

SONY®

9-885-046-95(2)

CD/DVD Player



DVP-M50

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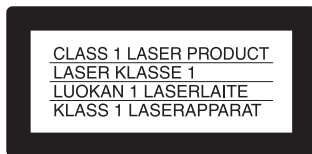
Safety Precautions

WARNING

To prevent fire or shock hazard, do not expose the unit to rain or moisture.

To avoid electrical shock, do not open the cabinet. Refer servicing to qualified personnel only.

The mains lead must only be changed at a qualified service shop.





This appliance is classified as a CLASS 1 LASER product. The CLASS 1 LASER PRODUCT MARKING is located on the rear exterior.

CAUTION

The use of optical instruments with this product will increase eye hazard. As the laser beam used in this CD/DVD player is harmful to eyes, do not attempt to disassemble the cabinet.

Refer servicing to qualified personnel only.

Notice for customers in the United Kingdom and Republic of Ireland

A moulded plug complying with BS1363 is fitted to this equipment for your safety and convenience. Should the fuse in the plug supplied need to be replaced, a 5AMP fuse approved by ASTA or BSI to BS1362, (i.e., marked with  or  mark) must be used. If the plug supplied with this equipment has a detachable fuse cover, be sure to attach the fuse cover after you change the fuse.

Never use the plug without the fuse cover. If you should lose the fuse cover, please contact your nearest Sony service station.

Precautions

Safety

- This unit operates on 110 – 240 V AC, 50/60 Hz. Check that the unit's operating voltage is identical with your local power supply.
- To prevent fire or shock hazard, do not place objects filled with liquids, such as vases, on the apparatus.

Installing

- Do not install the unit in an inclined position. It is designed to be operated in a horizontal position only.
- Keep the unit and discs away from equipment with strong magnets, such as microwave ovens, or large loudspeakers.
- Do not place heavy objects on the unit.

Welcome!

Thank you for purchasing this CD/DVD Player. Before operating this player, please read this manual thoroughly and retain it for future reference.

Safety Precautions (Continued)

Precautions

On safety

- Caution – The use of optical instruments with this product will increase eye hazard.
- Should any solid object or liquid fall into the cabinet, unplug the player and have it checked by qualified personnel before operating it any further.

On power sources

- The player is not disconnected from the AC power source (mains) as long as it is connected to the wall outlet, even if the player itself has been turned off.
- If you are not going to use the player for a long time, be sure to disconnect the player from the wall outlet. To disconnect the AC power cord (mains lead), grasp the plug itself; never pull the cord.

On placement

- Place the player in a location with adequate ventilation to prevent heat build-up in the player.
- Do not place the player on a soft surface such as a rug that might block the ventilation holes.
- Do not place the player in a location near heat sources, or in a place subject to direct sunlight, excessive dust, or mechanical shock.
- Do not install the appliance in a confined space, such as a bookcase or built-in cabinet.

On operation

- If the player is brought directly from a cold to a warm location, or is placed in a very damp room, moisture may condense on the lenses inside the player. Should this occur, the player may not operate properly. In this case, remove the disc and leave the player turned on for about half an hour until the moisture evaporates.
- When you move the player, take out any discs. If you don't, the disc may be damaged.

On adjusting volume

Do not turn up the volume while listening to a section with very low level inputs or no audio signals. If you do, the speakers may be damaged when a peak level section is played.

On cleaning

Clean the cabinet, panel, and controls with a soft cloth slightly moistened with a mild detergent solution. Do not use any type of abrasive pad, scouring powder or solvent such as alcohol or benzene.

On cleaning discs

Do not use a commercially available cleaning disc. It may cause a malfunction.

IMPORTANT NOTICE

Caution: This player is capable of holding a still video image or on-screen display image on your television screen indefinitely. If you leave the still video image or on-screen display image displayed on your TV for an extended period of time you risk permanent damage to your television screen. Plasma Display Panel televisions and projection televisions are susceptible to this.

If you have any questions or problems concerning your player, please consult your nearest Sony dealer.

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About the symbols for instructions



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

Note




Indicates special operating features of this unit.

Tip

Indicates tips and hints for making the task easier.

Before Use

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, SVCD, and CD-R or CD-RW that contains audio titles, MP3 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 “2” 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 “2” 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.



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.

Before Use (Continued)

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.

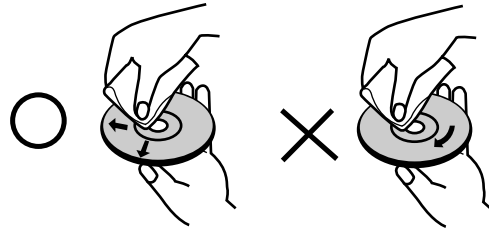


Storing discs

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

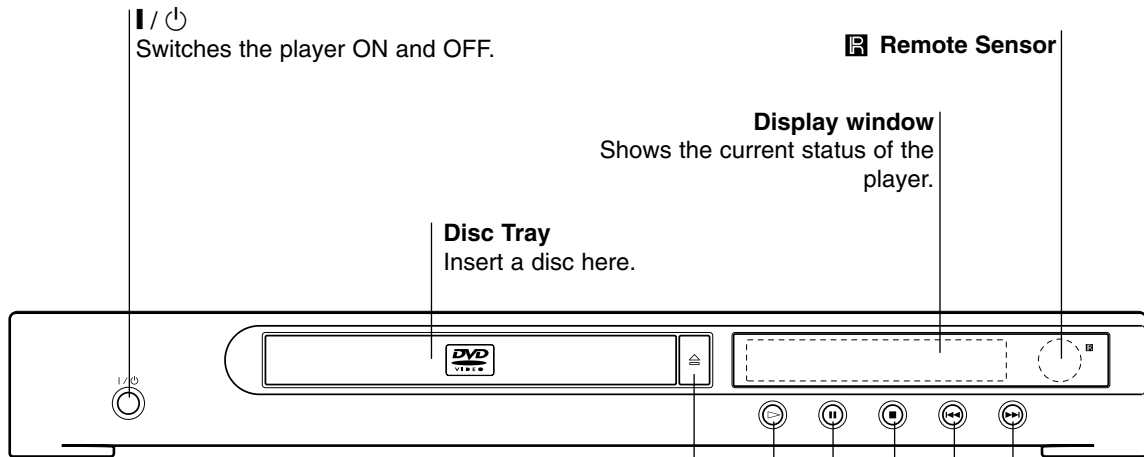
“” may appear on the TV screen during operation. This icon means the function explained in this owner's manual is not available on that specific DVD video disc.

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.
-  Audio CDs.
-  MP3 disc.
-  JPEG disc.

Front Panel and Display Window



⏮ (OPEN/CLOSE)
Opens or closes the disc tray.

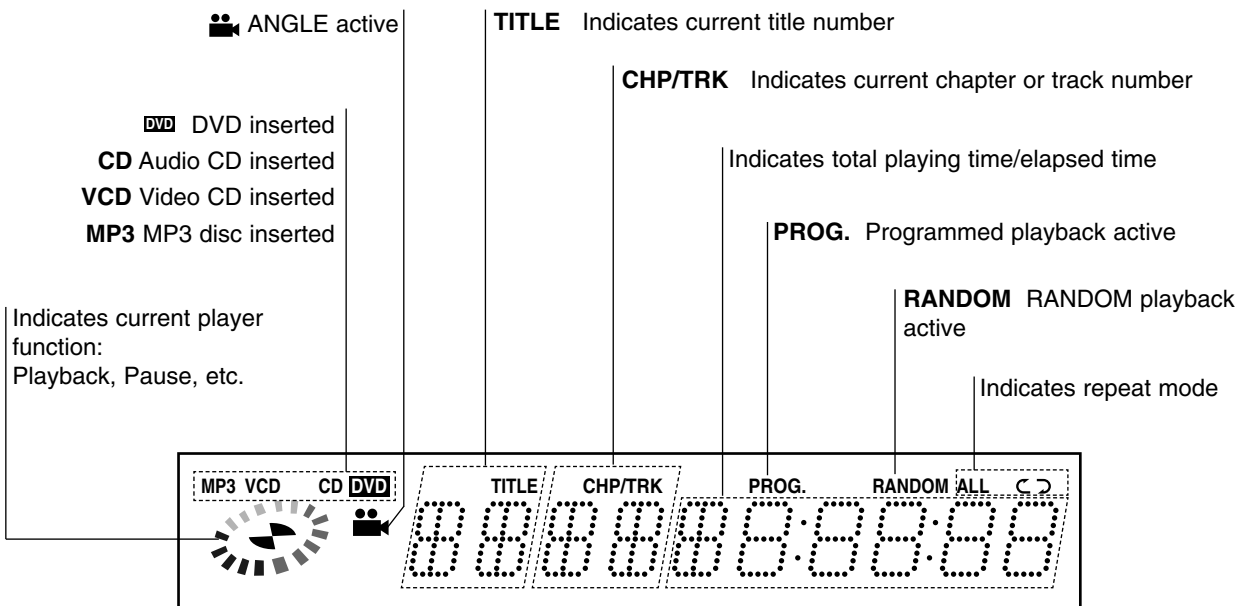
▶ (PLAY)
Starts playback.

⏸ (PAUSE)
Pause playback temporarily.

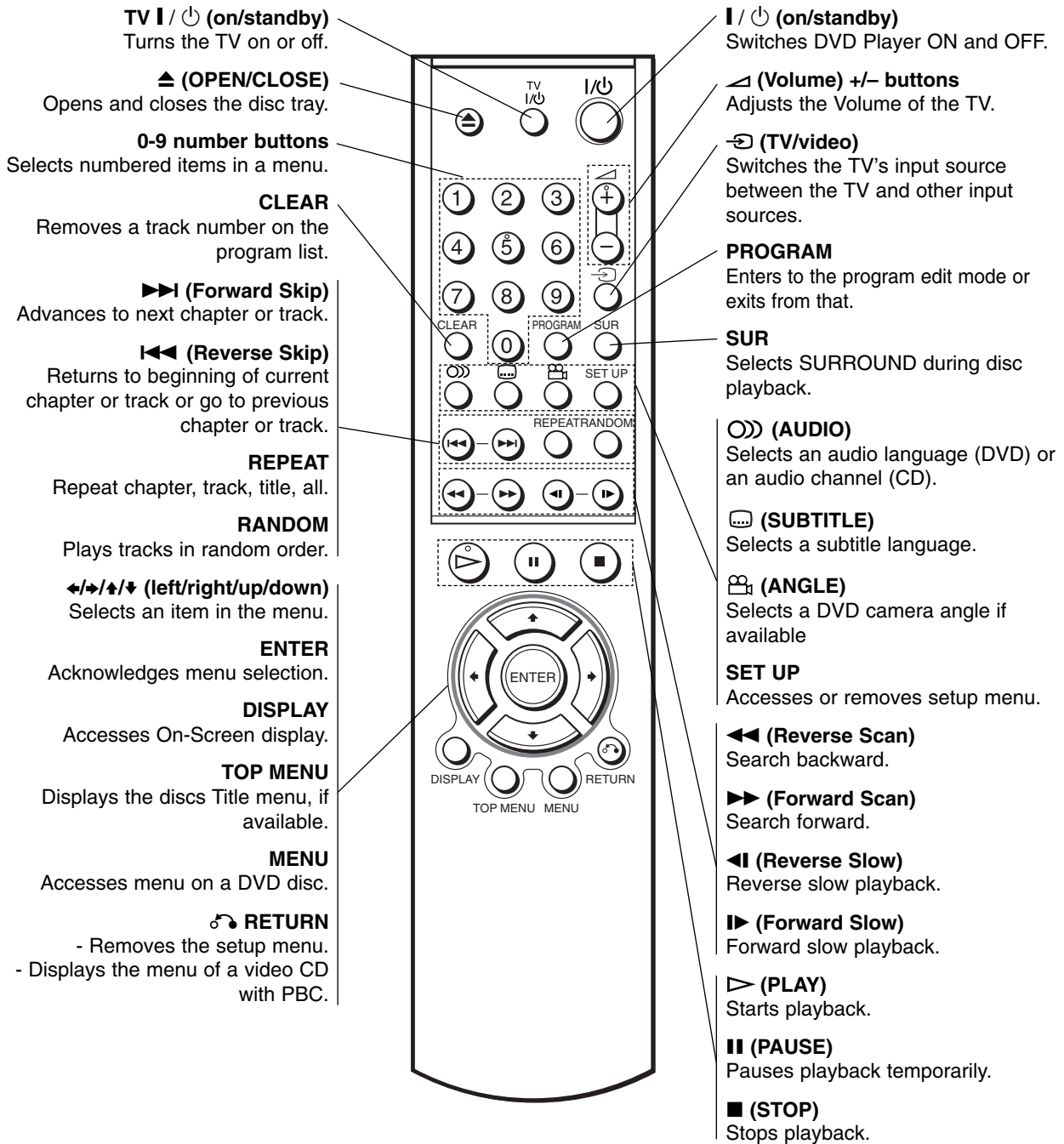
■ (STOP)
Stops playback.

⏪ (Reverse SKIP)
Go to beginning of current chapter/track or to PREVIOUS chapter/track.

⏩ (Forward SKIP)
Go to NEXT chapter/track.



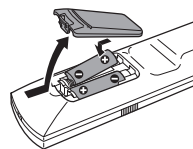
Remote Control



Remote Control Operation

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

Remote control battery installation

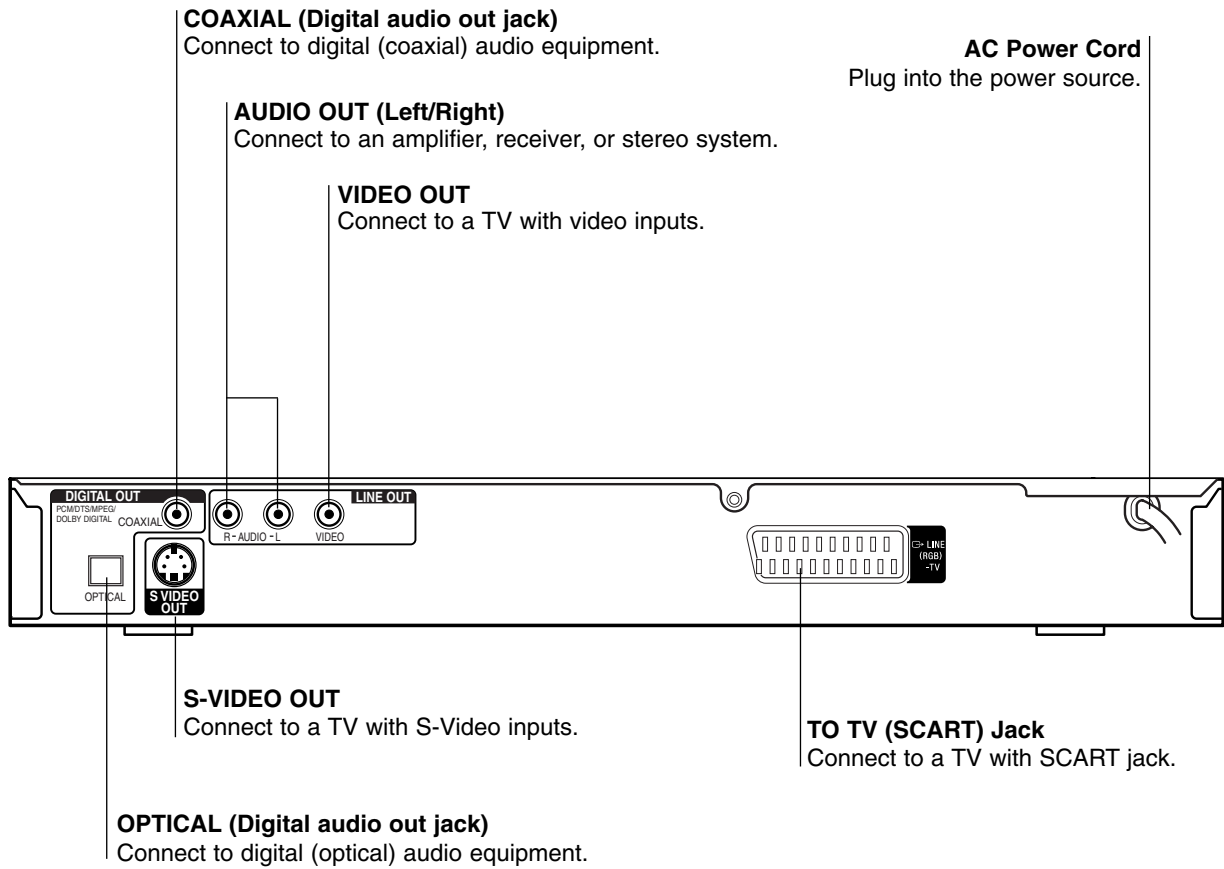


Detach the battery cover on the rear of the remote control, and insert two R6 (size AA) batteries with + and - aligned correctly.



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

Rear Panel



Do not touch the inner pins of the jacks on the rear panel. Electrostatic discharge may cause permanent damage to the unit.

Connections

Tips

- Depending on your TV and other equipment you wish to connect, there are various ways you could connect the player. Use only 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.
- For better sound reproduction, connect the player's AUDIO OUT jacks to the audio in jacks of your amplifier, receiver, stereo or audio/video equipment. See "Connecting to Optional Equipment" on page 11.



- Make sure the DVD Player is connected directly to the TV. Tune the TV to the correct video input channel.
- Do not connect the DVD Player's AUDIO OUT jack to the phono in jack (record deck) of your audio system.
- Do not connect your DVD Player via your VCR. The DVD image could be distorted by the copy protection system.

Connecting to a TV

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

Video connection

1 Connect the VIDEO OUT jack on the DVD Player to the video in jack on the TV using the video cable (**V**) (not supplied).

2 Connect the Left and Right AUDIO OUT jacks of the DVD Player to the audio left/right in jacks on the TV (**A**) using the audio cables (not supplied).

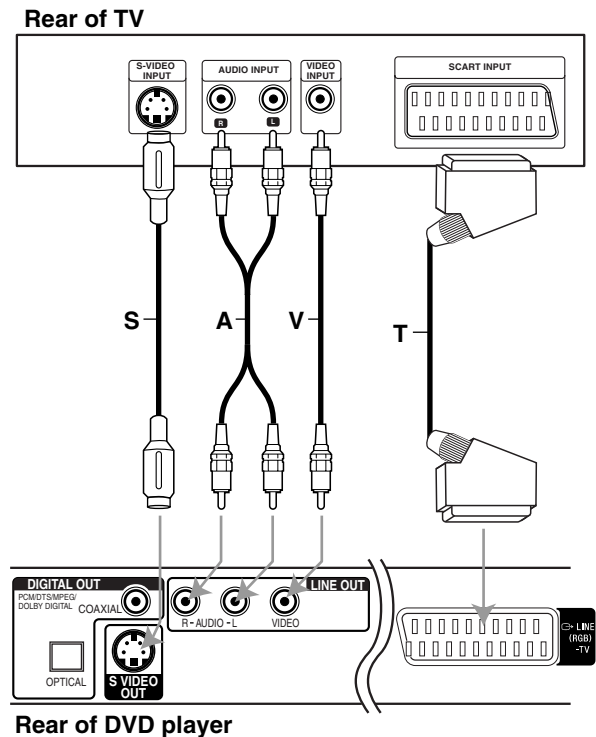
S-Video connection

1 Connect the S-VIDEO OUT jack on the DVD Player to the S-Video in jack on the TV using the S-Video cable (**S**) (not supplied).

2 Connect the Left and Right AUDIO OUT jacks of the DVD Player to the audio left/right in jacks on the TV (**A**) using the audio cables (not supplied).

SCART connection

Connect the TO TV scart jack on the DVD Player to the corresponding in jacks on the TV using the scart cable (**T**) (not supplied).



* Cable S.A.V.T. (not supplied)

Connections (Continued)

Connecting to Optional Equipment

Connecting to an amplifier equipped with two channel analog stereo or Dolby Pro Logic II/ Pro Logic

Connect the Left and Right AUDIO OUT jacks on the DVD Player to the audio left and right in jacks on your amplifier, receiver, or stereo system, using the audio cables **(A)** (not supplied).

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)

1 Connect one of the DVD Player's DIGITAL AUDIO OUT jacks (OPTICAL **O** or COAXIAL **X**) to the corresponding in jack on your amplifier. Use a digital (optical **O** or coaxial **X**) audio cable (not supplied).

2 You will need to activate the player's digital output. (See "Digital Audio Output" on page 14).

Digital Multi-channel sound

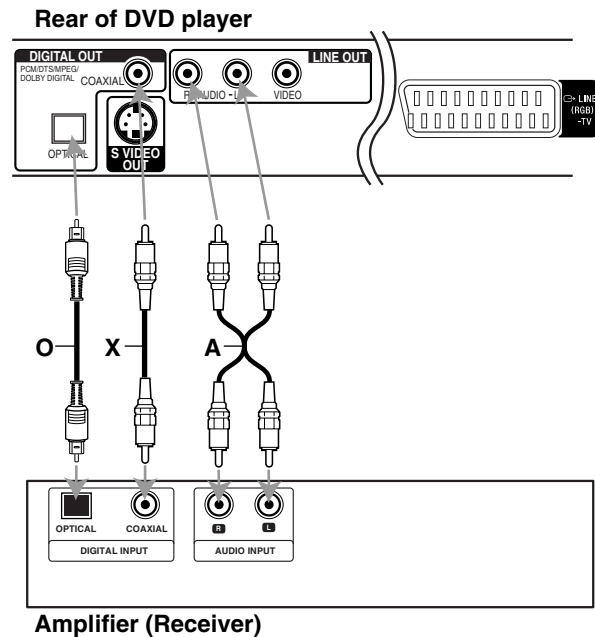
A digital multi-channel connection provides the best sound quality. For this you need a multi-channel Audio/Video receiver that supports one or more of the audio formats supported by your DVD Player (MPEG 2, Dolby Digital and DTS). Check the receiver manual and the logos on the front of the receiver.



Due to the DTS Licensing agreement, the digital output will be in DTS digital out when DTS audio stream is selected.


Notes

- If the audio format of the digital output does not match the capabilities of your receiver, the receiver 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 receiver is equipped with a Digital Multi-channel decoder.
- To see the audio format of the current DVD in the on-screen display, press **O** (AUDIO).



Before Operation

General Explanation

This manual gives basic instructions for operating the DVD Player. 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 DVD Player 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 **ENTER** to execute the setting.












Temporary Feedback Field Icons

-  Repeat Title
-  Repeat Chapter
-  Repeat Track
-  Repeat All Tracks
-  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.
- You cannot use the Repeat function with Video CDs with PBC playback.

DVD

Items		Function (Press ↑/↓ to select desired item)	Selection Method
Title Number	 1 / 3	Shows the current title number and total number of titles, and skips to the desired title number.	← / → , or Numbers, ENTER
Chapter Number	 1 / 12	Shows the current chapter number and total number of chapters, and skips to the desired chapter number.	← / → , or Numbers, ENTER
Time search	 0:20:09	Shows the elapsed playing time, and searches the point by the elapsed time directly.	Numbers, ENTER
Audio language and Digital Audio Output mode	 1 ENG  5.1 CH	Shows the current audio soundtrack language, encoding method, and channel number, and changes the setting.	← / → , or  (AUDIO)
Subtitle language	 OFF	Shows the current subtitles language, and changes the setting.	← / → , or  (SUBTITLE)
Angle	 1 / 1	Shows the current angle number and total number of angles, and changes the angle number.	← / → , or  (ANGLE)
Sound	 NORM.	Shows the current sound mode, and changes the setting.	← / → , or SUR

VCD

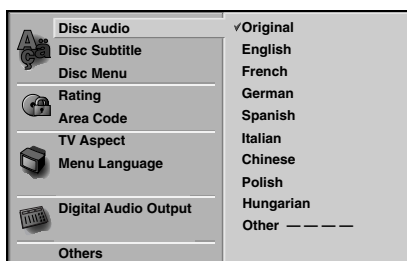
Items		Function (Press ↑/↓ to select desired item)	Selection Method
Track Number	 1 / 3	Shows the current track number, total number of tracks and PBC On mode, and skip to the desired track number.	← / → , or Numbers, ENTER
Time	 0:20:09	Shows the elapsed playing time (Display only)	–
Audio Channel	 ST	Shows the audio channel, and changes the audio channel.	← / → , or  (AUDIO)
Sound	 NORM.	Shows the current sound mode, and changes the setting.	← / → , or SUR

Before Operation (Continued)

Initial Settings

You can set your own Personal Preferences on the player.

Initial Settings General Operation



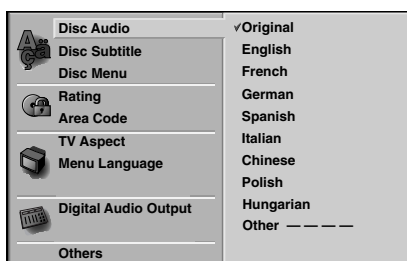
- 1 Press SET UP.**
The setup menu appears.
- 2 Press \uparrow/\downarrow to select the desired item.**
The screen will show the current setting for the selected item, as well as alternate setting(s).
- 3 While the desired item is selected, press \rightarrow , then \uparrow/\downarrow to select the desired setting.**
- 4 Press ENTER to confirm your selection.**
Some items require additional steps.
- 5 Press SET UP, RETURN, or \triangleright (PLAY) to exit the setup menu.**

Language

Disc Language **DVD**

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 25. 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 SET UP.



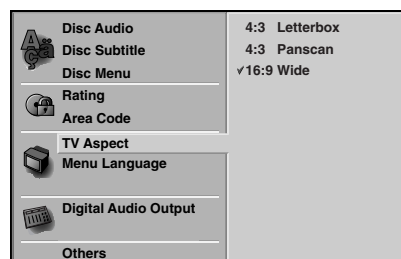
Picture

TV Aspect **DVD**

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.



Before Operation (Continued)

Sound

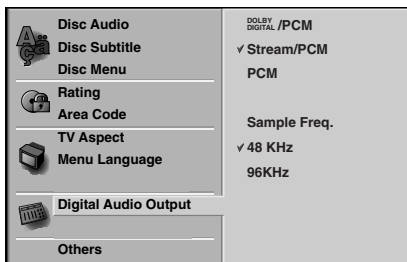
Digital Audio Output

Each DVD disc has a variety of audio output options. Set the player's Digital Audio Output according to the type of audio system you use.

DOLBY DIGITAL/PCM: Select "DOLBY DIGITAL/PCM" if you connected the DVD Player's DIGITAL OUT jack to a Dolby Digital decoder (or an amplifier or other equipment with a Dolby Digital decoder).

Stream/PCM: Select "Stream/PCM" if you connected the DVD Player's DIGITAL OUT jack to an amplifier or other equipment with a DTS decoder, Dolby Digital decoder or MPEG decoder.

PCM: Select when connected to a 2-channel digital stereo amplifier. The DVD player outputs sounds in the PCM 2ch format when you play a DVD video disc recorded on the Dolby Digital, MPEG1, or MPEG2 recording system.



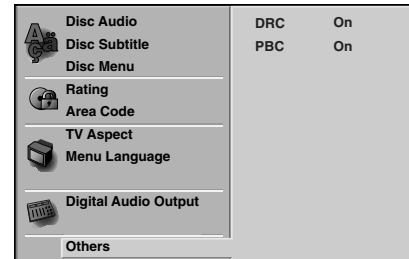
Sample Frequency

To change the Sample Frequency setting, first select the desired Digital Audio Output as indicated as above. If your receiver or amplifier is NOT capable of handling 96KHz signals, select 48KHz. When this choice is made, this unit will automatically convert any 96KHz signals to 48KHz so your system can decode them. If your receiver or amplifier is capable of handling 96KHz signals, select 96KHz. When this choice is made, this unit will pass each type of signal through without any further processing.

Others

The DRC and PBC settings can be changed.

- Press \uparrow/\downarrow 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.

PBC

Set Playback Control (PBC) to On or Off.

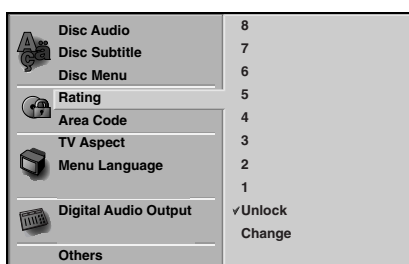
- On:** Video CDs with PBC are played according to the PBC.
- Off:** Video CDs with PBC are played the same way as Audio CDs.

Before Operation (Continued)

Parental Control

Rating **DVD**

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 area-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.



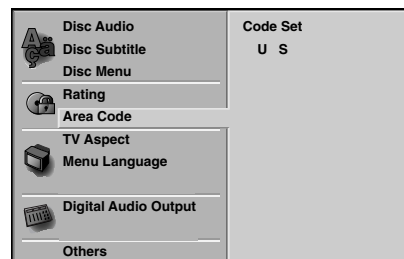
- 1 Select "Rating" on the Setup menu using the \uparrow/\downarrow buttons.
- 2 While "Rating" is selected, press \rightarrow .
- 3 When you have not entered a password yet. Enter a 4-digit password using the numbered buttons to create a personal 4-digit security password, then press ENTER. Enter the 4-digit password again and press 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 ENTER.

If you make a mistake before pressing ENTER, press CLEAR and enter 4-digit security password again.

- 4 Select a rating from 1 to 8 using the \uparrow/\downarrow buttons. One (1) has the most playback restrictions. Eight (8) has the least 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 ENTER to confirm your rating selection, then press SET UP to exit the menu.

Area Code **DVD**

Enter the code of a country/area whose standards were used to rate the DVD video disc, referring to the list (See "Area Code List", page 26.).



- 1 Select Area Code using the \uparrow/\downarrow buttons on the setup menu.
- 2 While Area Code is selected, press \rightarrow .
- 3 Follow step 3 of "Rating" on left.
- 4 Select the first character using the \uparrow/\downarrow buttons.
- 5 Shift the cursor using \rightarrow button and select the second character using \uparrow/\downarrow buttons.
- 6 Press ENTER to confirm your area code selection, then press SET UP 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 ENTER.
- 3 Select Change using \uparrow/\downarrow buttons then press ENTER.
- 4 Enter the new 4-digit code, then press ENTER.
- 5 Enter exactly the same code a second time and verify by pressing ENTER.
- 6 Press SET UP 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 SET UP to display the setup menu.
- 2 Use the Number buttons to enter the 6-digit number "210499".
The 4-digit password is cleared. "P CLR" appears on the display for a moment.
- 3 Enter a new code as shown above to the left (Rating).

Operation with DVD and Video CD

Playing a DVD and Video CD

Playback Setup **DVD** **VCD**

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

1 Press **▲** (OPEN/CLOSE) to open the disc tray.

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

3 Press **▲** (OPEN/CLOSE) to close the tray. READING appears on the TV screen, and 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.

DVD

Use the **◀/▶/▲/▼** buttons to select the title/chapter you want to view, then press ENTER to start playback. Press TOP MENU or MENU to return to the menu screen.

VCD

- 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 14.

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 15).
- 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 2 (two).

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 **DVD** 1/3

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

DVD **VCD** 1/12 1/3

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 **◀◀** 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).

Notes

- For two-digit numbers, press the numbered buttons (0-9) in rapid succession.
- On a Video CD with PBC, you must set PBC to Off on the setup menu to use this function. See page 14.

Search **DVD** **VCD**

- 1 Press **◀◀** or **▶▶** during playback.
The player will now go into SEARCH mode.
- 2 Press **◀◀** or **▶▶** repeatedly to select the required speed: X2 **◀**, 1 **◀◀**, 2 **◀◀**, 3 **◀◀** (backward) or X2 **▶**, 1 **▶▶**, 2 **▶▶**, 3 **▶▶** (forward).
With a Video CD, the Search speed changes: 1 **◀◀**, 2 **◀◀**, 3 **◀◀** (backward) or 1 **▶▶**, 2 **▶▶**, 3 **▶▶** (forward).
- 3 To exit SEARCH mode, press **▷** (PLAY).

Operation with DVD and Video CD (Continued)

General Features (continued)

Still Picture **DVD** **VCD**

- 1 Press **II** (PAUSE) during playback.
The player will now go into PAUSE mode.
- 2 To exit still motion mode, press **II** (PAUSE) again or **▷** (PLAY).

Slow Motion **DVD** **VCD**

- 1 Press **◀** or **▶** during playback.
The player will enter SLOW mode.
- 2 Use the **◀** or **▶** to select the required speed:
4 **◀**, 3 **◀**, 2 **◀** or 1 **◀** (backward), or 4 **▶**, 3 **▶**, 2 **▶** or 1 **▶** (forward).
- 3 To exit slow motion mode, press **▷** (PLAY).

Note

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

Random **VCD**

- 1 Press RANDOM during playback or in stop mode.
The unit automatically begins Random Playback and "RANDOM" appears on the display window.
- 2 To return to normal playback, press RANDOM until "RANDOM" disappears on the display window.

Tip

By pressing **▶▶** during Random playback, the unit selects another title (track) and resumes Random playback.

Notes

- This function only works with Video CD without PBC.
- On a Video CD with PBC, you must set PBC to Off on the setup menu to use the Random function. See page 14.

Repeat **DVD** **VCD**



DVD Video Discs - Repeat Chapter/Title/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 exit Repeat mode, press REPEAT a third time.
The Repeat Off icon appears on the TV screen.

Video CDs - 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 All icon appears on the TV screen.
- 3 To exit Repeat mode, press REPEAT a third 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 14.

Time Search **DVD**



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 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.

Surround **DVD** **VCD**



This unit can produce a 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 SUR to select "SUR" during playback.
- 2 To turn off the Surround effect, press SUR again to select "NORM".





Note

SUR cannot be used while selecting DTS.

Operation with DVD and Video CD (Continued)

Special DVD Features

Checking the contents of DVD Video discs: Menu

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 ENTER.

Title Menu


- 1 Press TOP MENU.
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 TOP MENU again.

Disc Menu


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

Camera Angle 1/1


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 1 ENG DSD 5.1 CH

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 (Stereo, Left or Right).

Subtitles 1 ENG

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

Note

If  appears, the feature is not available on the disc.

Operation with Audio CD and MP3 Disc

Playing an Audio CD and MP3 Disc

CD **MP3**

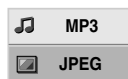
The DVD Player can play MP3 formatted recordings on CD-ROM, CD-R or CD-RW discs.

Before playing MP3 recordings, read the notes on MP3 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.

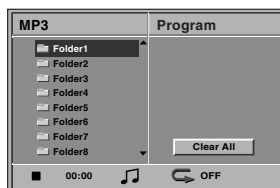
MP3 disc; The MP3-JPEG choice menu appears on the TV screen. Go to step 2



2 Press \uparrow/\downarrow to select the MP3 then press ENTER.

The MP3 menu appears on the TV screen.

Press \rightarrow RETURN to move to the MP3-JPEG choice menu.



3 Press \uparrow/\downarrow to select a folder, and ENTER.

A list of files in the folder appears.

4 Press \uparrow/\downarrow to select a track then press \triangleright (PLAY) or ENTER.

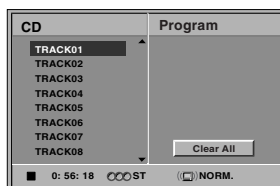
Playback starts.

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

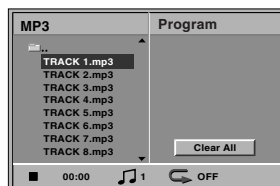
Playback will stop at the end of the disc.

Press TOP MENU to move to the next page.

Press MENU to move to the previous page.



Audio CD menu



MP3 menu

Tip

If you are in a file list and want to return to the Folder list, use the \uparrow/\downarrow to highlight \square and press ENTER to return to the previous menu screen.

5 To stop playback at any other time, press \blacksquare (STOP).

Notes on MP3 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”.

MP3 Disc compatibility with this player is limited as follows:

1. Sampling Frequency / only at 44.1 kHz
2. Bit rate / within 32-320 kbps CBR
3. CD-R physical format should be “ISO 9660”
4. Discs created in the Packet Write format cannot be played.
5. A single session disc requires MP3 files in the first track. If there is no MP3 file in the 1st track, it cannot playback MP3 files. If you wish to playback MP3 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” extension e.g. “*****.MP3”.
7. Do not use special letters such as “/ : * ? “ < > ” etc.
8. Total number of files on the disc should be less than 650.
9. VBR is not supported.

Operation with Audio and MP3 Disc (Continued)

Pause **CD** **MP3**

- 1 Press **II** (PAUSE) during playback.
- 2 To return to playback, press **▷** (PLAY) or press **II** (PAUSE) again.

Moving to another Track **CD** **MP3**

- Press **◀◀** or **▶▶** briefly during playback to go to the next track or to return to the beginning of the current track.
- Press **◀◀** 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 **CD** **MP3**

- 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 **CD** **MP3**

- 1 Press **◀◀** or **▶▶** during playback. The player will now go into SEARCH mode.
- 2 Press **◀◀** or **▶▶** repeatedly to select the required speed: 1 **◀◀**, 2 **◀◀◀**, 3 **◀◀◀◀** (backward) or 1 **▶▶**, 2 **▶▶▶**, 3 **▶▶▶▶** (forward). Search speed and direction are indicated on the menu screen.
- 3 To exit SEARCH mode, press **▷** (PLAY).

Random **CD** **MP3**

- 1 Press RANDOM during playback or when playback is stopped. The unit automatically begins Random Playback and RANDOM or "RAND." appears on the display window and menu screen.
- 2 To return to normal playback, press RANDOM repeatedly until RANDOM or "RAND." disappears on the display window and menu screen.

Surround **CD**

This unit can produce a 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 SUR to select "SUR" during playback.
- 2 To turn off the Surround effect, press SUR again to select "NORM."

Changing the Audio Channel **CD**

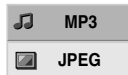
Press **◻◻** (AUDIO) repeatedly during playback to hear a different audio channel (Stereo, Left or Right).

Operation with JPEG Disc

Viewing a JPEG disc **JPEG**

This DVD Player can play discs with JPEG files. Before playing JPEG recordings, read the notes on JPEG Recordings on right.

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



- 2 Press \uparrow/\downarrow to select the JPEG then press ENTER.**
The JPEG menu appears on the TV screen.

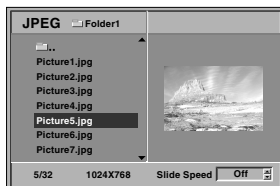


- 3 Press \uparrow/\downarrow to select a folder, and ENTER.**
A list of files in the folder appears. Press \rightarrow RETURN to move to the MP3-JPEG choice menu.

Tip

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

- 4 If you want to view a particular file, press \uparrow/\downarrow to highlight a file and press ENTER or \triangleright (PLAY).**
Viewing the file proceeding starts.
During viewing a file, press \rightarrow RETURN to move to the previous menu (JPEG menu).
Press TOP MENU 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 \leftarrow/\rightarrow to highlight the Slide Speed then press \uparrow/\downarrow to select the option you want to use, and press ENTER.

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

Moving to another File

Press $\leftarrow\leftarrow$ or $\rightarrow\rightarrow$ once during viewing a picture to advance to the next file or to the previous file.

Still Picture

- 1 Press $\|\$ (PAUSE) during slide show.
The player will now go into PAUSE mode.
- 2 To return to the slide show, press \triangleright (PLAY) or press $\|\$ (PAUSE) again.

To flip the picture

Press \uparrow/\downarrow during showing a picture to flip the picture horizontally or a vertically.

To rotate picture

Press \leftarrow/\rightarrow 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 DVD player 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.
- 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 DVD player. Even though the files are shown as JPEG image files in windows explorer.


Programmed Playback **CD** **VCD** **MP3**

Programmed Playback with Audio CD and MP3 Disc


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

Program can contain 30 tracks.

1 Press PROGRAM during playback or in the stop mode to enter the Program Edit mode.

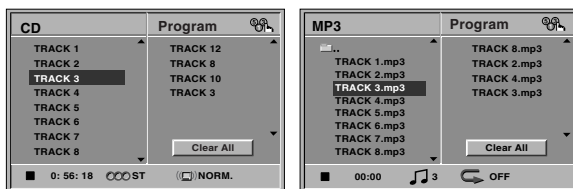
The  mark will appear to the right of the word Program on the right side of the menu screen.

Note

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

2 Select a track, then press ENTER to place the selected track on the Program list.

3 Repeat step 2 to place additional tracks on the Program list.



Audio CD menu

MP3 menu

4 Press .

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

5 Press / to select the track you want to start playing.

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

6 Press (PLAY) to start.

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

7 To resume normal playback from programmed playback, select a track of CD (or MP3) list and then press ENTER.

"PRG" disappears on the menu screen.

Programmed Playback with Video CD

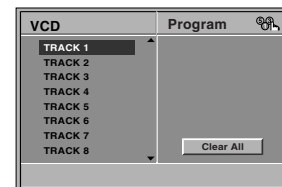
Note

On a Video CD with PBC, you must set PBC to Off on the setup menu to use the Program function. See page 14.


1 Insert Video CD and close the tray.

2 Press PROGRAM while playback is stopped.

The VCD Program menu will appear.



Note

Press  RETURN or PROGRAM to exit the Program menu.

3 Follow steps 2-6 of "Programmed Playback with Audio CD and MP3 disc" on left.

4 To resume normal playback from programmed playback, press PROGRAM.

"PROG." indicator disappears in the display window.

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.

Erasing a Track from Program List

1 Press PROGRAM during playback (Audio CD and MP3 disc only) or in the stop mode to enter the Program Edit mode.

The  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 ENTER.

The complete Program for the disc will be erased.

The programs are also cleared when the disc is removed.

Additional Information

Last Condition Memory

DVD **CD** **VCD**

This player 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 player before commencing to play it.

Screen Saver

The screen saver picture appears when you leave the DVD Player in stop mode for about 15 minutes. After the Screen Saver has been engaged for about 15 minutes, the DVD Player will automatically turn itself off.




Color System

The DVD Player's color system mode is selected automatically by inserted disc's color system (PAL or NTSC). When the selected system does not coincide with the system of your TV, normal color picture may not be displayed.

Controlling Your TV with the Supplied Remote

You can control the sound level, input source, and power switch of your Sony TV with the supplied remote.

You can control your TV using the buttons below.



By pressing	You can
TV I / 	Turn the TV on or off.
 (volume) +/-	Adjust the volume of the TV.
 (TV/video)	Switch the TV's input source between the TV and other input sources.

Note

Depending on the unit being connected, you may not be able to control your TV using some of the buttons.

Controlling other TVs with the remote

You can control the sound level, input source, and power switch of non-Sony TVs as well. If your TV is listed in the table below, set the appropriate manufacturer code.

1. While holding down TV I / , press the number buttons to select the manufacturer code for your TV (see the table below).
2. Release TV I / .

Code numbers of controllable TVs

If more than one code number is listed, try entering them one at a time until you find the one that works with your TV.

Manufacturer	Code Number
Sony (default)	01
Aiwa (default)	01
Grundig	11
Hitachi	24
JVC	33
LG	06
Loewe	06
Panasonic	17, 49
Philips	06, 08
Samsung	06
Sanyo	25
Sharp	29
Thomson	43
Toshiba	38

Notes

- Depending on your TV, some or all buttons may not function on the TV, even after entering the correct manufacturer code.
- If you enter a new code number, the code number previously entered will be erased.
- When you replace the batteries of the remote, the code number you have set may be reset to the default setting. Set the appropriate code number again.

Troubleshooting

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 DVD player 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 display window 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 DVD player 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 securely.
	<ul style="list-style-type: none"> The connected TV power is turned off. 	<ul style="list-style-type: none"> Turn on the TV.
No sound.	<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 receiver so you can listen to the sound from the DVD player.
	<ul style="list-style-type: none"> The audio cables are not connected securely. 	<ul style="list-style-type: none"> Connect the audio cable 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 Digital Audio Output is set to the wrong position. 	<ul style="list-style-type: none"> Set the Digital Audio Output to the correct position, then turn on the DVD player again by pressing ■ / ⏻.
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 DVD player 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"> The Rating level is set. 	<ul style="list-style-type: none"> Cancel the Rating function or change the rating level.
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 DVD player. 	<ul style="list-style-type: none"> Point the remote control at the remote sensor of the DVD player.
	<ul style="list-style-type: none"> The remote control is too far from the DVD player. 	<ul style="list-style-type: none"> Operate the remote control near the DVD player.
	<ul style="list-style-type: none"> There is an obstacle in the path of the remote control and the DVD player. 	<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.

Language Code List

Enter the appropriate code number for the initial settings “Disc Audio”, “Disc Subtitle” and/or “Disc Menu” (See page 13).

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

Area Code List

Enter the appropriate code number for the initial setting "Area Code" (See page 15).

Code	Area	Code	Area	Code	Area	Code	Area
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	MW	Malawi	TN	Tunisia
BO	Bolivia	GY	Guyana	MX	Mexico	TO	Tonga
BR	Brazil	HK	Hong Kong	MY	Malaysia	TP	East Timor
BS	Bahamas	HM	Heard and McDonald Islands	MZ	Mozambique	TR	Turkey
BT	Bhutan	HN	Honduras	NA	Namibia	TT	Trinidad and Tobago
BV	Bouvet Island	HR	Croatia	NC	New Caledonia (French)	TV	Tuvalu
BW	Botswana	HT	Haiti	NE	Niger	TW	Taiwan
BY	Belarus	HU	Hungary	NF	Norfolk Island	TZ	Tanzania
BZ	Belize	ID	Indonesia	NG	Nigeria	UA	Ukraine
CA	Canada	IE	Ireland	NI	Nicaragua	UG	Uganda
CC	Cocos (Keeling) Islands	IL	Israel	NL	Netherlands	UK	United Kingdom
CF	Central African Republic	IN	India	NO	Norway	UM	USA Minor Outlying Islands
CG	Congo	IO	British Indian Ocean Territory	NP	Nepal	US	United States
CH	Switzerland	IQ	Iraq	NR	Nauru	UY	Uruguay
CI	Ivory Coast	IR	Iran	NU	Niue	UZ	Uzbekistan
CK	Cook Islands	IS	Iceland	NZ	New Zealand	VA	Vatican City State
CL	Chile	IT	Italy	OM	Oman	VC	Saint Vincent & Grenadines
CM	Cameroon	JM	Jamaica	PA	Panama	VE	Venezuela
CN	China	JO	Jordan	PE	Peru	VG	Virgin Islands (British)
CO	Colombia	JP	Japan	PF	Polynesia (French)	VI	Virgin Islands (USA)
CR	Costa Rica	KE	Kenya	PG	Papua New Guinea	VN	Vietnam
CS	Former Czechoslovakia	KG	Kyrgyzstan	PH	Philippines	VU	Vanuatu
CU	Cuba	KH	Cambodia	PK	Pakistan	WF	Wallis and Futuna Islands
CV	Cape Verde	KI	Kiribati	PL	Poland	WS	Samoa
CX	Christmas Island	KM	Comoros	PM	Saint Pierre and Miquelon	YE	Yemen
CY	Cyprus	KN	Saint Kitts & Nevis Anguilla	PN	Pitcairn Island	YT	Mayotte
CZ	Czech Republic	KP	North Korea	PR	Puerto Rico	YU	Yugoslavia
DE	Germany	KR	South Korea	PT	Portugal	ZA	South Africa
DJ	Djibouti	KW	Kuwait	PW	Palau	ZM	Zambia
DK	Denmark	KY	Cayman Islands	PY	Paraguay	ZR	Zaire
DM	Dominica	KZ	Kazakhstan	QA	Qatar	ZW	Zimbabwe
DO	Dominican Republic	LA	Laos	RE	Reunion (French)		
DZ	Algeria	LB	Lebanon	RO	Romania		
EC	Ecuador			RU	Russian Federation		
EE	Estonia			RW	Rwanda		
EG	Egypt			SA	Saudi Arabia		
EH	Western Sahara			SB	Solomon Islands		

Specifications

General

Power requirements	AC 110-240V , 50/60 Hz
Power consumption	14W
Dimensions (approx.)	360 X 47.5 X 242 mm (w x h x d)
Mass (approx.)	2.1 kg
Operating temperature	5°C to 35°C (41°F to 95°F)
Operating humidity	5 % to 90 %

System

Laser	Semiconductor laser
Signal system	PAL/NTSC
Frequency response	DVD (PCM 96 kHz): 8 Hz to 44 kHz DVD (PCM 48 kHz): 8 Hz to 22 kHz CD: 8 Hz to 20 kHz
Signal-to-noise ratio	More than 100dB (ANALOG OUT connectors only)
Harmonic distortion	Less than 0.008%
Dynamic range	More than 100 dB (DVD) More than 95 dB (CD)

Outputs

VIDEO OUT	1 Vp-p 75 Ω , sync negative, RCA jack x 1 / SCART (TO TV)
S-VIDEO OUT	(Y) 1.0 V (p-p), 75 Ω , negative sync, Mini DIN 4-pin x 1 (C) 0.3 V (p-p) 75 Ω
Audio output (digital audio)	0.5 V (p-p), 75 Ω , RCA jack x 1
Audio output (optical audio)	-18 dBm (wave length 660 nm), Optical connector x 1
Audio output (analog audio)	2.0 Vrms (1 KHz, 0 dB), 600 Ω , RCA jack (L, R) x 1 / SCART (TO TV)

Accessory

Remote control	1
Batteries	2

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