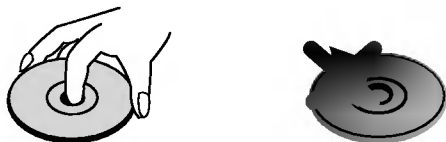
To obtain a clear picture

The DVD player is a high-tech, precision device. If the optical pick-up lens and disc drive parts are dirty or worn, the picture quality will be poor. Regular inspection and maintenance are recommended after every 1,000 hours of use. (This depends on the operating environment.)
For details, please contact your nearest dealer.

Notes on Discs

Handling discs

Do not touch the playback side of the disc.
Hold the disc by the edges so that fingerprints will not get on the surface.
Do not stick paper or tape on the disc.



Storing discs

After playing, store the disc in its case. Do not expose the disc to direct sunlight or sources of heat, or leave it in a parked car exposed to direct sunlight, as there may be a considerable temperature increase inside the car.

Cleaning discs

Fingerprints and dust on the disc can cause poor picture quality and sound distortion. Before playing, clean the disc with a clean cloth. Wipe the disc from the center out.



Do not use strong solvents such as alcohol, benzene, thinner, commercially available cleaners, or anti-static spray intended for older vinyl records.








About Symbols

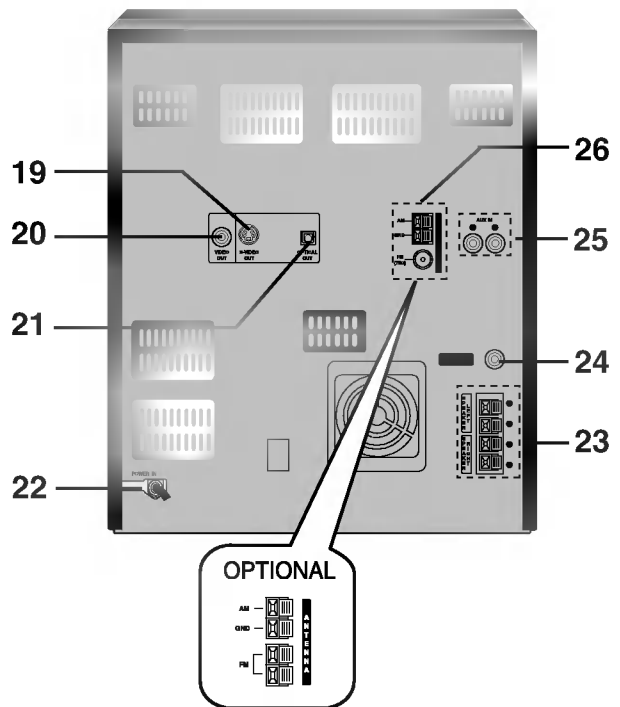
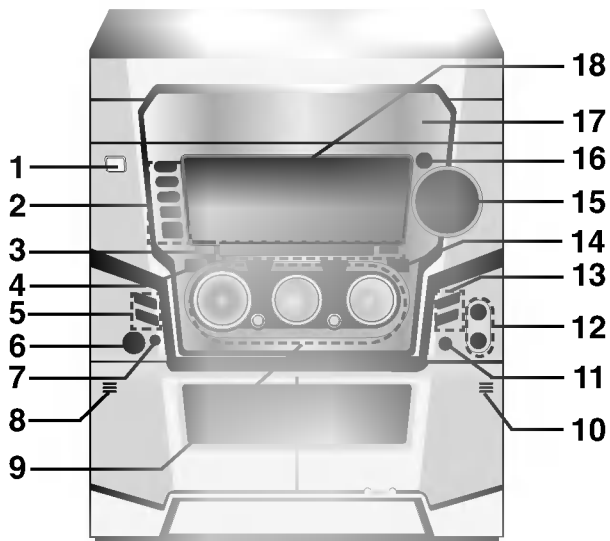
About the Ⓞ symbol display

“Ⓞ” may appear on the TV screen during operation. This icon means the function explained in this owner's manual is not available on that specific DVD video disc.

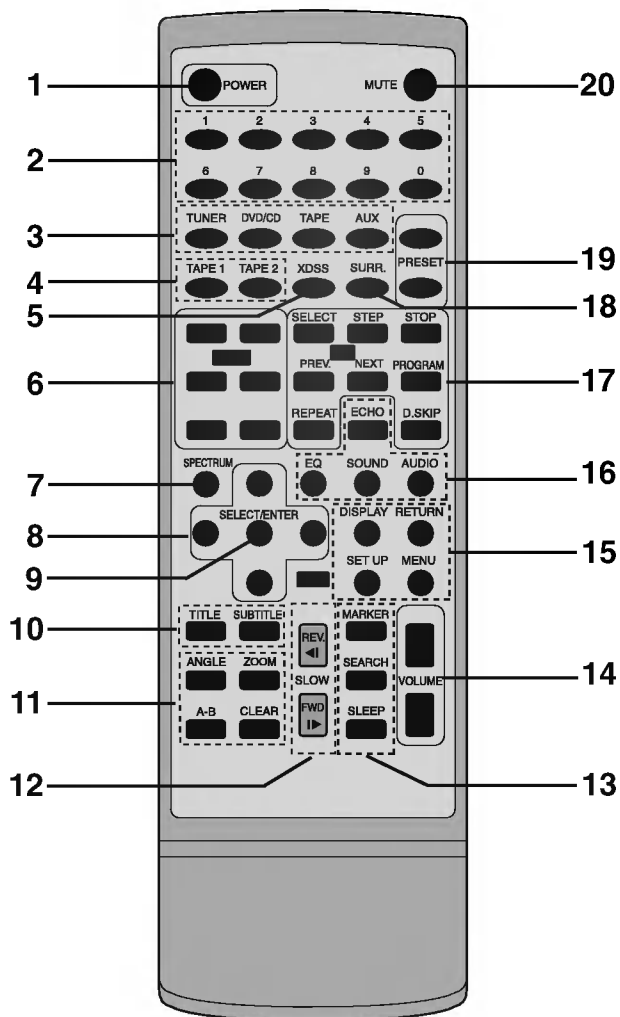
About the disc symbols for instructions

A section whose title has one of the following symbol is applicable only to the disc represented by the symbol.

-  DVD
-  Video CDs with the PBC (playback control) function.
-  Video CDs without the PBC (playback control) function.
-  Audio CDs.
-  MP3 disc.
-  WMA disc.
-  JPEG disc.



1. POWER (⏻ STANDBY/ON) button
2. • DISC DIRECT PLAY buttons (DISC1, DISC2, DISC3)
• DISC SKIP button (DISC SKIP)
• CD DOOR OPEN/CLOSE (▲ CD OPEN) button
3. • MODE/RIF button
• FUNCTION SELECT buttons (TUNER, TAPE, DVD/CD, AUX)
• PROGRAM/MEMORY (PROG./MEMO.) button
4. • RDS button : OPTIONAL
• CD PAUSE (CD||)/ SET button
• COUNTER RESET (COUNT.RESET) button : OPTIONAL
5. • NORMAL DUBBING (NOR-DUBB.)/
CD SYNCHRO RECORDING (CD SYNC.) button
• HIGH DUBBING (HI-DUBB.)/ REPEAT button
6. HEADPHONE SOCKET (PHONES) - ϕ 6.3mm
7. • PLAY MODE button : OPTIONAL
• DEMO button
• COUNTER RESET (COUNT.RESET) button : OPTIONAL
8. ▲ PUSH EJECT position (TAPE 1)
9. • XDSS button
• SURROUND (SURR.) button
• MULTI JOG DIAL/ SKIP (-/+)
• RECORD/ RECORD PAUSE (●REC/||) button
• PRESET DOWN/UP buttons
PLAY (▶)/ REVERSE PLAY (◀: optional) button
• STOP (■STOP)/ CLEAR button
• TUNING DOWN/UP buttons
• REWIND/ FAST FORWARD (◀◀▶▶) buttons
• CD SEARCH (◀◀▶▶) buttons
10. ▲ PUSH EJECT position (TAPE 2)
11. MIC VOLUME KNOB (MIC VOL.) : OPTIONAL
12. MIC JACKS (MIC1, MIC2) : OPTIONAL
13. • CLOCK button
• TIMER button
14. EQUALIZER (EQ) button
15. VOLUME knob
16. Remote Sensor
17. CD door
18. Display Window
19. S-VIDEO OUT Jack
20. VIDEO OUT Jack
21. OPTICAL OUT Jack
22. POWER CORD
23. SPEAKER Connector
24. SUB WOOFER OUT Connector
25. AUXILIARY INPUT Sockets (AUX IN)
26. ANTENNA Terminal



1. POWER button
2. NUMERIC buttons (0-9)
3. FUNCTION SELECT buttons (TUNER, TAPE, DVD/CD, AUX)
4. TAPE 1/2 SELECT buttons
5. XDSS button
6. TAPE FUNCTION buttons
 - REWIND/ FAST FORWARD PLAY (◀◀/▶▶)
 - PLAY (▶)
 - REVERSE PLAY (◀: optional)
 - STOP (■)
 - RECORD/ RECORD PAUSE (●/||)
7. SPECTRUM button
8. ARROW buttons
(For use in highlighting a selection on a GUI menu screen, TITLE and MENU screen.)
9. SELECT/ENTER button
10. • TITLE button
(Use the TITLE button to display the title screen included on DVD video discs.)
- SUBTITLE button
11. ANGLE/ ZOOM/ REPEAT(A-B)/ CLEAR buttons
12. SLOW(◀◀/▶▶)/SCAN(REV./FWD) buttons
13. MARKER/ SEARCH/ SLEEP buttons
14. VOLUME -/+ buttons
15. • DISPLAY/ RETURN/ SET UP buttons
- MENU button
(Use the MENU button to display the menu screen included on DVD video discs.)
16. EQUALIZER (EQ)/ SOUND/ AUDIO/ ECHO buttons
17. DVD/CD CONTROL buttons
 - PLAY/SELECT (▶), PAUSE(||) / STEP, STOP (■)
 - SKIP/PREV. (◀◀), SKIP/NEXT (▶▶)
 - PROGRAM
 - REPEAT, DISC SKIP (D.SKIP)
- SKIP ◀◀/▶▶** : Press and hold button for about two seconds for search function.
18. SURROUND (SURRE) button
19. PRESET (▲/▼) buttons
20. MUTE button

Remote Control Operation Range

Point the remote control at the remote sensor and press the buttons.

- **Distance:** About 23 ft (7 m) from the front of the remote sensor
- **Angle:** About 30° in each direction of the front of the remote sensor

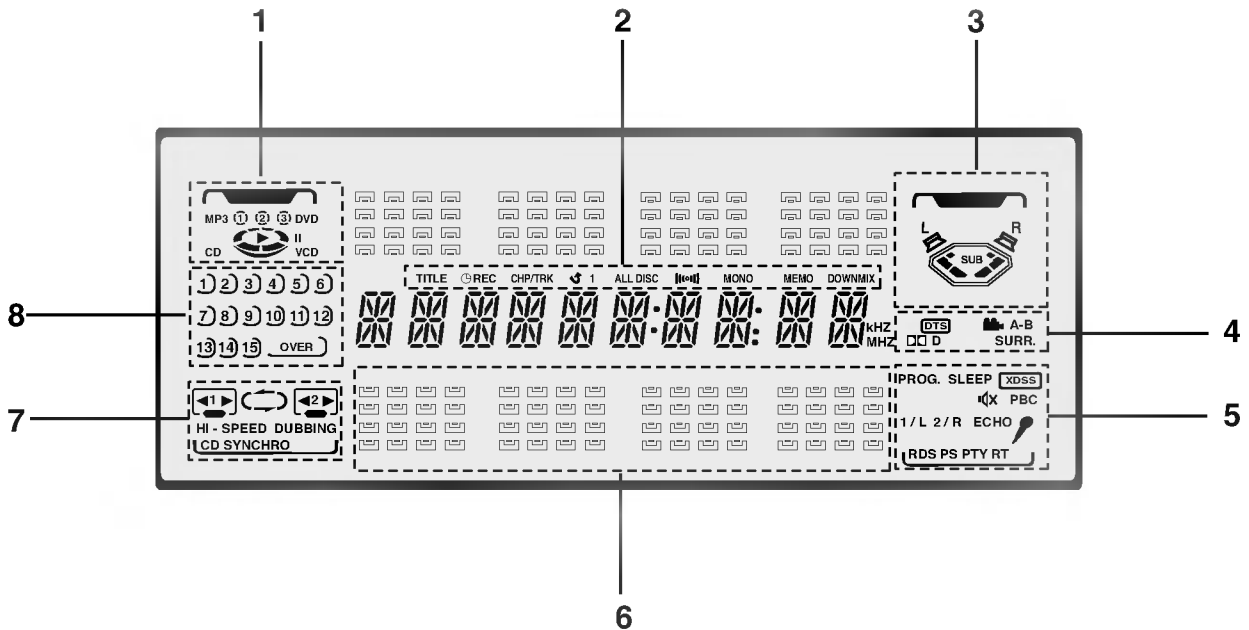
Remote control battery installation



Detach the battery cover on the rear of the remote control, and insert two R03 (size AAA) batteries with + and - aligned correctly.

⚠ Caution

Do not mix old and new batteries. Never mix different types of batteries (standard, alkaline, etc.).



- | | |
|---|--|
| <p>1. • DISC indicator
• DISC NUMBER indicator
• PLAY/ PAUSE indicator</p> <p>2. • TITLE indicator
• TIMER indicator
• CHAPTER/ TRACK indicator
• REPEAT indicator
• FM STEREO RECEIVING indicator
• MONO indicator
• MEMORY (MEMO) indicator
• DOWNMIX indicator</p> <p>3. • LEFT FRONT SPEAKER indicator (L)
• RIGHT FRONT SPEAKER indicator (R)
• SUB WOOFER indicator (SUB)</p> | <p>4. • DOLBY DIGITAL indicator
• SURROUND indicator (SURR.)
• REPEAT A-B/ ANGLE indicator</p> <p>5. • PROGRAM/ SLEEP/ XDS indicator
• MUTE/ PBC indicator
• ECHO indicator
• MIC indicator : OPTIONAL
• RDS indicator : OPTIONAL</p> <p>6. LEVEL indicator</p> <p>7. • TAPE 1/2 SELECT indicator
• PLAY MODE indicator
• DUBBING indicator
• CD SYNCHRO RECORDING indicator</p> <p>8. • CD MUSIC CALENDAR indicator</p> |
|---|--|



Connecting to External Equipment or Antenna

- Connect the AUX IN (L/R) jacks on the unit to the AUDIO OUT (L/R) jacks on the VCR, LD player, etc using the audio cables.

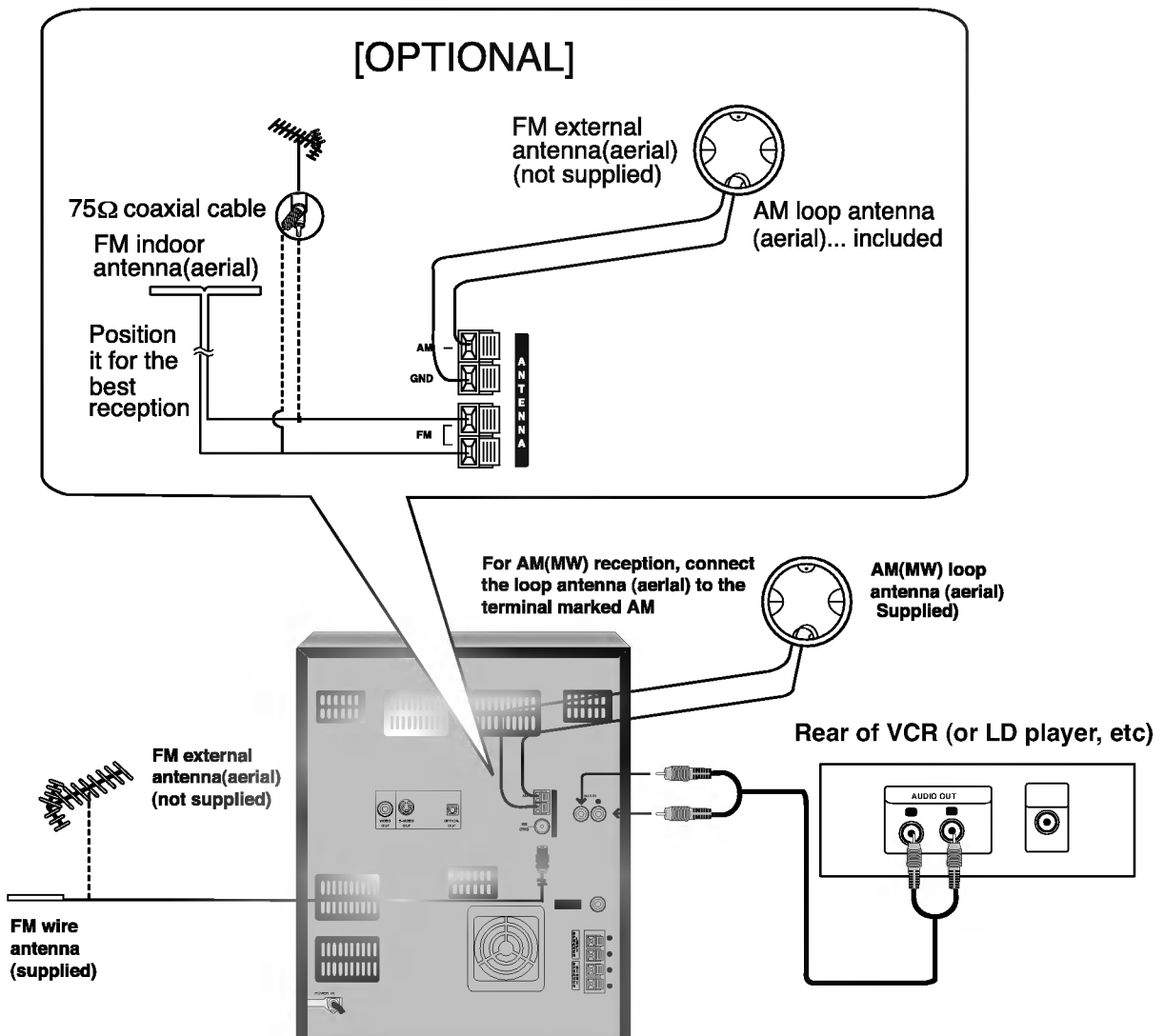
Notes

- To prevent noise pickup, keep the AM loop antenna away from the unit and other component.
- Be sure to fully extend the FM wire antenna.
- After connecting the FM wire antenna, keep it as horizontal as possible.

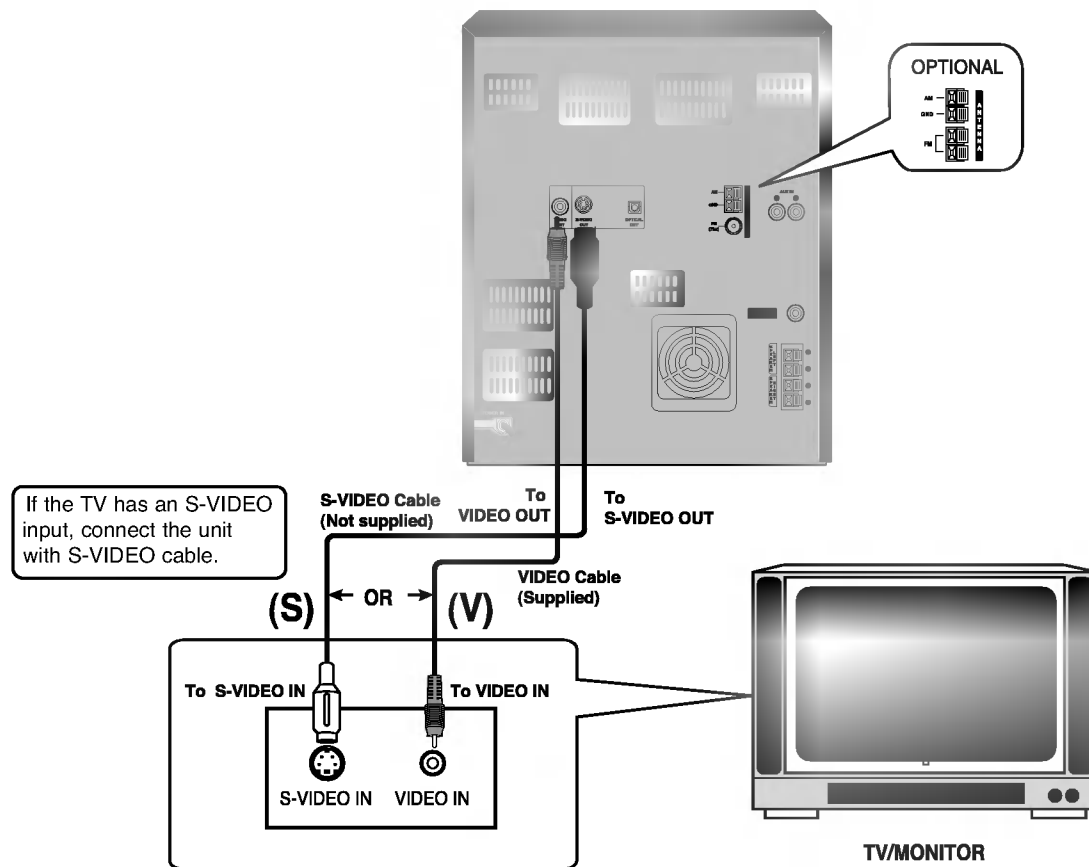
- Connect the supplied FM/AM antennas for listening to the radio.
 - Connect the AM loop antenna to the AM antenna connector.
 - Connect the FM wire antenna to the FM antenna connector.

Tip

Press AUX to select input to these jacks. "AUX" appears on the display window.



Connecting to a TV



- Make one of the following connections, depending on the capabilities of your existing equipment.

Tips

- Depending on your TV and other equipment you wish to connect, there are various ways you could connect the player. Use one of the connections described below.
- Please refer to the manuals of your TV, VCR, Stereo System or other devices as necessary to make the best connections.

Caution

- Make sure unit is connected directly to the TV. Select the correct AV input on your TV.
- Do not connect your unit to TV via your VCR. The picture image could be distorted by the copy protection system.

Video connection

Connect the VIDEO OUT jack on the unit to the VIDEO IN jack on the TV using the video cable supplied **(V)**.

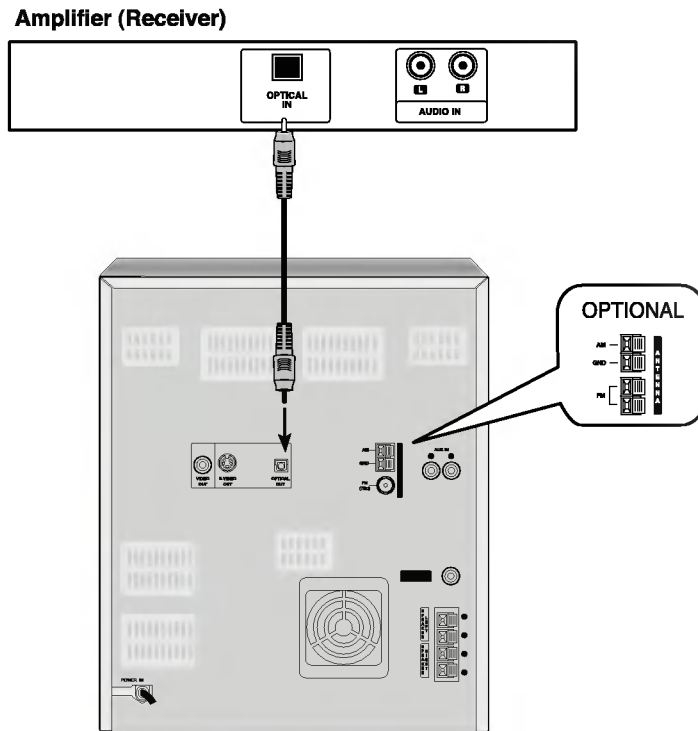
S-Video connection

Connect the S-VIDEO OUT jack on the the unit to the S-VIDEO IN jack on the TV using the optional S-Video cable **(S)**.

Notes

- The signal of S-VIDEO OUT jack will output only when the function mode is selected to CD/DVD.
- When you connect the unit to your TV, be sure to turn off the power and unplug both units from the wall outlet before making any connections.

Connecting to Optional Equipment



Connecting to an amplifier equipped with two channel digital stereo (PCM) or to an Audio/ Video receiver equipped with a multi-channel decoder (Dolby Digital™, MPEG 2 or DTS)

Connect the OPTICAL OUT jack on the unit to the OPTICAL IN jack on your amplifier. Use an optional audio cable.

Caution:

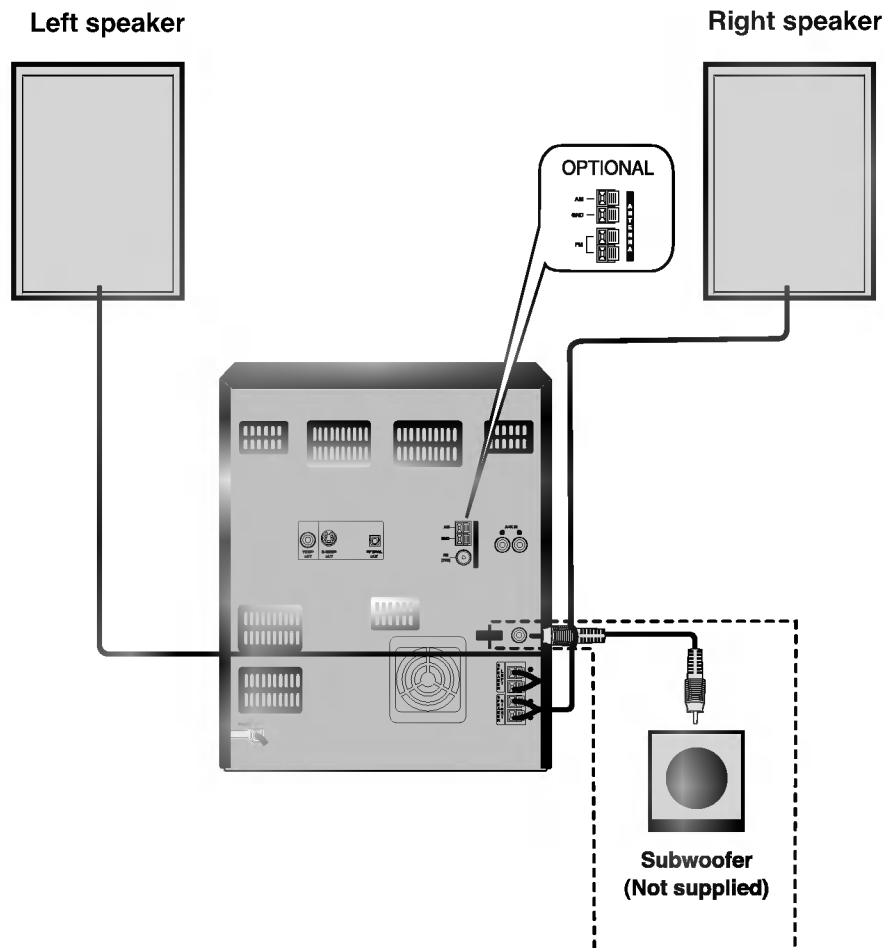
Due to the DTS Licensing agreement, the digital output will be in DTS digital out when DTS audio stream is selected.
The sound is muted during playback on an audio CD recorded in dts.

Notes

- If the audio format of the digital output does not match the capabilities of your unit, the DVD Karaoke will produce a strong, distorted sound or no sound at all.
- Six Channel Digital Surround Sound via digital connection can only be obtained if your unit is equipped with a Digital Multi-channel decoder.
- To see the audio format of the current unit in the On-Screen Display, press AUDIO.

Speaker System Connection

Connect the speakers using the supplied speaker cords by matching the colors of the terminals and those of the cords. To obtain the best possible surround sound, adjust the speaker parameters (distance, level, etc.).



If you feel lack of bass frequency

Connect an active sub woofer to the SUB WOOFER OUT connector using a monaural audio cord (not supplied).

Notes

- Be sure to match the speaker cord to the appropriate terminal on the components: + to + and – to –. If the cords are reversed, the sound will be distorted and will lack base.
- If you use front speakers with low maximum input rating, adjust the volume carefully to avoid excessive output on the speakers.

Audio Adjustment

Volume Adjustment

- Turn VOLUME knob clockwise to increase the sound level, or counterclockwise to decrease it.
- Press VOLUME + to increase the sound level, or use VOLUME - to decrease it on the remote control.

Sound Quality Adjustment

• To activate stereo sound

You can choose between 4 fixed sound impressions. Select a desired sound mode using the EQUALIZER (EQ).

- FLAT : Linear frequency response
- ROCK : More bass, more treble
- POP : Less bass, less treble
- CLASSIC : For orchestral music

• Headphone Jack

Connect a stereo headphone plug (ø6.3mm) into the headphone jack.

The speakers are automatically disconnected when you plug in the headphones (not supplied).

MUTE

Press MUTE to turn off the sound, press again to restore.

You can mute your unit in order, for example, to answer the telephone, "M" indicator flashes in the display window.

SURROUND

To activate surround mode

You can choose one between 2 fixed sound impressions.

Press SURROUND (SURR.) button.

SURROUND ON ↔ SURROUND OFF

XDSS (Extreme Dynamic Sound System)

Press XDSS to reinforce treble and bass.

- The "XDSS ON" indicator lights up.

To cancel it press XDSS again.

- The "XDSS OFF" indicator lights up.

DEMO Mode

With the unit plugged in but turned off, press the DEMO for a continuous visual display of units features. Press it again to return to a display of the current time.

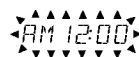
SPECTRUM Effect

Whenever you press the SPECTRUM button on the remote control, you can enjoy the spectrum change with 8 types in the display.

Setting the Clock

1 Press **CLOCK**.
(If the clock requires setting, press and hold **CLOCK** for more than 2 seconds.)
- The hours display begins to blink.

2 Select either the 12 hour cycle or the 24 hour cycle by turning **MULTI JOG DIAL**.



(12HR)

or



(24HR)

3 Press **SET** to confirm the selected hour cycle.

4 Use **MULTI JOG DIAL** to set the current hour.

5 Press **SET**.

6 Use **MULTI JOG DIAL** to set current minutes.

7 Press **SET** and the correct time is shown on the display.

8 Press **CLOCK** at any time to show the time on the display, for about 5 seconds.

Sleep Timer Function

When the sleep timer is set, the unit automatically turns off after the specified time has elapsed.

1 To specify the time delay before the power is turned off, press **SLEEP**.

In the display window you can see *SLEEP 90* for about 5 seconds. This means that the system turns off automatically after 90 minutes.

Each time the button is pressed the time interval before it turns off is reduced by 10 minutes. i.e. 80...70... etc. Select the desired time to turn off.

2 To check the remaining time until the power is turned off.

While the sleep function is active press **SLEEP** briefly. The time remaining until the unit turns off is displayed for about 5 seconds.

Note

If you press **SLEEP** while the sleep time is displayed, the SLEEP time is reset.

To cancel Sleep Timer setting

If you wish to stop the function, press the **SLEEP** button repeatedly until "SLEEP 10" appears, and then press **SLEEP** once again after "SLEEP 10" shows on the display.



Timer Function

With the TIMER function you can have the radio reception and recording, CD or tape playing turned on and off at the time desired.

1 Press **CLOCK** to check the current time.

For your reference

If you don't set clock, timer function doesn't work.

2 Press **TIMER** to enter the timer setting mode.
TUNER-CD-TAPE flash in the display window in turn.

For your reference

If you want to correct the previous memorized TIMER setting, press and hold the **TIMER** button more than 2 seconds.

- The previous memorized timer setting for On Time and "⊙" indicators appear in the display.

3 Press **SET** when the desired function flashes.

4 1. a. When you select **TUNER** function, 'PLAY' and 'REC' indicator flash in the display window alternately for about 3 seconds.

'PLAY' indicator : TUNER play only
'REC' indicator : TUNER play and recording

b. Select the previous memorized preset number with **MULTI JOG DIAL** on the front panel and press **SET**.

'ON TIME' indicator appears for about 0.5 seconds in the display window and then disappears.

2. When you select **CD** or **TAPE** function, 'ON TIME' indicator appears for about 0.5 seconds in the display window and then disappears.

5 Set the turn on hour turning **MULTI JOG DIAL**.

6 Press **SET** to confirm the turn on hour time.

7 Set the turn on minutes time turning **MULTI JOG DIAL**.

8 Press **SET** to confirm the turn on minutes time.

'OFF TIME' indicator appears for about 0.5 seconds in the display window and then disappears.

9 Set the turn off hour time turning **MULTI JOG DIAL**.

10 Press **SET**.



11 Set the turn off minutes turning **MULTI JOG DIAL**.

12 Press **SET**.

13 Adjust the volume level turning **MULTI JOG DIAL**.

14 Press **SET**.

"⊙" appear in the display window and the timer setting has been completed.

15 Turn the system off.

The selected timer functions are automatically switched on and off at the preset times.

To cancel or check the timer

Each time the **TIMER** button is pressed you can select the timer set or cancel. You can also check the timer setting status. To activate or check the timer, press the **TIMER** button repeatedly so that "⊙" appears in the display window. To cancel the **TIMER**, press the **TIMER** button repeatedly so that "⊙" disappears from the display window.

Using Microphone - OPTIONAL

You can sing to a music source by connecting a microphone to the unit.

1 Connect your microphone (not supplied) to the **MIC** socket.

"♪" will be shown in the display window.

2 Play a music you want.

3 Sing along with the accompaniment.

Adjust the microphone volume by turning **MIC VOLUME KNOB**.

For your reference

You can record during using microphone.

Refer to the "Recording" explanation section.

Notes

- When not using the microphone, set the **MIC** volume knob to minimum or turn off the **MIC** and remove the microphone from the **MIC** socket.
- If the microphone is set too near the speaker, a howling sound may be produced. In this case, move the microphone away from the speaker or decrease the sound level by using the **MIC** volume control.
- If sound through the microphone is extremely loud, it may be distorted. In this case, turn the **MIC** volume control toward minimum.

To Adjust ECHO Volume


You can give an echo effect to the sound from the microphones.

Press the **ECHO** repeatedly.

ECHO OFF → ECHO - 1 → ECHO - 2 → ECHO 3



General Explanation

This manual gives basic instructions for operating the Unit. Some DVDs require specific operation or allow only limited operation during playback. When this occurs, the symbol  appears on the TV screen, indicating that the operation is not permitted by the Unit or is not available on the disc.









On-Screen Display

General playback status can be displayed on the TV screen. Some items can be changed on the menu.

On-screen display operation


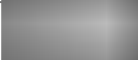
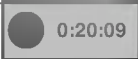




- 1** Press **DISPLAY** during playback.
- 2** Press **▲/▼** to select an item.
The selected item will be highlighted.
- 3** Press **◀▶** to change the setting of an item.
The number buttons can be also be used for setting numbers (e.g., title number). For some functions, press **SELECT/ENTER** to execute the setting.


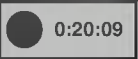


Temporary Feedback Field Icons

-  **TITLE** Repeat Title
-  **CHAPT** Repeat Chapter
-  **TRACK** Repeat Track (non-PBC Video CDs only)
-  **ALL** Repeat All Tracks (non-PBC Video CDs only)
-  **A B** Repeat A-B
-  **OFF** Repeat Off
-  Resume play from this point
-  Action prohibited or not available

Notes

- Some discs may not provide all of the features on the on-screen display example shown below.
- If no button is pressed for 10 seconds, the on-screen display disappears.

Items		Function (Press ▲/▼ to select desired item)	Selection Method
Title Number		Shows the current title number and total number of titles, and skips to the desired title number.	◀ / ▶, or Numbers, SELECT/ENTER
Chapter Number		Shows the current chapter number and total number of chapters, and skips to the desired chapter number.	◀ / ▶, or Numbers, SELECT/ENTER
Time search		Shows the elapsed playing time, and searches the point by the elapsed time directly.	Numbers, SELECT/ENTER
Audio language and Digital Audio Output mode		Shows the current audio soundtrack language, encoding method, and channel number, and changes the setting.	◀ / ▶, or AUDIO
Subtitle language		Shows the current subtitles language, and changes the setting.	◀ / ▶, or SUBTITLE
Angle		Shows the current angle number and total number of angles, and changes the angle number.	◀ / ▶, or ANGLE
Sound		Shows the current sound mode, and changes the setting.	◀ / ▶, or SOUND

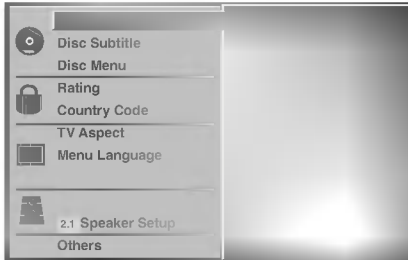
Items		Function (Press ▲/▼ to select desired item)	Selection Method
Track Number		Shows the current track number, total number of tracks and PBC On mode, and skip to the desired track number.	◀ / ▶, or Numbers, SELECT/ENTER
Time		Shows the elapsed playing time (Display only)	-
Audio Channel		Shows the audio channel, and changes the audio channel.	◀ / ▶, or AUDIO
Sound		Shows the current sound mode, and changes the setting.	◀ / ▶, or SOUND

Initial Settings

You can set your own Personal Preferences on the unit.

General Operation

- 1 Press SETUP.**
The setup menu appears.



- 2 Press ▲▼ to select the desired item.**
The screen will show the current setting for the selected item, as well as alternate setting(s).

- 3 While the desired item is selected, press ►, then ▲▼ to select the desired setting.**

- 4 Press ENTER to confirm your selection.**
Some items require additional steps.

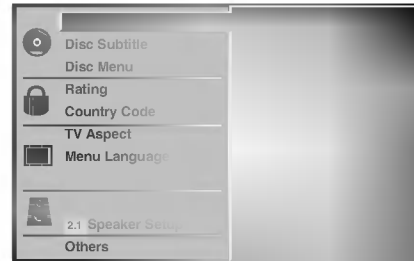
- 5 Press SETUP, RETURN, or PLAY to exit the setup menu.**

Language

Disc Language

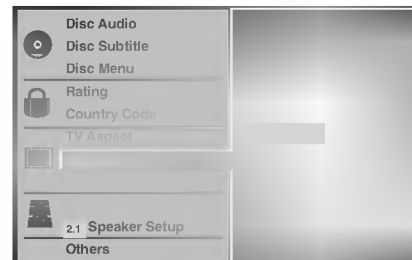
Select a language for the disc's Menu, Audio, and Subtitle.

Original : The original language set for the disc is selected.
Other : To select another language, press number buttons to enter the corresponding 4-digit number according to the language code list on page 30. If you enter the wrong language code, press CLEAR.



Menu Language

Select a language for the setup menu. This is the menu you see when you press SETUP.



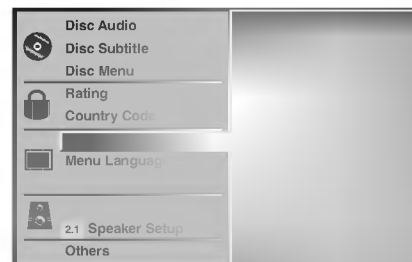
Picture

TV Aspect

4:3 Letterbox: Select when a standard 4:3 TV is connected. Displays theatrical images with masking bars above and below the picture.

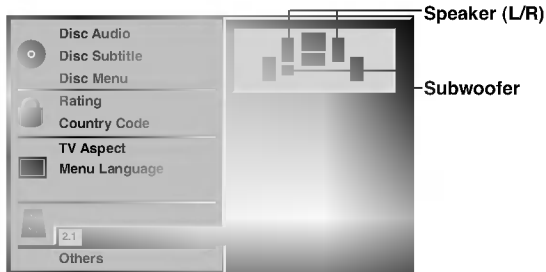
4:3 Panscan: Select when a conventional TV set is connected. The video material formatted in the Pan & Scan style is played back in that style (Both sides of the picture are cut off).

16:9 Wide: Select when a 16:9 wide TV is connected.



Speaker Setup

Select the speaker to adjust the audio output mode of the speaker.



- 1** Select "2.1 Speaker Setup" using the ▲▼ buttons on the setup menu.
- 2** While "2.1 Speaker Setup" is selected, press ► button.
- 3** Press ► buttons to select the desired speaker.
- 4** Adjust options by using ▲▼◀▶ buttons.

Speaker selection

Select a speaker that you want to adjust. (Speaker(L/R) or Subwoofer)

Note

Certain speaker settings are prohibited by the Dolby Digital licensing agreement.

Volume

Press ◀/▶ to adjust the output level of the selected speaker. (-6dB ~ +6dB)

Size

Since the speaker settings are fixed, you cannot change the settings.

Test

Press ENTER to test the signals of each speaker. Adjust the volume to match the volume of test signals memorized in the system.

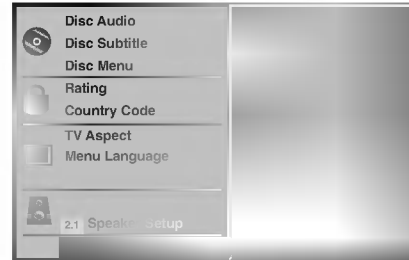
Return

Press ENTER to return to the previous menu.

Others

The DRC, Vocal, PBC and Auto Play settings can be changed.

- Press ▲▼ to select the desired item and press ENTER. The setting of the selected item is changed between On and Off.



Dynamic Range Control (DRC)

With the DVD format, you can hear a program's soundtrack in the most accurate and realistic presentation possible, thanks to digital audio technology. However, you may wish to compress the dynamic range of the audio output (the difference between the loudest sounds and the quietest ones). Then, you may listen to a movie at a lower volume without losing clarity of sound. Set DRC to On for this effect.

Vocal

Set Vocal to On only when a multi-channel karaoke DVD is playing. The karaoke channels on the disc will mix into normal stereo sound.

PBC

Set Playback Control (PBC) to On or Off.

On: Video CDs with PBC are played according to the PBC.
Off: Video CDs with PBC are played the same way as Audio CDs.

Auto Play

You can set up the unit so a DVD disc automatically starts playing whenever the DVD is inserted. If Auto Play mode is set to On, this unit will search a title that playback time is longest and then play back the title automatically.

On: Auto Play function is activated.

Off: Auto Play function is not activated.

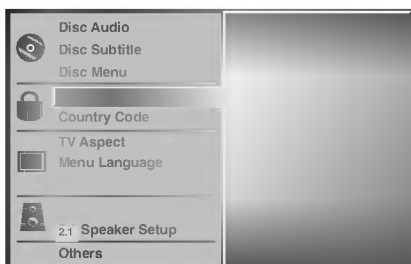
Note

The Auto Play function may not work for some DVDs.

Parental Control

Rating

Movies on DVDs may contain scenes not suitable for children. Therefore, discs may contain Parental Control information that applies to the complete disc or to certain scenes on the disc. These scenes are rated from 1 to 8, and alternatively, more suitable scenes are available for selection on some discs. Ratings are country-dependent. The Parental Control feature allows you to prevent discs from being played by your children or to have certain discs played with alternative scenes.



- 1 Select "Rating" on the Setup menu using the ▲▼ buttons.
- 2 While "Rating" is selected, press ►.
- 3 When you have not entered a password yet. Enter a 4-digit password using the numbered buttons to create a personal 4-digit security password. then press SELECT/ENTER. Enter the 4-digit password again and press SELECT/ENTER to verify. **When you have already entered a password;** Enter a 4-digit password using the numbered buttons to confirm the personal 4-digit security password, then press SELECT/ENTER.
If you make a mistake before pressing SELECT/ENTER, press CLEAR and enter 4-digit security password again.
- 4 Select a rating from 1 to 8 using the ▲▼ buttons. One (1) has the least playback restrictions. Eight (8) has the most playback restrictions. **Unlock:** If you select Unlock, Parental Control is not active. The disc will play in full. **Ratings 1 to 8:** Some discs contain scenes not suitable for children. If you set a rating for the player, all disc scenes with the same rating or lower will be played. Higher rated scenes will not be played unless an alternative scene is available on the disc. The alternative must have the same rating or a lower one. If no suitable alternative is found, playback will stop. You must enter the 4-digit password or change the rating level in order to play the disc.
- 5 Press SELECT/ENTER to confirm your rating selection, then press SETUP to exit the menu.

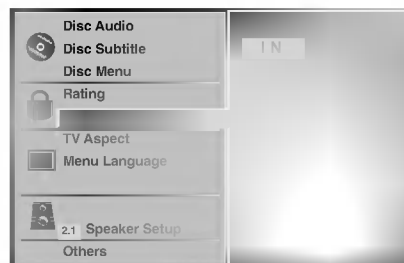
Note

This function may not work for some DVDs.



Country Code

Enter the code of a country/area whose standards were used to rate the DVD video disc, referring to the list (See "Country Code List", page 31.).



- 1 Select Country Code using the ▲▼ buttons on the setup menu.
- 2 While Country Code is selected, press ►.
- 3 Follow step 3 of "Rating" on left.
- 4 Select the first character using the ▲▼ buttons.
- 5 Shift the cursor using ► button and select the second character using ▲▼ buttons.
- 6 Press SELECT/ENTER to confirm your country code selection, then press SETUP to exit the menu.

Note

Confirmation of the 4-digit password is necessary when the code is changed (see "Changing the 4-digit code" below.).

Changing the 4-digit code

- 1 Follow Steps 1-2 as shown above to the left (Rating).
- 2 Enter the old code, then press SELECT/ENTER.
- 3 Select Change using ▲▼ buttons then press SELECT/ENTER.
- 4 Enter the new 4-digit code, then press SELECT/ENTER.
- 5 Enter exactly the same code a second time and verify by pressing SELECT/ENTER.
- 6 Press SETUP to exit the menu.

If you forget your 4-digit code

If you forget your password, to clear the current password, follow the procedure below.

- 1 Press SETUP to display the setup menu.
- 2 Use the Number buttons to enter the 6-digit number "210499".
The 4-digit password is cleared.
- 3 Enter a new code as shown above to the left (Rating).

Presetting the radio stations

You can preset 30 stations for FM and AM. Before tuning, make sure that you have turned the volume down to the minimum level.

- 1 Press TUNER to show either FM or AM in the display window.**
Every time you press this button, AM and FM changes alternately.
- 2 Press TUNING DOWN/UP on the front panel until the frequency indication starts to change, then release.**

Notes

- **Automatic Tuning**
Press the TUNING DOWN/UP.
 - Scanning stops when the unit tunes in a station.
 - **Manual Tuning**
Use the MULTI JOG DIAL.
- 3 Press PROG./MEMO. on the front panel.**
A preset number will flash in the display window.
 - 4 Press PRESET DOWN/UP (or PRESET ▲/▼ on the remote control) to select the preset number you want.**
 - 5 Press PROG./MEMO. again.**
The station is stored.
 - 6 Repeat steps 2 to 5 to store other stations.**

To clear all memorized stations

Press and hold PROG./MEMO. on the front panel for about two seconds, "CLEAR" appears in the display window and then press CLEAR on the front panel, the stations are cleared.

For your reference

If all stations have already been entered, "FULL" message will appear in the display window for a moment and then a preset number will flash. To change the preset number, follow the steps 4-5 .

To recall preset numbers

Press and hold PRESET DOWN/UP (or PRESET ▲/▼ on the remote control) until the desired preset number appears or press the button repeatedly.

Listening to the radio

- 1 Press TUNER to select either AM or FM in the display window.**
The last received station is tuned in.
- 2 Press PRESET DOWN/UP (or PRESET ▲/▼ on the remote control) repeatedly to select the preset station you want.**
Each time you press this button, the unit tunes in the next preset station.
- 3 Adjust the volume by rotating VOLUME knob (or pressing VOLUME +/- on the remote control) repeatedly.**

To listen to non-preset radio stations

- For manual tuning, see "Manual Tuning".
- For automatic tuning, see "Automatic Tuning".

To turn the radio off

Press POWER to turn off the unit or to select another function mode (TAPE, DVD/CD or AUX).

For your reference

- **If a FM program is noisy**
Press MODE/RIF repeatedly so that "■■■■" disappears in the display window. There will be no stereo effect, but the reception will improve. Press MODE/RIF again to restore the stereo effect.
- **To improve reception**
Reposition the supplied antennas.

Notes

- Use MODE/RIF (Radio Interference Filter) function to switch to Mono reception if stereo reception is distorted by noise.
- While recording weak AM broadcasts, if noises occurs, press MODE/RIF once.

RDS Function - OPTIONAL

About RDS

This unit is equipped with RDS (Radio Data System), which brings a wide range of information from FM radio. RDS is a system for transmitting station call signs or network information, a description of station programme type text message about the station or specifics of musical selection and the correct time.

RDS Tuning

When a FM station containing RDS data is tuned in, the unit will automatically display the station's call sign and the RDS indicator will light in the Display Window as well as indicators for the programme type recognition (PTY), Radio Text (RT), Clock Time (CT) and RDS service programme (PS) if transmitted by the station.

RDS Display Options

The RDS system is capable of transmitting a wide variety of information in addition to the initial call sign that appears when a station is first tuned. In normal RDS operation the display will indicate the station name, broadcast network or call letters. Pressing **RDS** on the front panel enables you to cycle through the various data types in the sequence:

(PS → FREQUENCY → PTY → RT → CT)

- **PTY (Programme type recognition)**- The programme type is shown on the display window.
- **RT (Radio text recognition)**- The radio station's name is displayed on the display window.
- **CT (Time controlled by the channel)**- Enable the unit to receive the actual time and show it on the display window.
- **PS (Programme Service name)**- The programme title is displayed on the display window.

Notes

- Some RDS stations may not choose to include some of these additional features. If the data required for the selected mode is not being transmitted, the Display Window will show a **PTY NONE, RT NONE, CT NONE, PS NONE** message.

Programme Search (PTY)

A major benefit of RDS is its ability to encode broadcasts with Programme Type (PTY) codes that indicate the type of material being broadcast. The following list shows the abbreviations used to indicate each PTY along with an explanation of the PTY.

NEWS	News
AFFAIRS	Current Affairs
INFO	Information
SPORT	Sports
EDUCATE	Educational
DRAMA	Drama
CULTURE	Culture
SCIENCE	Science
VARIED	Varied Speech Programme
POP M	Popular Music
ROCK M	Rock Music
EASY M	Easy Listening Music
LIGHT M	Classical Music
CLASSICS	Serious Classical Music
OTHER M	Other Music
WEATHER	Weather Information
FINANCE	Financial Programmes
CHILDREN	Children's Programmes
SOCIAL	Social Affairs Programmes
RELIGION	Religious Broadcasts
PHONE IN	Phone-In Programmes
TRAVEL	Travel and Touring
LEISURE	Leisure and Hobby
JAZZ	Jazz Music
COUNTRY	Country Music
NATION M	National Music
OLDIES	Oldies Music
FOLK M	Folk Music
DOCUMENT	Documentary Programmes
TEST	Station Alarm Test Message
ALARM 1	Emergency Broadcast Information

You may search for a specific Programme Type (PTY) by following these steps:

- 1 Press TUNER to select FM mode.**
- 2 Select a desired station by pressing TUNING DOWN/UP.**
When the RDS transmission is received, the display shows the program service name (PS) after RDS indicator appears.
- 3 Press the RDS to select PTY mode.**
- 4 To search for a different PTY, press the PRESET DOWN/UP while the last PTY in use is still displayed to scroll through the list of available PTY types.**
- 5 When the PTY is selected, press the TUNING DOWN/UP within 5 seconds.**
The unit will go into an automatic search mode and attempt to find the next station with acceptable signal strength that matches the desired PTY type.



Basic Playback

- 1 Press **TAPE** (or **TAPE-1/2**) to select tape function.
("NO TAPE" appears in the display window.)
- 2 Open cassette **TAPE 1** (or **2**) by pushing to the **▲PUSH EJECT** position.
- 3 Insert one or two cassettes with the tape side to the bottom and then close the **TAPE 1** (and/or **2**) door.
- 4 Press **▶** (or **◀** : optional) on the front panel or remote control.

AUTO STOP DECK (TAPE 1/2)

After auto stop deck plays front side of cassette, the unit stops automatically.

AUTO REVERSE DECK (TAPE 2) : OPTIONAL

You can select direction of the cassette you want by pressing **PLAY MODE**.

Pressing	Display	Function
Once	↔	After the cassette of TAPE 1 or 2 plays front or reverse (backward play) side, stops automatically.
Twice	↔→	After the cassette of TAPE 1 or 2 plays front and reverse side, stops automatically.
Three times	(↔)	After the cassette of TAPE 1 or 2 plays six times repeatedly front and reverse side, stops automatically.

To Stop Play

Press **STOP(■)/CLEAR** on the front panel or **TAPE STOP(■)** on the remote control during playback.

Tape Counter Reset

Press **COUNT.RESET** during playback.

Playing time appears "TAP -1 (or 2) 0000" in display window.

To Play Rewind or Fast Forward

After press **◀◀/▶▶** on the front panel or on the remote control during playback, press **▶** (or **◀** : optional) at the tape position you want.

Dubbing

This function shows how to record from tape to tape.

- 1 Press **TAPE** or **TAPE-1/ 2**.
 - Cassette **TAPE 1**- Insert the playback tape to dub.
 - Cassette **TAPE 2**- Insert a blank tape to copy on.

- 2 Press **NOR-DUBB./HI-DUBB..**

- **NOR-DUBB.** - Normal speed copying
- **HI-DUBB.** - Double speed copying

To stop recording, press **STOP (■)**.

Basic Setting

- 1 Press **CD** or **TUNER** to select source.
- 2 Open the cassette deck **TAPE 2** and insert a blank cassette into the cassette compartment.
Set the recording direction : **OPTIONAL**
Press **PLAY MODE** repeatedly to set the recording direction.

Recording from Radio, CD or Auxiliary source

- 1 Press **●REC/II** on the front panel.
"REC" flashes and holds the cassette in pause mode.
- 2 Press **▶** (or **◀** : **OPTIONAL**) on the front panel or remote control.
The recording is begun.

To pause the recording

Press **●REC/II** or **●/II**.

To Stop the recording

Press **STOP(■)**.

CD to Tape Synchronized Recording

The CD synchro recording function dubs a complete CD and programmed titles automatically into a cassette.

- 1 Press **CD SYNC.** in stop mode.
"REC" flashes and "CD SYNCHRO" displays in the display window.
- 2 The synchronized recording is started automatically after about 7 seconds.

Notes

- If you wish to record from the desired track, select the desired track with **MULTI JOG DIAL** before commencing CD synchro recording.
- A function change is not possible during recording.

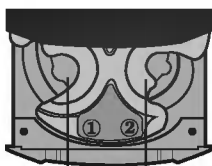
Playing a DVD and Video CD

Playback Setup


- Turn on the TV and select the video input source connected to the unit.
- Audio system: Turn on the audio system and select the input source connected to the unit.

1 Press  CD OPEN to open the disc tray.

2 Load your chosen disc in the tray, with the playback side facing down.








- **Playing one or two discs**
Place discs on trays 1 and 2.
- **Playing three discs**
After placing two discs, press the DISC SKIP button to rotate the trays. Place the next disc on tray 3.


3 Press  CD OPEN to close the tray.
Playback starts automatically. If playback does not start, press PLAY.
In some cases, the disc menu might appear instead.

If a menu screen is displayed

The menu screen may be displayed first after loading a DVD or Video CD which offer a menu.


Use the     buttons to select the title/chapter you want to view, then press SELECT/ENTER to start playback.

Press TITLE or MENU to return to the menu screen.

- 
- Use the number buttons to select the track you want to view.
Press RETURN to return to the menu screen.
 - Menu setting and the exact operating procedures for using the menu may differ depending on the disc.
Follow the instructions on the each menu screen.
You also may set PBC to Off under setup. See page 17.

Notes

- If Parental Control is set and the disc is not within the Rating settings (not authorized), the 4-digit code must be entered and/or the disc must be authorized (see "Parental Control", on page 18).
- DVDs may have a region code.
Your player will not play discs that have a region code different from your player. The region code for this player is 5 (five).

General Features

Note

Unless stated otherwise, all operations described use the remote control. Some features may also be available on the Setup menu.

Moving to another TITLE










When a disc has more than one title, you can move to another title as follows:

- Press DISPLAY, then press the appropriate numbered button (0-9) to select a title number.

Moving to another CHAPTER/TRACK

























When a title on a disc has more than one chapter or a disc has more than one track, you can move to another chapter/track as follows:

- Press PREV./NEXT  or  briefly during playback to select the next chapter/track or to return to the beginning of the current chapter/track.
- Press  twice briefly to step back to the previous chapter/track.
- To go directly to any chapter during DVD playback, press DISPLAY. Then, press   to select the chapter/track icon. Then, enter the chapter/track number using the numbered buttons (0-9) or press   to select the chapter/track, then press SELECT/ENTER.

Note

For two-digit numbers, press the numbered buttons (0-9) in rapid succession.

Search

- 1 Press and hold PREV./NEXT  or  for about two seconds during playback.
The player will now go into SEARCH mode.
- 2 Press and hold PREV./NEXT  or  repeatedly to select the required speed:   X2,   X4,   X16,   X100 (backward) or  X2,  X4,  X16,  X100 (forward).
With a Video CD, the Search speed changes:  X2,  X4,  X8, (backward) or  X2,  X4,  X8, (forward).
- 3 To return to normal play, press PLAY.

General Features (continued)

Still Picture and Frame-by-frame playback

- 1 Press PAUSE/STEP during playback.
The player will now go into PAUSE mode.
- 2 You can advance the picture frame-by-frame by pressing PAUSE/STEP repeatedly on the remote control.
- 3 To return to normal play, press PLAY.

Slow Motion

- 1 Press SLOW ◀◀ or ▶▶ during playback.
The player will enter SLOW mode.
- 2 Use the SLOW ◀◀ or ▶▶ to select the required speed: ◀◀ 1/16, ◀◀ 1/8, ◀◀ 1/4 or ◀◀ 1/2 (backward) or ▶▶ 1/16, ▶▶ 1/8, ▶▶ 1/4 or ▶▶ 1/2 (forward).
- 3 To return to normal PLAY, press PLAY.

Note

Slow motion playback in reverse is not applicable for Video CD.

Repeat



DVD Video Discs - Repeat Chapter/Title/All/Off

- 1 To repeat the currently playing chapter, press REPEAT.
The Repeat Chapter icon appears on the TV screen.
- 2 To repeat the title currently playing, press REPEAT a second time.
The Repeat Title icon appears on the TV screen.
- 3 To repeat the all disc currently playing, press REPEAT a four time.
The Repeat All icon appears on the TV screen.
- 4 To exit Repeat mode, press REPEAT a five time.
The Repeat Off icon appears on the TV screen.

Video CDs - Repeat Track/Disc/All/Off

- 1 To repeat the track currently playing, press REPEAT.
The Repeat Track icon appears on the TV screen.
- 2 To repeat the disc currently playing, press REPEAT a second time.
The Repeat Disc icon appears on the TV screen.
- 3 To repeat the all disc currently playing, press REPEAT a three time.
The Repeat all icon appears on the TV screen.
- 4 To exit Repeat mode, press REPEAT a four time.
The Repeat Off icon appears on the TV screen.

Note

On a Video CD with PBC, you must set PBC to Off on the setup menu to use the Repeat function. See page 17.

Repeat A-B



To repeat a sequence in a title:

- 1 Press A-B at your chosen starting point.
“A *” appears briefly on the TV screen.
- 2 Press A-B again at your chosen end point.
“A B” appears briefly on the TV screen, and the repeat sequence begins.
- 3 To cancel the sequence, press A-B.

Time Search



The Time Search function allows you to start playing at any chosen time on the disc.

- 1 Press DISPLAY during playback. The on-screen display appears on the screen.
The Time Search box shows the elapsed playing time of the current disc.
- 2 Within 10 seconds, press ▲/▼ to select the Time Search icon in the on-screen display.
The “-:--:--” appears in the Time Search box.
- 3 Within 10 seconds, use the number buttons to enter the required start time. Enter hours, minutes, and seconds from left to right in the box.
If you enter the wrong numbers, press CLEAR to remove the numbers you entered. Then enter the correct numbers.
- 4 Within 10 seconds, press SELECT/ENTER to confirm the start time.
Playback starts from the selected time on the disc. If you enter an invalid time, playback will continue from the current point.

Last Condition Memory

This unit memorizes the user settings for the last disc that you have viewed. Settings remain in memory even if you remove the disc from the player or switch off the player. If you load a disc that has its settings memorized, the latest stop position is automatically recalled.

Notes

- Settings are stored in memory for use any time.
- This player does not memorize settings of a disc if you switch off the unit before commencing to play it.

3D Surround



This unit can produce a 3D Surround effect, which simulates multi-channel audio playback from two conventional stereo speakers, instead of the five or more speakers normally required to listen to multi-channel audio from a home theater system.

- 1 Press SOUND to select “3D SUR” during playback.
- 2 To turn off the 3D Surround effect, press SOUND again to select “BYPASS”.

General Features (continued)

Zoom

The Zoom function allows you to enlarge the video image and to move through the enlarged image.

- 1 Press ZOOM during playback or still playback to activate the Zoom function.
If you press ZOOM repeatedly, the magnification level increases up to six steps.
- 2 Use the ◀▶/▲▼ buttons to move through the zoomed picture.
- 3 Press CLEAR to resume normal playback or return to the paused image.

Note

- The zoom function may not work for some DVDs.

Marker Search



You can start playback from a memorized point. Up to nine points can be memorized.

To enter a mark, follow these steps.

- 1 During disc playback, press MARKER when playback reaches the spot that you want to memorize.
The Marker icon will appear on the TV screen briefly.
- 2 Repeat step 1 to enter up to nine Marker points on a disc.

To Recall a Marked Scene

- 1 During disc playback, press SEARCH.
The MARKER SEARCH menu will appear on the screen.
- 2 Within 10 seconds, press ◀▶ to select a Marker number that you want to recall.
- 3 Press SELECT/ENTER.
Playback will start from the Marked scene.
- 4 To remove the MARKER SEARCH menu, press SEARCH.

To clear a Marked Scene

- 1 During disc playback, press SEARCH.
The MARKER SEARCH menu will appear on the screen.
- 2 Press ◀▶ to select the Marker number that you want to erase.
- 3 Press CLEAR.
The Marker number will be erased from the list.
- 4 Repeat steps 2 and 3 to erase additional Marker numbers.
- 5 To remove the MARKER SEARCH menu, press SEARCH.

Special DVD Features

Checking the contents of DVD Video discs: Menus

DVDs may offer menus that allow you to access special features. To use the disc menu, press MENU. Then, press the appropriate number button to select an option. Or, use the ◀▶/▲▼ buttons to highlight your selection, then press SELECT/ENTER.

Title Menu

- 1 Press TITLE.
If the current title has a menu, the menu will appear on the screen. Otherwise, the disc menu may appear.
- 2 The menu can list camera angles, spoken language and subtitle options, and chapters for the title.
- 3 To remove the title menu, press TITLE again.

Disc Menu

- 1 Press MENU.
The disc menu is displayed.
- 2 To remove the disc menu, press MENU again.

Camera Angle

If the disc contains scenes recorded at different camera angles, you can change to a different camera angle during playback.

- Press ANGLE repeatedly during playback to select a desired angle.
The number of the current angle appears on the display.

Changing the Audio Language

Press AUDIO repeatedly during playback to hear a different audio language or audio track.

Changing the Audio Channel

Press AUDIO repeatedly during playback to hear a different audio channel (STER., LEFT or RIGHT).

Subtitle

Press SUBTITLE repeatedly during playback to see the different subtitle languages.

Note

If a circled 'X' appears, the feature is not available on the disc.

Playing an Audio CD and MP3/WMA Disc

The unit can play MP3/WMA formatted recordings on CD-ROM, CD-R or CD-RW discs.

Before playing MP3/WMA recordings, read the notes on MP3/WMA Recordings on right.

1 Insert a disc and close the tray.

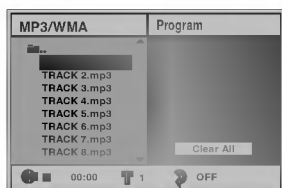
Audio CD; Audio CD menu appears on the TV screen. go to step 4.

MP3/WMA disc; The MP3/WMA-JPEG choice menu appears on the TV screen. Go to step 2



2 Press ▲▼ to select the MP3/WMA then press SELECT/ENTER.

The MP3/WMA menu appears on the TV screen. Press RETURN to move to the MP3/WMA-JPEG choice menu.



3 Press ▲▼ to select a folder, and SELECT/ENTER.

A list of files in the folder appears.

4 Press ▲▼ to select a track then press PLAY or SELECT/ENTER.

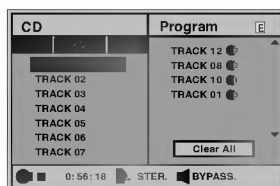
Playback starts.

During playback, the current track's elapsed playing time will appear on the display window and menu.

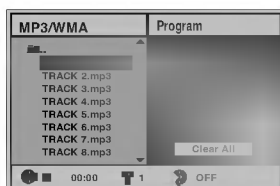
Playback will stop at the end of the disc.

Press TITLE to move to the next page.

Press MENU to move to the previous page.



Audio CD menu



MP3/WMA menu



If you are in a file list and want to return to the Folder list, use the ▲▼ to highlight ■- and press SELECT/ENTER to return to the previous menu screen.

5 To stop playback at any other time, press STOP.

Notes on MP3/WMA Recordings

About MP3

- An MP3 file is audio data compressed by using the MPEG1 audio layer-3 file-coding scheme. We call files that have the “.mp3” file extension “MP3 files”.
- The player can not read an MP3 file that has a file extension other than “.mp3”.

About WMA (Window Media Audio)

- An WMA file is a Microsoft audio compression technology.
- WMA (Windows Media Audio) offers double the audio compression of the MP3 format.

MP3/WMA Disc compatibility with this player is limited as follows:

1. Sampling Frequency / only at 44.1 kHz (MP3), 22.05-44.1 kHz (WMA)
2. Bit rate / within 32-320 kbps (MP3), 32-128 kbps (WMA)
3. CD-R physical format should be “ISO 9660”
4. If you record MP3/WMA files using the software which cannot create a FILE SYSTEM, for example “Direct-CD” etc., it is impossible to playback MP3/WMA files. We recommend that you use “Easy-CD Creator”, which creates an ISO9660 file system.
5. A single session disc requires MP3/WMA files in the first track. If there is no MP3/WMA file in the 1st track, it cannot playback MP3/WMA files. If you wish to playback MP3/WMA files, format all the data in the disc or use a new one.
6. File names should be named using 8 letters or less and must incorporate “.mp3” or “.wma” extension e.g. “*****.MP3” or “*****.WMA”.
7. Do not use special letters such as “/ : * ? “ < > ” etc.
8. Total number of files on the disc should be less than 650.

This unit requires discs/recordings to meet certain technical standards in order to achieve optimal playback quality. Pre-recorded DVDs are automatically set to these standards. There are many different types of recordable disc formats (including CD-R containing MP3 or WMA files). That require certain pre-existing conditions (see above) to insure compatible playback.




Customers should also note that permission is required in order to download MP3/WMA files and music from the Internet. Our company has no right to grant such permission. Permission should always be sought from the copyright owner.



Pause



- 1 Press PAUSE/STEP during playback.
- 2 To return to playback, press PLAY or press PAUSE/STEP again.

Moving to another Track











- Press PREV./NEXT  or  briefly during playback to go to the next track or to return to the beginning of the current track.
- Press PREV./NEXT  twice briefly to step back to the previous track.
- In case of audio CD, to go directly to any track, enter the track number using the numbered buttons (0-9) during playback.

Repeat Track/All/Off

- 1 To repeat the track currently playing, press REPEAT.
The Repeat Track icon appears on the TV screen.
- 2 To repeat the disc currently playing, press REPEAT a second time.
The Repeat Disc icon appears on the TV screen.
- 3 To repeat the all disc currently playing, press REPEAT a three time.
The Repeat all icon appears on the TV screen.
- 4 To exit Repeat mode, press REPEAT a four time.
The Repeat Off icon appears on the TV screen.

- 
- 
- 1 To repeat the track currently playing, press REPEAT.
The Repeat icon and "TRACK" appears on the menu screen.
 - 2 To repeat all tracks on a disc, press REPEAT a second time.
The Repeat icon and "ALL" appears on the menu screen.
 - 3 To cancel Repeat mode, press REPEAT a third time.
The Repeat icon and "OFF" appears on the menu screen.

Search

- 1 Press and hold PREV./NEXT  or  for about two seconds during playback.
The player will now go into SEARCH mode.
- 2 Press and hold PREV./NEXT  or  repeatedly to select the required speed: X2, X4, X8 (backward) or X2, X4, X8 (forward).
Search speed and direction are indicated on the menu screen.
- 3 To return to playback, press PLAY.

Repeat A-B

To repeat a sequence.

- 1 During disc playback, press A-B at your chosen starting point.
The Repeat icon and "A * " appears on the menu screen.
- 2 Press A-B again at your chosen end point.
The Repeat icon and "A B" appears on the menu screen, and the sequence begins to play repeatedly.
- 3 To exit the sequence and return to normal play, press A-B again.
The Repeat icon and "OFF" appears on the menu screen.

Changing the Audio Channel

Press AUDIO repeatedly during playback to hear a different audio channel (STER., LEFT, or RIGHT).

Viewing a JPEG disc

This unit can play discs with JPEG files and Kodak picture CD. Before playing JPEG recordings, read the notes on JPEG Recordings on right.

- 1 Insert a disc and close the tray.**
The MP3/WMA-JPEG choice menu appears on the TV screen.



- 2 Press ▲/▼ to select the JPEG then press SELECT/ENTER.**
The JPEG menu appears on the TV screen.



- 3 Press ▲/▼ to select a folder, and SELECT/ENTER.**
A list of files in the folder appears.
Press RETURN to move to the MP3/WMA-JPEG choice menu.

Tip

If you are in a file list and want to return to the Folder list, use the ▲/▼ buttons on the remote to highlight “..” and press SELECT/ENTER to return to the previous menu screen.

- 4 If you want to view a particular file, press ▲/▼ to highlight a file and press SELECT/ENTER or PLAY.**

Viewing the file proceeding starts.
During viewing a file, press RETURN to move to the previous menu (JPEG menu).
Press TITLE to move to the next page.
Press MENU to move to the previous page.



Tip

There are three viewing Slide Speed options: Fast, Normal, Slow, and Off. Press ◀▶ to highlight the Slide Speed then press ▲/▼ to select the option you want to use, and press SELECT/ENTER.

- 5 To stop viewing at any other time, press STOP.**
The JPEG menu appears.

Moving to another File

Press PREV./NEXT ◀◀ or ▶▶ once during viewing a picture to advance to the next file or to the previous file.

Still Picture

- Press PAUSE/STEP during slide show.
The player will now go into PAUSE mode.
- To return to the slide show, press PLAY or press PAUSE/STEP again.

To flip the picture

Press ▲/▼ during showing a picture to flip the picture horizontally or a vertically.

To rotate picture

Press ◀▶ during showing a picture to rotate the picture clockwise or counter clockwise.

Notes on JPEG Recordings

- Depending upon the size and number of the JPEG files, it could take a long time for the unit to read the disc's contents. If you don't see an on-screen display after several minutes, some of the files are too big — reduce the resolution of the JPEG files to less than 2 mega pixels and burn another disc.
- Total number of files and folders on the disc should be less than 650.
- Some disc may be incompatible due to different recording format or condition of disc.
- When you are using software such as “Easy CD Creator” to burn the jpeg files into the CD-R, ensure that all the selected files have the “.jpg” extensions when copying into the CD layout.
- If the files have “.jpe” or “.jpeg” extensions, please rename them as “.jpg” files.
- File names without “.jpg” extension will not be able to be read by this unit. Even though the files are shown as JPEG image files in windows explorer.



The Program function enables you to store your favorite tracks from any disc in the player memory. Program can contain 30 tracks.

Programmed Playback with Audio CD and Video CD

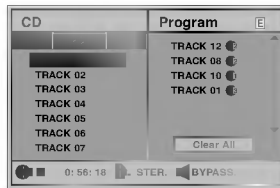
- 1 Press PROGRAM during playback (Audio CD only) or in the stop mode to enter the Program Edit mode.

The [E] mark will appear to the right of the word Program on the right side of the menu screen.

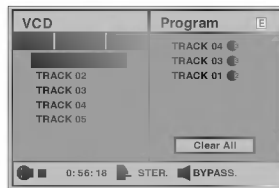
Note

Press PROGRAM to exit the Program Edit mode; the [E] mark will disappear.

- 2 Select the disc number by pressing ◀▶/▲▼.
- 3 Select a track using ▲▼, then press SELECT/ENTER to place the selected track on the Program list.
- 4 Repeat step 2-3 to place additional tracks on the Program list.



Audio CD menu



VCD menu

Notes

- You must select a disc number of audio CD or Video CD. If selected track is other kind of disc (DVD or MP3 etc.), the track skips.
- On a Video CD with PBC, you must set PBC to Off on the setup menu to use the Program function. See page 17.

- 5 Press ▶.

The programmed track you selected last is highlighted on the program list.

- 6 Press ▲▼ to select the track you want to start playing.

Press TITLE to move to the next page.
Press MENU to move to the previous page.

- 7 Press PLAY to start.

Playback begins in the order in which you programmed the tracks and "PROG." appears on the menu screen. Playback stops after all of the tracks on the Program list have played once.

To resume normal playback from programmed playback

In case of Audio CD menu, select a track of CD list and then press SELECT/ENTER.

- "PROG." indicator disappears on the menu screen.

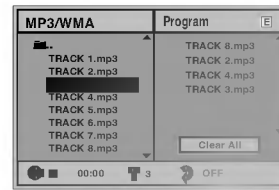
In case of VCD menu, press PROGRAM.

- "PROG." indicator disappears in the display window.



Programmed Playback with MP3/WMA Disc

- 1 Follow step 1 of "Programmed Playback with Audio CD and Video CD" on left.
- 2 Select a track, then press SELECT/ENTER to place the selected track on the Program list.
- 3 Follow steps 2 to place additional tracks on the Program list.



MP3/WMA menu

- 4 Follow steps 5-7 of "Programmed Playback with Audio CD and Video CD" on left.

To resume normal playback from programmed playback

In case of MP3/WMA menu, select a track of CD list and then press SELECT/ENTER.

Repeat Programmed Tracks

- To repeat the track currently playing, press REPEAT. The Repeat icon and "TRACK" appears on the menu screen.
- To repeat all tracks on the program list, press REPEAT a second time. The Repeat icon and "ALL" appears on the menu screen.
- To cancel Repeat mode, press REPEAT a third time. The Repeat icon and "OFF" appears on the menu screen.

Note

- If you want to play All disc (three disc) repeat programmed playback, it is only available to Audio CD.

Erasing a Track from Program List

- 1 Press PROGRAM during playback (Audio CD and MP3/WMA disc only) or in the stop mode to enter the Program Edit mode.
The [E] mark will appear.
- 2 Press ▶ to move to the Program list.
- 3 Use ▲▼ to select the track that you wish to erase from the Program list.
- 4 Press CLEAR.
The track will be erased from the Program list.

Erasing the Complete Program List

- 1 Follow steps 1-2 of "Erasing a Track from Program List" as above.
- 2 Use ▲▼ to select "Clear All", then press SELECT/ENTER.
The complete Program for the disc will be erased. The programs are also cleared when the disc is removed.

Check the following guide for the possible cause of a problem before contacting service.

Symptom	Cause	Correction
No power.	<ul style="list-style-type: none"> The power cord is disconnected. 	<ul style="list-style-type: none"> Plug the power cord into the wall outlet securely.
The power is on, but the unit does not work.	<ul style="list-style-type: none"> No disc is inserted. 	<ul style="list-style-type: none"> Insert a disc. (Check that the DVD or, audio CD indicator in the DVD display is lit.)
No picture.	<ul style="list-style-type: none"> The TV is not set to receive DVD signal output. 	<ul style="list-style-type: none"> Select the appropriate video input mode on the TV so the picture from the unit appears on the TV screen.
	<ul style="list-style-type: none"> The video cable is not connected securely. 	<ul style="list-style-type: none"> Connect the video cable into the jacks securely.
	<ul style="list-style-type: none"> The connected TV power is turned off. 	<ul style="list-style-type: none"> Turn on the TV.
There is no sound or only a very low-level sound is heard.	<ul style="list-style-type: none"> The equipment connected with the audio cable is not set to receive DVD signal output. 	<ul style="list-style-type: none"> Select the correct input mode of the audio so you can listen to the sound from the unit.
	<ul style="list-style-type: none"> The audio cables are not connected securely. 	<ul style="list-style-type: none"> Connect the audio cable into the jacks securely.
	<ul style="list-style-type: none"> The power of the equipment connected with the audio cable is turned off. 	<ul style="list-style-type: none"> Turn on the equipment connected with the audio cable.
	<ul style="list-style-type: none"> The audio connecting cord is damaged. 	<ul style="list-style-type: none"> Replace it with new one.
The playback picture is poor.	<ul style="list-style-type: none"> The disc is dirty. 	<ul style="list-style-type: none"> Clean the disc.
The unit does not start playback.	<ul style="list-style-type: none"> No disc is inserted. 	<ul style="list-style-type: none"> Insert a disc. (Check that the DVD, or audio CD indicator in the DVD display is lit.)
	<ul style="list-style-type: none"> An unplayable disc is inserted. 	<ul style="list-style-type: none"> Insert a playable disc. (Check the disc type, color system and Regional code.)
	<ul style="list-style-type: none"> The disc is placed upside down. 	<ul style="list-style-type: none"> Place the disc with the playback side down.
	<ul style="list-style-type: none"> The disc is not placed within the guide. 	<ul style="list-style-type: none"> Place the disc on the disc tray correctly inside the guide.
	<ul style="list-style-type: none"> The disc is dirty. 	<ul style="list-style-type: none"> Clean the disc.
	<ul style="list-style-type: none"> A menu is on the TV screen. 	<ul style="list-style-type: none"> Press the SET-UP button to turn off the menu screen.
Severe hum or noise is heard.	<ul style="list-style-type: none"> The plugs and jacks are dirty. 	<ul style="list-style-type: none"> Wipe them with a cloth slightly moistened with alcohol.
	<ul style="list-style-type: none"> The disc is dirty. 	<ul style="list-style-type: none"> Clean the disc.
	<ul style="list-style-type: none"> The speakers and components are connected poorly. 	<ul style="list-style-type: none"> Connect the speakers and components securely.
	<ul style="list-style-type: none"> The unit is located with too close to the TV. 	<ul style="list-style-type: none"> Move your TV away from the audio components.
Radio stations cannot be tuned in.	<ul style="list-style-type: none"> The antenna is positioned or connected poorly. 	<ul style="list-style-type: none"> Connect the antenna securely. Adjust the antennas and connect an external antenna if necessary.
	<ul style="list-style-type: none"> The signal strength of the stations is too weak (when tuning in with automatic tuning). 	<ul style="list-style-type: none"> Tune in the station manually.
	<ul style="list-style-type: none"> No stations have been preset or preset stations have been cleared (when tuning by scanning preset stations). 	<ul style="list-style-type: none"> Preset the stations.
The remote control does not work properly.	<ul style="list-style-type: none"> The remote control is not pointed at the remote sensor of the unit. 	<ul style="list-style-type: none"> Point the remote control at the remote sensor of the unit.
	<ul style="list-style-type: none"> The remote control is too far from the unit. 	<ul style="list-style-type: none"> Operate the remote control within about 23 ft (7 m).
	<ul style="list-style-type: none"> There is an obstacle in the path of the remote control and the unit. 	<ul style="list-style-type: none"> Remove the obstacle.
	<ul style="list-style-type: none"> The batteries in the remote control are exhausted. 	<ul style="list-style-type: none"> Replace the batteries with new ones.

Enter the appropriate code number for the initial settings "Disc Audio", "Disc Subtitle" and/or "Disc Menu"
(See page 16).

Code	Language	Code	Language	Code	Language	Code	Language
6566	Abkhazian	7074	Fiji	7678	Lingala	8373	Singhalese
6565	Afar	7073	Finnish	7684	Lithuanian	8375	Slovak
6570	Afrikaans	7082	French	7775	Macedonian	8376	Slovenian
8381	Albanian	7089	Frisian	7771	Malagasy	8379	Somali
6577	Ameharic	7176	Galician	7783	Malay	6983	Spanish
6582	Arabic	7565	Georgian	7776	Malayalam	8385	Sudanese
7289	Armenian	6869	German	7784	Maltese	8387	Swahili
6583	Assamese	6976	Greek	7773	Maori	8386	Swedish
6588	Aymara	7576	Greenlandic	7782	Marathi	8476	Tagalog
6590	Azerbaijani	7178	Guarani	7779	Moldavian	8471	Tajik
6665	Bashkir	7185	Gujarati	7778	Mongolian	8465	Tamil
6985	Basque	7265	Hausa	7865	Nauru	8484	Tatar
6678	Bengali; Bangla	7387	Hebrew	7869	Nepali	8469	Telugu
6890	Bhutani	7273	Hindi	7879	Norwegian	8472	Thai
6672	Bihari	7285	Hungarian	7982	Oriya	6679	Tibetan
6682	Breton	7383	Icelandic	8065	Panjabi	8473	Tigrinya
6671	Bulgarian	7378	Indonesian	8083	Pashto, Pushto	8479	Tonga
7789	Burmese	7365	Interlingua	7065	Persian	8482	Turkish
6669	Byelorussian	7165	Irish	8076	Polish	8475	Turkmen
7577	Cambodian	7384	Italian	8084	Portuguese	8487	Twi
6765	Catalan	7465	Japanese	8185	Quechua	8575	Ukrainian
9072	Chinese	7487	Javanese	8277	Rhaeto-Romance	8582	Urdu
6779	Corsican	7578	Kannada	8279	Rumanian	8590	Uzbek
7282	Croatian	7583	Kashmiri	8285	Russian	8673	Vietnamese
6783	Czech	7575	Kazakh	8377	Samoan	8679	Volapük
6865	Danish	7589	Kirghiz	8365	Sanskrit	6789	Welsh
7876	Dutch	7579	Korean	7168	Scots Gaelic	8779	Wolof
6978	English	7585	Kurdish	8382	Serbian	8872	Xhosa
6979	Esperanto	7679	Laothian	8372	Serbo-Croatian	7473	Yiddish
6984	Estonian	7665	Latin	8378	Shona	8979	Yoruba
7079	Faroese	7686	Latvian, Lettish	8368	Sindhi	9085	Zulu



Enter the appropriate code number for the initial setting "Country Code" (See page 18).

Code	Country	Code	Country	Code	Country	Code	Country
AD	Andorra	ER	Eritrea	LC	Saint Lucia	SC	Seychelles
AE	United Arab Emirates	ES	Spain	LI	Liechtenstein	SD	Sudan
AF	Afghanistan	ET	Ethiopia	LK	Sri Lanka	SE	Sweden
AG	Antigua and Barbuda	FI	Finland	LR	Liberia	SG	Singapore
AI	Anguilla	FJ	Fiji	LS	Lesotho	SH	Saint Helena
AL	Albania	FK	Falkland Islands	LT	Lithuania	SI	Slovenia
AM	Armenia	FM	Micronesia	LU	Luxembourg	SJ	Svalbard and Jan Mayen Islands
AN	Netherlands Antilles	FO	Faroe Islands	LV	Latvia	SK	Slovak Republic
AO	Angola	FR	France	LY	Libya	SL	Sierra Leone
AQ	Antarctica	FX	France (European Territory)	MA	Morocco	SM	San Marino
AR	Argentina	GA	Gabon	MC	Monaco	SN	Senegal
AS	American Samoa	GB	Great Britain	MD	Moldavia	SO	Somalia
AT	Austria	GD	Grenada	MG	Madagascar	SR	Suriname
AU	Australia	GE	Georgia	MH	Marshall Islands	ST	Saint Tome and Principe
AW	Aruba	GF	French Guyana	MK	Macedonia	SU	Former USSR
AZ	Azerbaijan	GH	Ghana	ML	Mali	SV	El Salvador
BA	Bosnia-Herzegovina	GI	Gibraltar	MM	Myanmar	SY	Syria
BB	Barbados	GL	Greenland	MN	Mongolia	SZ	Swaziland
BD	Bangladesh	GM	Gambia	MO	Macau	TC	Turks and Caicos Islands
BE	Belgium	GN	Guinea	MP	Northern Mariana Islands	TD	Chad
BF	Burkina Faso	GP	Guadeloupe (French)	MQ	Martinique (French)	TF	French Southern Territories
BG	Bulgaria	GQ	Equatorial Guinea	MR	Mauritania	TG	Togo
BH	Bahrain	GR	Greece	MS	Montserrat	TH	Thailand
BI	Burundi	GS	S. Georgia & S. Sandwich Isls.	MT	Malta	TJ	Tadjikistan
BJ	Benin	GT	Guatemala	MU	Mauritius	TK	Tokelau
BM	Bermuda	GU	Guam (USA)	MV	Maldives	TM	Turkmenistan
BN	Brunei Darussalam	GW	Guinea Bissau	MX	Mexico	TN	Tunisia
BO	Bolivia	GY	Guyana	MZ	Mozambique	TO	Tonga
BR	Brazil	HK	Hong Kong	NA	Namibia	TP	East Timor
BS	Bahamas	HM	Heard and McDonald Islands	NC	New Caledonia (French)	TR	Turkey
BT	Bhutan	HN	Honduras	NE	Niger	TT	Trinidad and Tobago
BV	Bouvet Island	HR	Croatia	NF	Norfolk Island	TV	Tuvalu
BW	Botswana	HT	Haiti	NG	Nigeria	TW	Taiwan
BY	Belarus	HU	Hungary	NI	Nicaragua	TZ	Tanzania
BZ	Belize	ID	Indonesia	NL	Netherlands	UA	Ukraine
CA	Canada	IE	Ireland	NO	Norway	UG	Uganda
CC	Cocos (Keeling) Islands	IL	Israel	NP	Nepal	UK	United Kingdom
CF	Central African Republic	IN	India	NR	Nauru	UM	USA Minor Outlying Islands
CG	Congo	IO	British Indian Ocean Territory	NU	Niue	US	United States
CH	Switzerland	IQ	Iraq	NZ	New Zealand	UY	Uruguay
CI	Ivory Coast	IR	Iran	OM	Oman	UZ	Uzbekistan
CK	Cook Islands	IS	Iceland	PA	Panama	VA	Vatican City State
CL	Chile	IT	Italy	PE	Peru	VC	Saint Vincent & Grenadines
CM	Cameroon	JM	Jamaica	PF	Polynesia (French)	VE	Venezuela
CN	China	JO	Jordan	PG	Papua New Guinea	VG	Virgin Islands (British)
CO	Colombia	JP	Japan	PH	Philippines	VI	Virgin Islands (USA)
CR	Costa Rica	KE	Kenya	PK	Pakistan	VN	Vietnam
CS	Former Czechoslovakia	KG	Kyrgyzstan	PL	Poland	VU	Vanuatu
CU	Cuba	KH	Kambodia6	PM	Saint Pierre and Miquelon	WF	Wallis and Futuna Islands
CV	Cape Verde	KI	Kiribati	PR	Puerto Rico	WS	Samoa
CX	Christmas Island	KM	Comoros	PT	Portugal	YE	Yemen
CY	Cyprus	KN	Saint Kitts & Nevis Anguilla	PW	Palau	YT	Mayotte
CZ	Czech Republic	KP	North Korea	PY	Paraguay	YU	Yugoslavia
DE	Germany	KR	South Korea	QA	Qatar	ZA	South Africa
DJ	Djibouti	KW	Kuwait	RE	Reunion (French)	ZM	Zambia
DK	Denmark	KY	Cayman Islands	RO	Romania	ZR	Zaire
DM	Dominica	KZ	Kazakhstan	RU	Russian Federation	ZW	Zimbabwe
DO	Dominican Republic	LA	Laos	RW	Rwanda		
DZ	Algeria	LB	Lebanon	SA	Saudi Arabia		
EC	Ecuador			SB	Solomon Islands		
EE	Estonia						
EG	Egypt						
EH	Western Sahara						

[General]	Power supply	Refer to the back panel.	
	Power consumption	210W	
	Mass	10.5kg	
	External dimensions (W x H x D)	273 x 327 x 356 mm	
[CD/VCD/DVD]	Laser	Semiconductor laser, wavelength 650 nm	
	Frequency response (audio)	40 - 18000 Hz	
	Signal-to-noise ratio (audio)	More than 70 dB (1 kHz)	
	Signal-to-noise ratio (video)	More than 60 dB (1 kHz)	
	Dynamic range (audio)	More than 70 dB	
	Harmonic distortion (audio)	0.2 % (1 kHz)	
[Video]	Video output	1.0 V (p-p), 75 Ω, negative sync., RCA jack	
	S-video output	(Y) 1.0 V (p-p), 75 Ω, (C) 0.3 V (p-p), 75 Ω	
[Tuner]	FM	Tuning Range	87.5 -108.0 MHz or 65 -74 MHz, 87.5 -108.0 MHz
		Intermediate Frequency	10.7 MHz
		Signal to Noise Ratio (Mono/Stereo)	60/55 dB
		Frequency Response	60 - 10000 Hz
	AM (MW)	Tuning Range	522 - 1611 kHz or 530 - 1610 kHz or 530 - 1720 kHz
		Intermediate Frequency	450 kHz
		Signal to Noise Ratio	35 dB
		Frequency Response	100 - 1800 Hz
[Amplifier]	Output Power	100W + 100W	
	T.H.D	0.2%	
	Frequency Response	42 - 25000 Hz	
	Signal-to-noise ratio	80 dB	
TAPE	Tape Speed	3 kHz ± 50Hz	
	Wow Flutter	0.25% (MTT -111, JIS-WTD)	
	F.F/REW. Time	120sec (C-60)	
	Frequency Response	125 - 8000Hz	
	Signal to Noise Ratio	43dB(P/B)/43dB(R/B)	
	Channel Separation	45dB(P/B)/42dB(R/P)	
	Erase Ratio	52dB (MTT-5511)	
[Speakers]	Speaker Model	LMS-D2930V	
	Type	3 Way 3 Speaker	
	Impedance	6 Ω	
	Frequency Response	65 - 20000 Hz	
	Sound Pressure Level	86 dB/W (1m)	
	Rated Input Power	100 W	
	Max. Input Power	200 W	
	Net Dimensions (W x H x D)	230X338X298mm	
Net Weight (Approx.)	5.5kg		