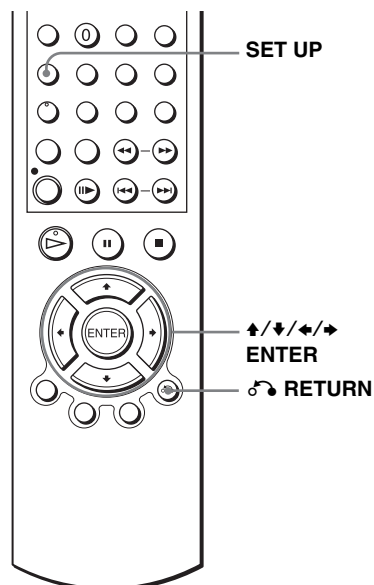


Notes

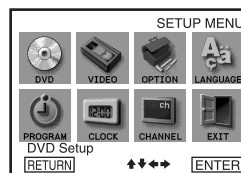
- If you select surround setting while playing a DVD, the player does not output Dolby Digital signals from the DIGITAL AUDIO OUT (OPTICAL or COAXIAL) jack (when you set “Dolby Digital” to “D-PCM”).
- If you connect a component that does not conform to the selected audio signal, a loud noise (or no sound) will come out from the speakers, affecting your ears or causing the speakers to be damaged.

Screen Setup **DVD**

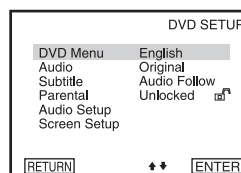
“Screen Setup” allows you to set the screen according to the playback and connection conditions.



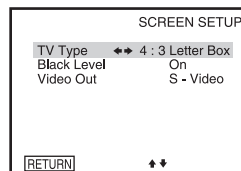
- 1  Press SET UP when the DVD player is in stop mode.
The “SETUP MENU” appears.



- 2  Press  (DVD Setup), then press ENTER.
The “DVD SETUP” menu appears.



- 3  Press  to select “Screen Setup,” then press ENTER.



4



Press $\uparrow/\downarrow$ to select the setup item from the displayed list:
“TV Type,” “Black Level,” or “Video Out.”

5



Press $\leftarrow/\rightarrow$ to select an item, then press $\curvearrowright$ RETURN to confirm the setting.



RETURN

6



RETURN

Press $\curvearrowright$ RETURN repeatedly to exit the menu.

Menu choices

- TV Type (DVD only)

Selects the aspect ratio of the connected TV (4:3 standard or wide).
The default setting is indicated in bold print.

4:3 Letter Box	Select this when you connect a 4:3 screen TV. Displays a wide picture with bands on the upper and lower portions of the screen.
4:3 Pan Scan	Select this when you connect a 4:3 screen TV. Automatically displays the wide picture on the entire screen and cuts off the portions that do not fit.
16:9	Select this when you connect a wide-screen TV or a TV with a wide mode function.

4:3 Letter Box



4:3 Pan Scan



16:9



- Black Level

You can enhance the black level by increasing the brightness and contrast when viewing DVDs with the PROGRESSIVE indicator turned off.
The default setting is indicated in bold print.

On	Increases the contrast.
Off	Stops the increase of the contrast.

continued

- Video Out

You must set this setting when you use S VIDEO OUT or COMPONENT VIDEO OUT jacks to connect to the TV.

The default setting is indicated in bold print.

S-Video	Select this when you use the S VIDEO OUT jack on the rear panel to connect to the TV.
Component	Select this when you use the COMPONENT VIDEO OUT jacks on the rear panel to connect to the TV.

Tip

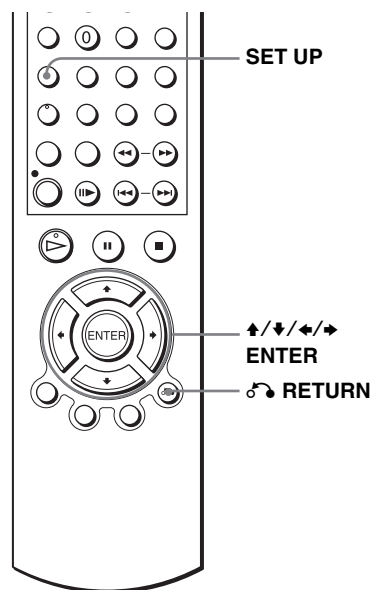
- You can select the type of signal output from the COMPONENT VIDEO OUT jacks. When you press the PROGRESSIVE button on the front panel when the DVD player is in stop mode, progressive signal is selected and the PROGRESSIVE indicator lights up in blue. Select this when you have a TV that can accept progressive signal. When you are connected to a standard (interlace format) TV, turn off the PROGRESSIVE indicator.

Notes

- Playback settings stored in the disc take priority over the “DVD SETUP” menu settings and not all the functions described may work.
- Depending on the DVD, “4:3 Letter Box” may be selected automatically instead of “4:3 Pan Scan” or vice versa.
- The connection using S VIDEO OUT or COMPONENT VIDEO OUT jacks is only for the DVD player.
- If you select progressive signal when you connect the DVD player to a TV that cannot accept the signal in progressive format, the image quality will deteriorate. In this case, press the PROGRESSIVE button to turn off the PROGRESSIVE indicator.
- You can output progressive signal only from COMPONENT VIDEO OUT jacks. If you turn on the PROGRESSIVE indicator when you set “Video Out” to “S-video”, COMPONENT VIDEO OUT takes priority over S VIDEO OUT.
- The PROGRESSIVE button is not available when the DVD player is in play mode. Use the PROGRESSIVE button in stop mode.

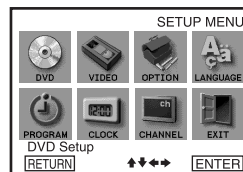
Setting the display or sound track language **DVD**

You can set various languages for the disc's menu, sound track or subtitle.

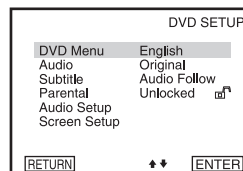


DVD Settings and Adjustments

- 1 **SET UP** Press SET UP when the DVD player is in stop mode.
The "SETUP MENU" appears.



- 2 **ENTER** Press $\uparrow/\downarrow/\leftarrow/\rightarrow$ to select (DVD Setup), then press ENTER.
The "DVD SETUP" menu appears.



- 3 **ENTER** Press $\uparrow/\downarrow$ to select the language setup item from the displayed list: "DVD Menu," "Audio," or "Subtitle."
Then press ENTER.

continued

4



Press $\uparrow/\downarrow$ to select the desired language, then press ENTER.

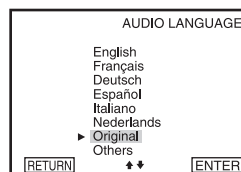
- DVD MENU LANGUAGE

You can select the desired language for the disc's menu.



- AUDIO LANGUAGE

Switches the language of the sound track. When you select "Original," the language given priority in the disc is selected.



- SUBTITLE LANGUAGE

Switches the language of the subtitle recorded on the DVD. When you select "Audio Follow," the language for the subtitles changes according to the language you selected for the sound track.



5



RETURN

Press $\rightarrow$ RETURN repeatedly to exit the menu.

Tip

If you select "Others" in step 4, an additional language menu appears. Press $\uparrow/\downarrow/\leftarrow/\rightarrow$ to select the desired language, then press ENTER.



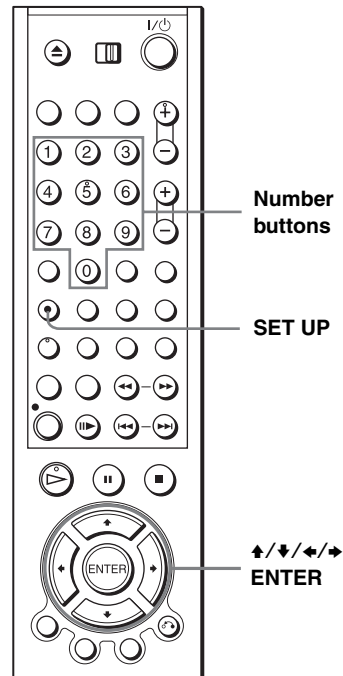
Notes

- When you select a language that is not recorded on the DVD in step 4, one of the recorded languages will be automatically selected.
- Playback settings stored in the disc take priority over the DVD SETUP settings and not all the functions described may work.

Parental Control (limiting playback by children)

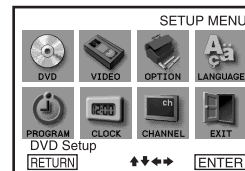
DVD

Playback of some DVDs can be limited according to a predetermined level such as the age of the users. The “Parental Control” function allows you to set a playback limitation level.



DVD Settings and Adjustments

- 1**  Press SET UP when the DVD player is in stop mode.
The “SETUP MENU” appears.



- 2**  Press  to select  (DVD Setup), then press ENTER.
The “DVD SETUP” menu appears.



continued

3



Press $\uparrow/\downarrow$ to select "Parental," then press ENTER.

PARENTAL CONTROL

Use Password $\leftrightarrow$ No

[RETURN] [ENTER]

4



Press $\rightarrow$ to select "Yes".

- If you have not entered a password
The display for registering a new password appears.
Enter a 4-digit password using the number buttons.

CREATE PASSWORD

Enter Password

[RETURN] PRESS 0-9

The display for confirming the password appears.
Re-enter the password.

CREATE PASSWORD

Re-enter Password

[RETURN] PRESS 0-9

- When you have already registered a password
The display for entering the password appears.
Enter a 4-digit password using the number buttons.

PASSWORD CHECK

Enter Password

[RETURN] PRESS 0-9

PARENTAL CONTROL

Use Password $\leftrightarrow$ Yes

Rating Level 1

Change Password

[RETURN] $\leftrightarrow$ [ENTER]

5



Press $\uparrow/\downarrow$ to select "Rating Level," then press ENTER.

RATING LEVEL

Level 8 Adult

Level 7

Level 6

Level 5

Level 4

Level 3

Level 2

Level 1 Kids Safe

[RETURN] $\leftrightarrow$ [ENTER]

6

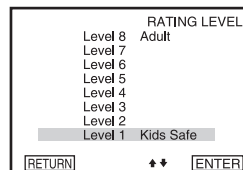


Press $\uparrow/\downarrow$ to select the level you want, then press ENTER.

The options are as follows.

Level 8 (Adult) $\leftrightarrow$ Level 7 $\leftrightarrow$ Level 6 $\leftrightarrow$
Level 5 $\leftrightarrow$ Level 4 $\leftrightarrow$ Level 3 $\leftrightarrow$ Level 2
 $\leftrightarrow$ Level 1 (Kids Safe)

The lower the value, the stricter the limitation.



7



RETURN

Press $\curvearrowright$ RETURN repeatedly to exit the menu.

To change the password

- 1 Select "Change Password" in step 4.
The display for entering a new password appears.
- 2 Enter a new 4-digit password using the number buttons.
The display for confirming the password appears.
- 3 Re-enter the new password.

To turn off the Parental Control function

Set "Use Password" to "No" in Step 4.

To play a disc for which Parental Control is set

- 1 Insert the disc, then press $\triangleright$ PLAY.
The display for entering your password appears.
- 2 Enter your 4-digit password using the number buttons.
The player starts playback.

If you forget your password

- 1 Remove the disc and turn off the DVD-VCR.
- 2 Turn on the DVD-VCR again with no disc in the unit.
- 3 Hold down $\ll$ and $\gg$ on the front panel simultaneously for 5 seconds.
"reset ok" appears on the screen.
- 4 Turn off the DVD-VCR.
The password is cleared.
- 5 To create a new password, follow step 4 on page 68.

Notes

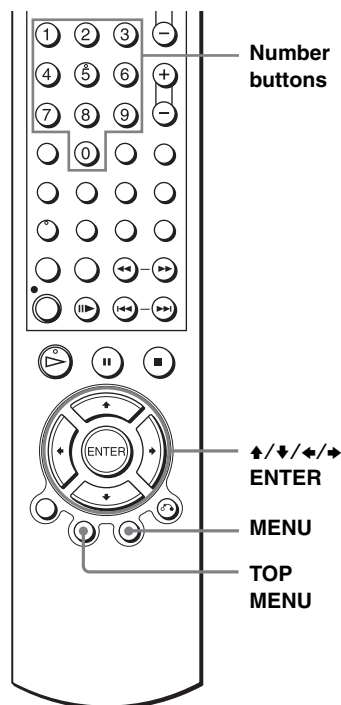
- When you play DVDs which do not have the Parental Control function, playback cannot be limited on this player.
- All the ratings higher than the level you select will be blocked.
- Write your password down and keep it in a safe place in case you forget it.

DVD Additional Operations

Using the DVD's menu **DVD**

A DVD is divided into long sections of a picture or a music feature called "titles." When you play a DVD which contains several titles, you can select the title you want using the TOP MENU button.

When you play DVDs that allow you to select items such as the language for the subtitles and the language for the sound, select these items using the MENU button.



- 1**



Press TOP MENU or MENU.

The disc's menu appears on the TV screen.

The contents of the menu vary from disc to disc.



MENU
- 2**



Press $\uparrow/\downarrow/\leftarrow/\rightarrow$ to select the item you want to play or change.

You can also use the number buttons to select the item.
- 3**



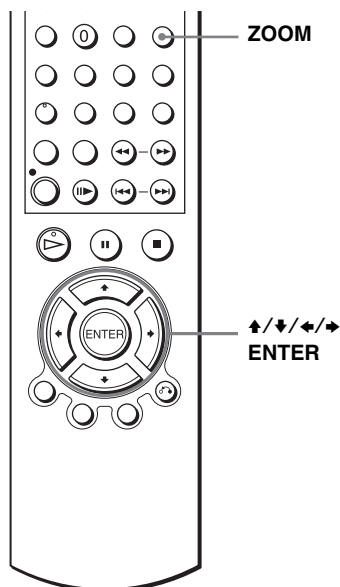
Press ENTER.

Note

- Depending on the DVD, you may not be able to use the TOP MENU button.

Zooming into a scene **DVD VCD DATA-CD**

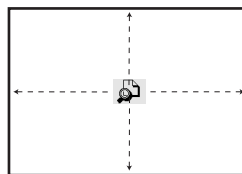
You can zoom into a scene during playback or still mode. To zoom into a JPEG image, see “Playing JPEG image files” on page 87.



1



Press ZOOM.
“” appears.



2



Press /// to move “” to the position where you want to zoom in.

3



Press ENTER repeatedly to change the magnification.
Each time you press the button, the magnification changes as shown below.
2× → 4× → 2× → normal magnification

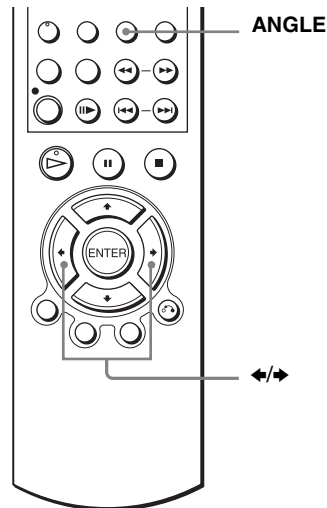
DVD Additional Operations

Notes

- You cannot use 4× magnification when you play VIDEO CDs.
- The zoom function may not work depending on the DVD.

Changing the angles **DVD**

If various angles (multi-angles) for a scene are recorded on the DVD, “” appears in the display when you press ANGLE during playback. This means that you can change the viewing angle.



1

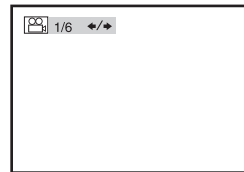
ANGLE



Press ANGLE during playback.

The angle number appears on the display.

The number after the slash indicates the total number of angles.



2



Press  repeatedly to select the angle number.

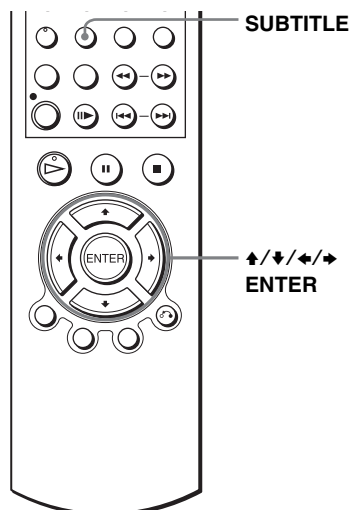
The scene changes to the selected angle.

Note

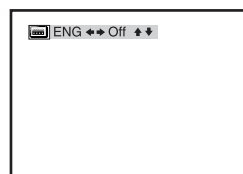
- Depending on the DVD, you may not be able to change the angles even if multi-angles are recorded on the DVD.

Displaying the subtitle **DVD**

If subtitles are recorded on the disc, you can change the subtitles or turn them on and off whenever you want while playing a DVD.



- 1** Press SUBTITLE during playback.



- 2** Press $\leftarrow/\rightarrow$ repeatedly to select the language.
Depending on the DVD, the choice of language varies.
Refer to "DVD Audio/Subtitle Language" on page 117 for the abbreviation of the language.



- 3** Press $\uparrow/\downarrow$ repeatedly to select "On."



To turn off the subtitles

Select "Off" in step 3.

Note

- Depending on the DVD, you may not be able to change the subtitles even if multilingual subtitles are recorded on it. You also may not be able to turn them off.

Various play mode functions (Program play, Shuffle play, Repeat play) **DVD VCD CD DATA-CD**

You can set the following play modes:

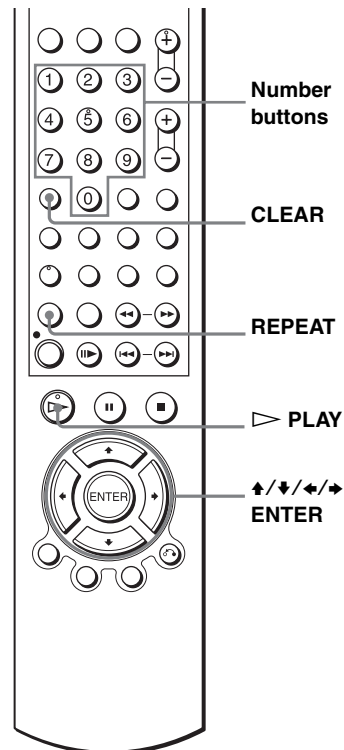
- Program play (page 74)
- Shuffle play (page 76)
- Repeat play (page 77)

Note

- The play mode is canceled when:
 - you open the disc tray
 - the player enters standby mode by pressing **I/⏻**.

Creating your own program (Program play) **CD**

You can play the contents of a disc in the order you want by arranging the order of the tracks on the disc to create your own program. You can program up to 20 tracks.

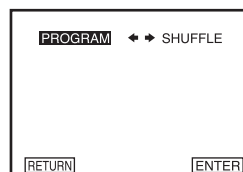


1

REPEAT/
REPLAY



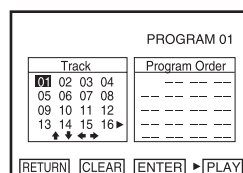
Press REPEAT when the DVD player is in stop mode.



2



Press $\leftarrow/\rightarrow$ to select "PROGRAM", then press ENTER.

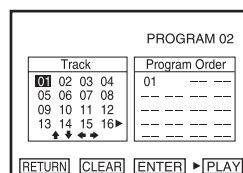


3



Press $\uparrow/\downarrow/\leftarrow/\rightarrow$ to select the track number you want to program, then press ENTER.

You can also use the number buttons to enter the track number.



4

To program other tracks, repeat step 3.

The programmed track numbers are displayed in the selected order.

5

PLAY



Press $\triangleright$ PLAY to start program play.

Program play starts.

When the program ends, you can restart the same program again by pressing $\triangleright$ PLAY.

To stop program play

Press CLEAR.

To change or cancel a program

1 Follow steps 1 and 2 of "Creating your own program (Program play)."

2 Press CLEAR.
The last programmed number is canceled.

3 Follow step 3 for new programming.

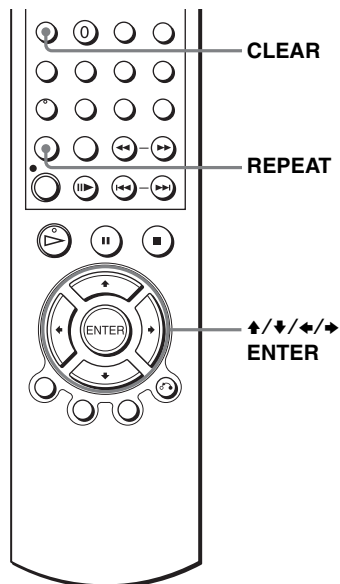
DVD Additional Operations

continued

Various play mode functions (Program play, Shuffle play, Repeat play) 75

Playing in random order (Shuffle play)

You can shuffle the playback order of tracks.
Subsequent “shuffling” may produce a
different playing order.

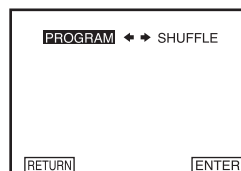


1

REPEAT/
REPLAY



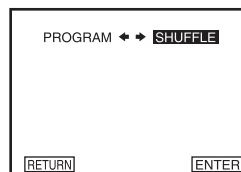
Press REPEAT when the DVD player is in stop mode.



2



Press  to select “SHUFFLE”, then press ENTER.

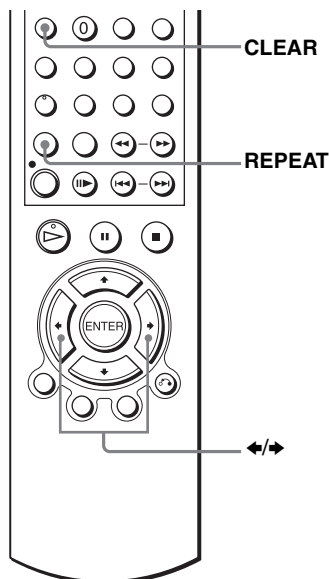


To return to normal play

Press CLEAR.

Playing repeatedly (Repeat play) **DVD VCD CD DATA-CD**

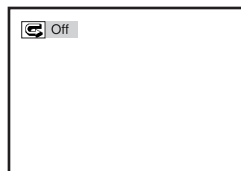
You can play all of the titles or tracks on a disc or a single title, chapter, or track repeatedly.



1



Press REPEAT during playback.



DVD Additional Operations

2



Press REPEAT or  repeatedly to select the item to be repeated.



When playing a DVD

- Chapter: repeats the current chapter.
- Title: repeats the current title on a disc.

When playing a VIDEO CD or CD

- Track: repeats the current track.
- Disc: repeats all of the tracks.

When playing a DATA CD (MP3 audio)

- Track: repeats the current track.

To return to normal play

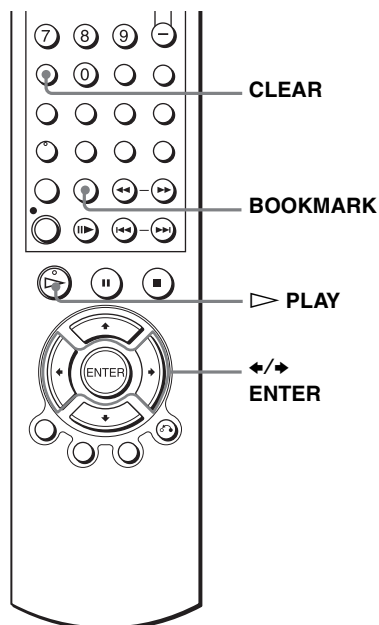
Select "Off" or press CLEAR in step 2.

Using bookmarks **DVD** **VCD**

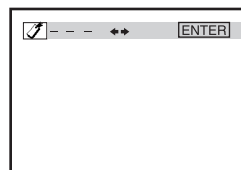
You can store scenes in the player's memory as bookmarks.

You can set up to three bookmarks.

Select "MENU OFF" before setting up bookmarks on a VIDEO CD (see "Playing VIDEO CDs with "MENU ON/OFF" Functions" on page 90).



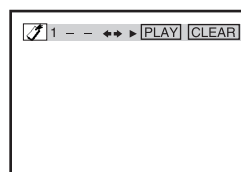
- 1 **BOOKMARK/SEARCH MENU** Press **BOOKMARK** during playback.
Three bookmark placeholders (- - -) appear next to the bookmark icon.



- 2 Press **ENTER** to select one of the placeholders.



- 3 Play the DVD scene you want, then press **ENTER**.
The selected placeholder changes to a number (1, 2 or 3).



To cancel the bookmark

Press CLEAR after step 3.

To exit the Bookmark menu

Press BOOKMARK.

To playback the scene where you insert a bookmark

- 1** Press BOOKMARK during playback.
- 2** Press ◀/▶ to select the bookmark placeholder, then press ▷ PLAY to play the bookmark.

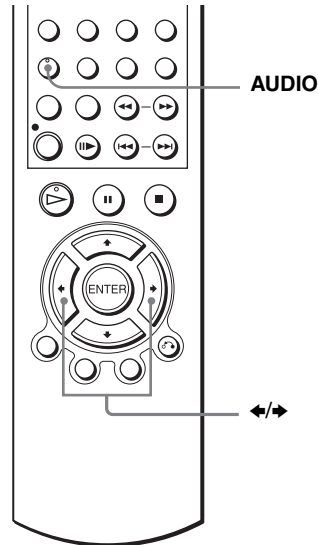
Note

- Depending on the DVD, you may not be able to use the bookmark function.

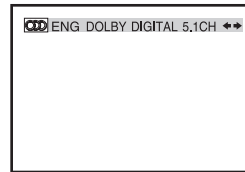
Changing the sound **DVD** **VCD** **CD**

When playing a DVD recorded in multiple audio formats (PCM, Dolby Digital, or DTS), you can change the audio format. If the DVD is recorded with multilingual tracks, you can also change the language.

With CDs, DATA CDs, or VIDEO CDs, you can select the sound from the right or left channel and listen to the sound of the selected channel through both the right and left speakers. For example, when playing a disc containing a song with the vocals on the right channel and the instruments on the left channel, you can hear the instruments from both speakers by selecting the left channel.



1 Press AUDIO during playback.



2



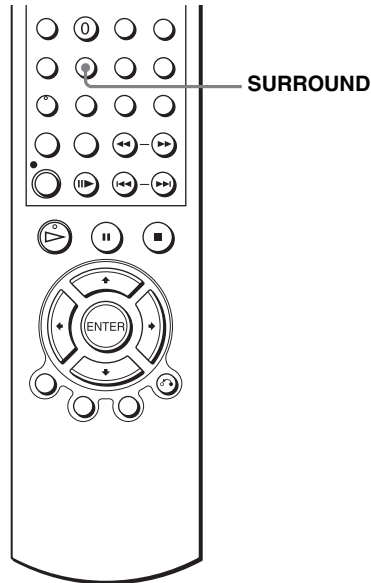
Press **↔** repeatedly to select the desired language/audio setting.

- When playing a DVD
Depending on the DVD, the choice of language varies.
Refer to “DVD Audio/Subtitle Language” on page 117 for the abbreviation of the language.
- When playing a VIDEO CD or CD
The default setting is indicated in bold print.

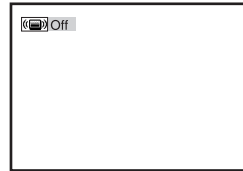
STEREO	The standard stereo sound
Left	The sound of the left channel (monaural)
Right	The sound of the right channel (monaural)

Virtual surround setting **DVD**

When you connect a stereo TV or 2 front speakers, SURROUND lets you enjoy surround sound effects by using sound imaging to create virtual rear speakers from the sound of the front speakers without using actual rear speakers. This function is designed to work with the LINE OUT AUDIO L/R jacks.



- 1** SURROUND Press SURROUND during playback.



- 2** SURROUND Press SURROUND repeatedly to select "On."



To cancel the setting

Select "Off" in step 2.

DVD Additional Operations

continued

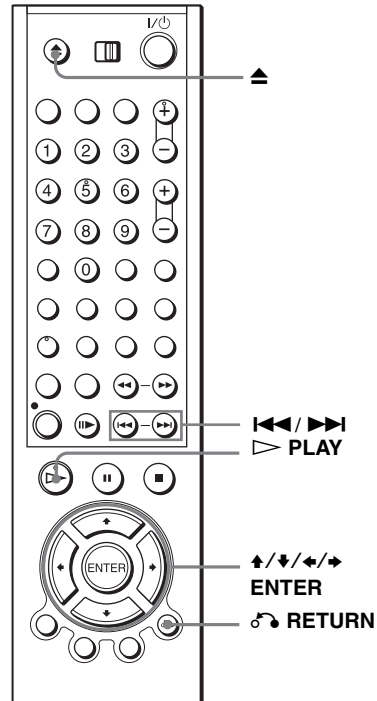
Virtual surround setting 81

Notes

- When the playing signal does not contain a signal for the rear speakers, the surround effects will be difficult to hear.
- When you activate the surround effect, turn off the surround setting of the connected TV or amplifier (receiver).
- Make sure that your listening position is between and at an equal distance from your speakers, and that the speakers are located in similar surroundings.
- If you use the DIGITAL AUDIO OUT (OPTICAL or COAXIAL) jack and set “Dolby Digital” to “Dolby Digital” or “DTS” to “On” in “AUDIO SETUP” menu, sound will come from your speakers but it will not have the surround effect.
- Certain audio features of this product manufactured under a license from Desper Products, Inc. Spatializer®, VBX™ and the circle-in-square device are trademarks owned by Desper Products, Inc.

Playing an MP3 audio track **DATA-CD**

You can play back DATA CDs (CD-ROMs/
CD-Rs/CD-RWs) recorded in MP3 (MPEG1
Audio Layer 3) format.



DVD Additional Operations

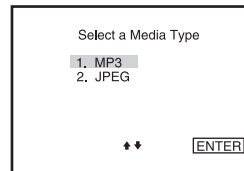
1



Press and place a DATA CD on the disc tray,
then press to close the tray.

When you load a DATA CD which contains
MP3 audio tracks and JPEG image files,
“Select a Media Type” menu appears.

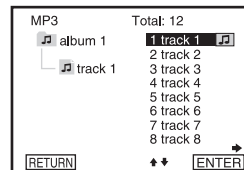
If you load a DATA CD which contains only
MP3 audio files, the MP3 display appears.
Then you can skip step 2.



2



Press to select “MP3”, then press ENTER.



continued

Playing an MP3 audio track **83**

3



Press $\uparrow/\downarrow$ or $\leftarrow/\rightarrow$ to select the desired track, then press ENTER.

The selected track starts playing.

When a track or album is being played, its title is shaded. The playing track number appears on the display window.

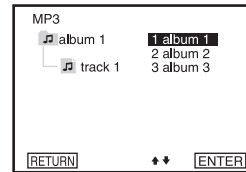


4



RETURN

To change the album, press $\curvearrowright$ RETURN.



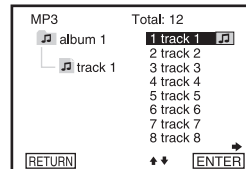
5



Press $\uparrow/\downarrow$ to select an album, then press ENTER.

The list of tracks contained in the album appears.

To select a track, repeat step 2.



To go to the next or previous page

Press $\rightarrow$ or $\leftarrow$.

To return to the previous display

Press $\curvearrowright$ RETURN.

To return to the "Select a Media Type" menu

Press $\blacksquare$ STOP twice, then press TOP MENU.

To turn off the display

Press $\blacksquare$ STOP, then press $\curvearrowright$ RETURN repeatedly.

Notes

- Only the letters in the alphabet and numbers can be used for album or track names. Anything else is displayed as an asterisk.
- Up to 10 alphanumeric characters can be displayed for album or track names.
- ID3 tags cannot be displayed.

About MP3 audio tracks

You can play MP3 audio tracks on CD-ROMs, CD-Rs, or CD-RWs. However, the discs must be recorded according to ISO9660 level 1, level 2, or Joliet format for the player to recognize the tracks.

You can also play discs recorded in Multi Session.

See the instructions of the CD-R/RW device or recording software (not supplied) for details on the recording format.

To play a Multi Session CD

This player can play Multi Session CDs when an MP3 audio track is located in the first session. Any subsequent MP3 audio tracks, recorded in the later sessions, can also be played back. When audio tracks and images in music CD format or video CD format are recorded in the first session, only the first session will be played back.

Notes

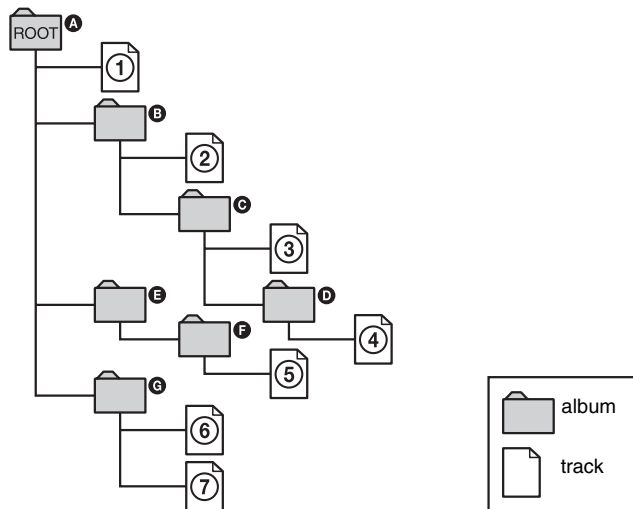
- If you put the extension “.MP3” to data not in MP3 format, the player cannot recognize the data properly and will generate a loud noise which could damage your speaker system.
- The player cannot play audio tracks in MP3PRO format.
- This player supports MP3 audio tracks recorded with a bit rate of 128 kbps and a sampling frequency of 44.1 kHz. Attempting to play MP3 audio tracks recorded with different specifications may result in loud noise, sound skipping or speaker damage.
- Depending on the disc, playback may take some time to start.

The Playback order of MP3 audio tracks

The playback order of albums and tracks recorded on a DATA CD is as follows.

- Structure of disc contents

Tree 1 Tree 2 Tree 3 Tree 4 Tree 5



continued

When you insert a DATA CD and press  PLAY, the numbered tracks are played sequentially, from ① through ⑦. Any sub-albums/tracks contained within a currently selected album take priority over the next album in the same tree. (Example: **C** contains **D** so ④ is played before ⑤.)

When you press  RETURN and the list of MP3 albums appears (page 84), the albums are arranged in the following order: **A** → **B** → **C** → **D** → **F** → **G**. Albums that do not contain tracks (such as album **E**) do not appear in the list.

Tips

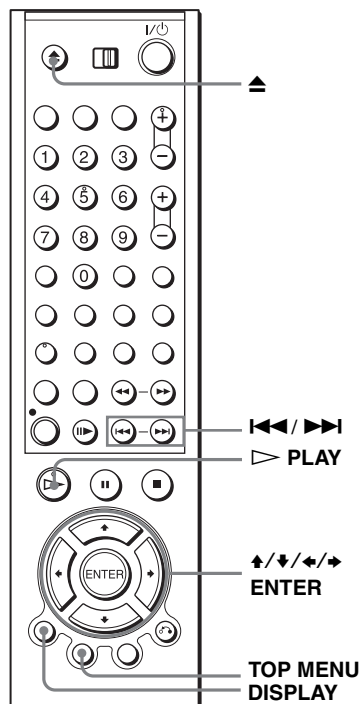
- If you add numbers (01, 02, 03, etc.) to the front of the track file names, the tracks will be played in that order.
- Since a disc with many trees takes longer to start playback, place your albums within the first two trees.

Notes

- Depending on the software you use to create the DATA CD, the playback order may differ from the illustration above.
- The playback order above may not be applicable if there are more than a total of 200 albums and tracks in the DATA CD.
- The player can recognize up to 100 albums (the player will count just albums, including albums that do not contain MP3 audio tracks). The player will not play any albums beyond the first 100 albums. Of the first 100 albums, the player will play no more than a combined total of 200 albums and tracks.

Playing JPEG image files **DATA-CD**

You can play JPEG image files on DATA CDs
(CD-ROMs/CD-Rs/CD-RWs).

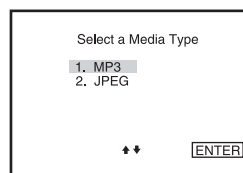


DVD Additional Operations

- 1** Press and place a DATA CD on the disc tray, then press to close the tray.

When you load a DATA CD which contains MP3 audio tracks and JPEG image files, "Select a Media Type" menu appears.

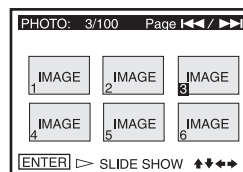
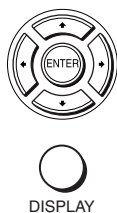
If you load a DATA CD which contains only JPEG image files, the ALBUM display appears. Then you can skip step 2.



- 2** Press to select "JPEG", then press ENTER.

The ALBUM display will appear.

To display the total number of JPEG image files on the disc, press DISPLAY.



continued

3



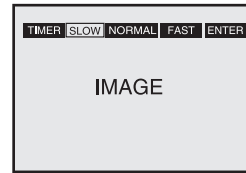
Press ◀◀ / ▶▶ to select the next/previous ALBUM page, press ▲/▼/◀/▶ to select an image in the ALBUM display, then press ▶ PLAY.



The TIMER menu appears.



PLAY



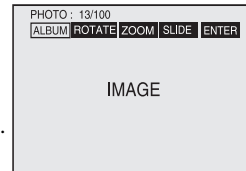
4



Press ◀/▶ to select the desired play speed, then press ENTER. Slide show starts from the selected image.

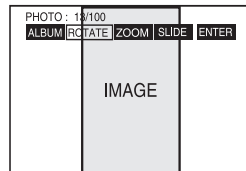
To display an image

- 1 Press ▲/▼/◀/▶ to select an image in the ALBUM display, then press ENTER. The selected image number appears in the display window.
- 2 To display the next/previous image, press ◀◀ / ▶▶.



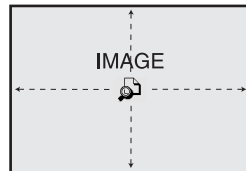
To rotate an image

- 1 Press ▲/▼/◀/▶ to select an image in the ALBUM display, then press ENTER.
- 2 Press ◀/▶ to select ROTATE, then press ENTER. Each time you press ENTER, the image turns clockwise by 90°.



To zoom in an image

- 1 Press ▲/▼/◀/▶ to select an image in the ALBUM display, then press ENTER.
- 2 Press ◀/▶ to select ZOOM, then press ENTER. “” appears.
- 3 Press ▲/▼/◀/▶ to move “” to the position where you want to zoom in.
- 4 Press ENTER repeatedly to change the magnification. Each time you press ENTER, the magnification changes as shown below.
2× → 4× → 2× → normal magnification



To enjoy the Slide show

- 1 Press $\blacktriangle/\blacktriangledown/\blacktriangleleft/\blacktriangleright$ to select an image in the ALBUM display, then press ENTER.
- 2 Press $\blacktriangleleft/\blacktriangleright$ to select SLIDE, then press ENTER.
The TIMER menu appears.
- 3 Press $\blacktriangleleft/\blacktriangleright$ to select the desired play speed, then press ENTER.
Slide show starts.



To turn on/off the menu in the single image display

Press DISPLAY in the single image display.

To turn on/off the total number of images in the ALBUM display

Press DISPLAY in the ALBUM display.

To return to the ALBUM display

Press DISPLAY to turn on the menu and press $\blacktriangleleft/\blacktriangleright$ to select ALBUM, then press ENTER. You can also use MENU button to return to the ALBUM display. Press $\blacktriangleleft\blacktriangleleft$ repeatedly to return to the first ALBUM page.

To return to the "Select a Media Type" menu

Press $\blacksquare$ STOP twice, then press TOP MENU.

Notes

- Slide show can play in only one direction.
- You cannot rotate or zoom in the image during Slide show.
- If you select ALBUM in the rotated image display, the images in the ALBUM display will also be rotated. Correct the rotation in the ROTATE menu.

About JPEG image files

You can play JPEG image files on CD-ROMs, CD-Rs, or CD-RWs. However, the discs must be recorded according to ISO9660 level 1, level 2, or Joliet format for the player to recognize the files.

You can also play discs recorded in Multi Session.

See the instructions of the CD-R/RW device or recording software (not supplied) for details on the recording format.

To play a Multi Session CD

This player can play Multi Session CDs when a JPEG image file is located in the first session. Any subsequent JPEG image files, recorded in the later sessions, can also be played back. When audio tracks and images in music CD format or video CD format are recorded in the first session, only the first session will be played back.

Notes

- The system can play the extension ".JPG" or ".JPEG."
- Some CD-Rs or CD-RWs cannot be played on this system depending on file format.
- If you add the extension ".JPG" or ".JPEG" to data not in JPEG format, the display will be blank.
- Depending on the disc or the size of image files, playback may take some time to start.

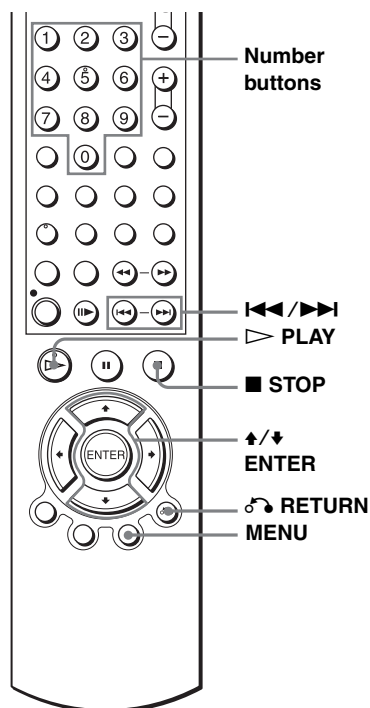
Tip

- If you add numbers (01, 02, 03, etc.) to the front of the file names, the files will be played in that order.

Playing VIDEO CDs with “MENU ON/OFF” Functions **VCD**

The PBC (Playback control) function allows you to search and perform other operations interactively. PBC playback follows a selection menu displayed on your TV screen.

The “MENU ON” function is the PBC function.



1



Press MENU to select “MENU ON.”

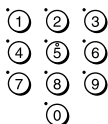
The menu for your selection appears.

2



Press **↑/↓** to select the item number you want.

You can also use the number buttons to select the item number and track.



3



Press ENTER.

4

Follow the instructions in the menu for interactive operations.

Refer to the instructions supplied with the disc, as the operating procedure may differ depending on the VIDEO CD.

To return to the menu

Press  RETURN.

To play using "MENU OFF"

Press MENU to select "MENU OFF."

When "MENU OFF" is selected, the DVD player starts continuous play. You cannot play still pictures such as a menu.

To return to "MENU ON," press MENU to select "MENU ON."

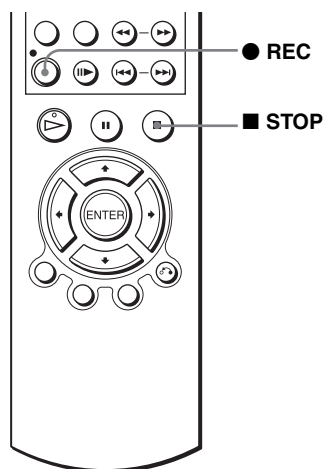
Note

- Depending on the VIDEO CD, "Press ENTER" in step 3 may appear as "Press SELECT" in the instructions supplied with the disc. In this case, press  PLAY.

VCR Additional Operations

Quick Timer Recording **VHS**

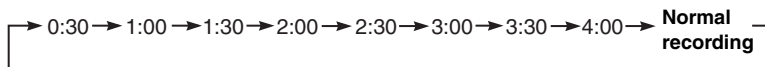
After you have started recording, you can have the VCR stop recording automatically after a specified duration.



- 1 While recording, press ● REC.



- 2 Press ● REC repeatedly to set the duration time.
Each press advances the time as follows.



The tape counter decreases minute by minute to 0:00, then the VCR stops recording.

To extend the duration

Press ● REC repeatedly to set a new duration time.

To cancel the duration

Press ● REC repeatedly until the ⊖ indicator disappears and the VCR returns to normal recording mode.

To stop while recording

Press ■ STOP.

Note

- You cannot display the current tape time in the display window when setting the recording duration time.

Recording stereo and bilingual programs

VHS

Recording stereo programs

When you receive a program broadcast in stereo, press AUDIO to display “Hi-Fi” on the TV screen. You can also select “Left,” “Right,” or “Mono.” If there is noise in the stereo program, select “Mono.” The sound will be recorded in monaural (on both hi-fi and normal audio tracks) but with less noise.

Recording bilingual programs

Press AUDIO to display “SAP” on the TV screen. When a SAP (Second Audio Program) is received, “SAP” appears on the TV screen. When MAIN is selected, the VCR records only the main sound.

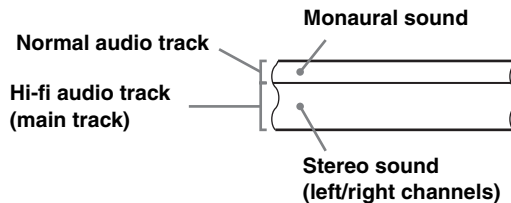
Selecting the sound during playback

During playback, press AUDIO to select the sound you want.

To listen to	On-screen display	Display window
Stereo	Hi-Fi	STEREO indicator
Left channel	Left	STEREO indicator
Right channel	Right	STEREO indicator
Monaural sound on the normal audio track	Mono	No indicator

How sound is recorded on a video tape

The VCR records sound onto two separate tracks. Hi-fi audio is recorded onto the main track along with the picture. Monaural sound is recorded onto the normal audio track along the edge of the tape.

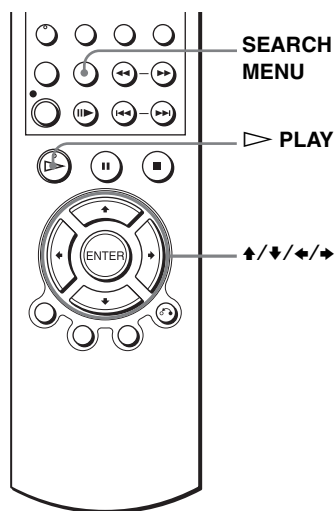


Notes

- To play a tape in stereo, you must use the A/V connections.
- When you play a tape recorded in monaural, the sound is heard in monaural regardless of the AUDIO setting.

Searching using various functions **VHS**

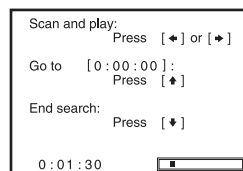
The VCR automatically marks the tape with an index signal at the point where each recording begins.
You can easily find a specific point using various search functions.



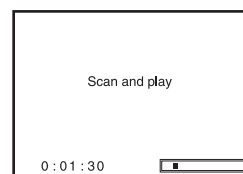
To search using the index function (Scan and Play)

The VCR automatically marks the tape with an index signal at the point where each recording begins. Use these signals as references to find a specific recording.

- 1** Insert an indexed tape into the VCR.
- 2** Press SEARCH MENU.



- 3** Press ► to scan ahead, or ◀ to scan backwards.
The VCR searches and then plays back for about five seconds.



- 4** Press ► PLAY to view that program.
If you do not press ► PLAY, the VCR automatically searches for the next index mark, or until it reaches the end of the tape.

To search for the counter 0:00:00 point

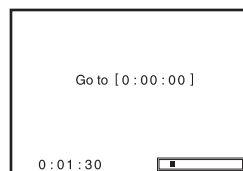
To mark a point on the tape that you want to find later, reset the tape counter to “0:00:00.”

The VCR automatically fast-forwards or rewinds to the 0:00:00 point on the tape counter.

1 Press SEARCH MENU.

2 Press **▲**.

The VCR starts searching and automatically stops at the 0:00:00 point.



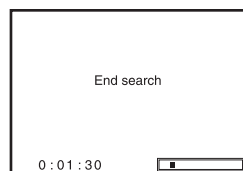
To search for a blank portion of the tape

The VCR automatically searches for the beginning of a blank portion. You can easily find a point you can start recording from.

1 Press SEARCH MENU.

2 Press **▼**.

The VCR starts searching and automatically stops at the beginning of a blank space. If no blank space is found, the VCR reaches the end.



Note

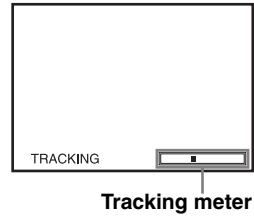
- Once in recording mode, if the VCR is put in pause and then released to start the recording, no index mark will be inserted. An index mark will be inserted if the channel is changed while VCR is put in pause.

Adjusting the picture (tracking) **VHS**

Although the VCR automatically adjusts the tracking when playing a tape, distortion may occur if the recording is in poor condition. In this case, manually adjust the tracking.

Press TRACKING +/- to display the tracking meter. The distortion should disappear as you press one of the two tracking buttons.

To resume automatic tracking adjustment, eject the tape and reinsert it.

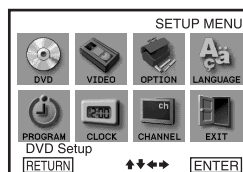


Note

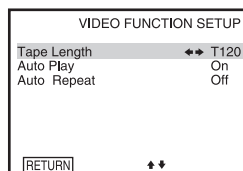
- The auto tracking adjustment cannot be guaranteed to work with tapes recorded in the LP mode on other VCRs.

Changing menu options **VHS**

- 1 Press SET UP when the DVD player is in stop mode.



- 2 Press $\uparrow/\downarrow/\leftarrow/\rightarrow$ to select  (Video Function Setup), then press ENTER.
The “VIDEO FUNCTION SETUP” menu appears.



- 3 Press $\uparrow/\downarrow$ to select the option to change.
- 4 Press $\leftarrow/\rightarrow$ to change the setting.
- 5 Press $\curvearrowright$ RETURN repeatedly to exit the menu.

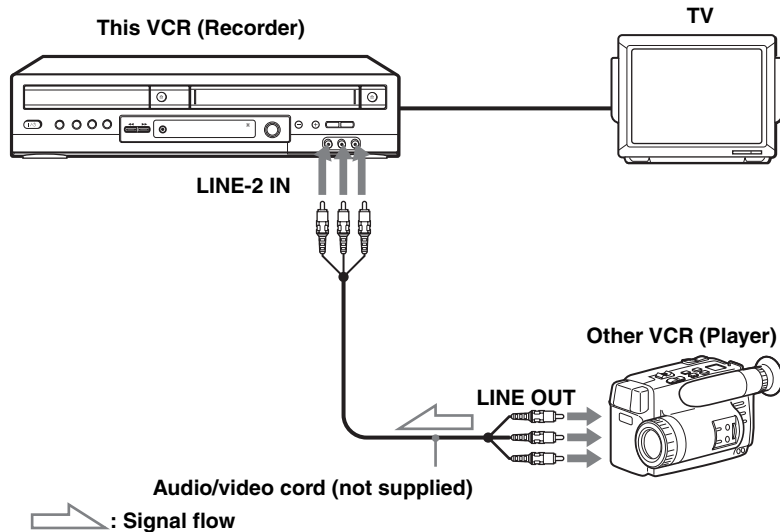
Menu choices

The default settings are indicated in bold print.

Menu option	Set this option to
Tape Length	• T-120 when using a T-120 or shorter length tape. • T-160 when using a T-160 length tape. • T-180 when using a T-180 or longer length tape.
Auto Play	• On to start playback automatically, when you insert a tape with its safety tab removed. • Off to turn off Auto play. You need to press $\triangleright$ PLAY to start playback, even if you insert a tape with its safety tab removed.
Auto Repeat	• On to play back a tape repeatedly. The VCR rewinds a tape to the beginning and restarts playback automatically. • Off to turn off Auto repeat.

Editing with another VCR **VHS**

How to connect to record on this VCR



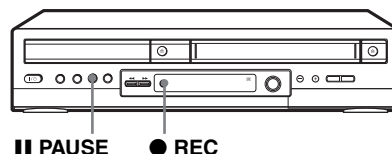
Notes

- Make sure you connect the plugs to jacks of the same color.
- If the other VCR is a monaural type and connected to this VCR's LINE-2 IN jacks, connect the audio plug to the AUDIO L (white) jack. The sound is recorded on both right and left channels. If you connect to the AUDIO R (red) jack, the sound is recorded only on the right channel.
- If you connected this VCR to both the LINE IN and LINE OUT jacks of the other VCR, select the input correctly to prevent a humming noise.
- You can use the LINE IN 1 jacks for editing. If the other VCR is a monaural type the sound is recorded only on the channel whose jack is connected to the audio plug. To record on both right and left channels, connect the audio plugs to the AUDIO L/R jacks using an audio/video cord (not supplied).

Operation (when recording on this VCR)

Before you start editing

- Turn on the VCR and the TV and set it to the video channel.
- Press INPUT SELECT or CH +/- to display "LINE 1" or "LINE 2" in the display window.
- Press SP/EP to select the tape speed, SP or EP.



- 1** Insert a source tape with its safety tab removed into the other (playback) VCR. Search for the point to start playback and set it to playback pause.
- 2** Insert a tape into this (recording) VCR. Search for the point to start recording and press **PAUSE**.
- 3** Press **REC** on this VCR to set it to recording pause.
- 4** To start editing, press the **PAUSE** buttons on both VCRs at the same time.

To stop editing

Press the **STOP** buttons on both VCRs.

Tip

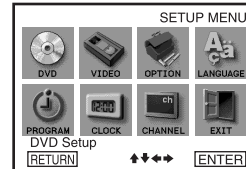
- To cut out unwanted scenes while editing, press **PAUSE** on this VCR when an unwanted scene begins. When it ends, press **PAUSE** again to resume recording.

Additional Information

General setup information

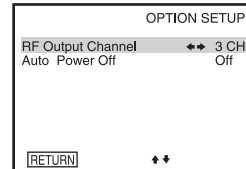
Changing setup options

- 1 Press SET UP when the DVD player is in stop mode.



- 2 Press $\uparrow/\downarrow/\leftarrow/\rightarrow$ to select  (Option setup), then press ENTER.

The "OPTION SETUP" menu appears.



- 3 Press $\uparrow/\downarrow$ to select the option to change.

- 4 Press $\leftarrow/\rightarrow$ to change the setting.

- 5 Press $\curvearrowright$ RETURN repeatedly to exit the menu.

If you have changed the RF Output Channel, a confirmation message appears.

Press ENTER to confirm the changed channel.

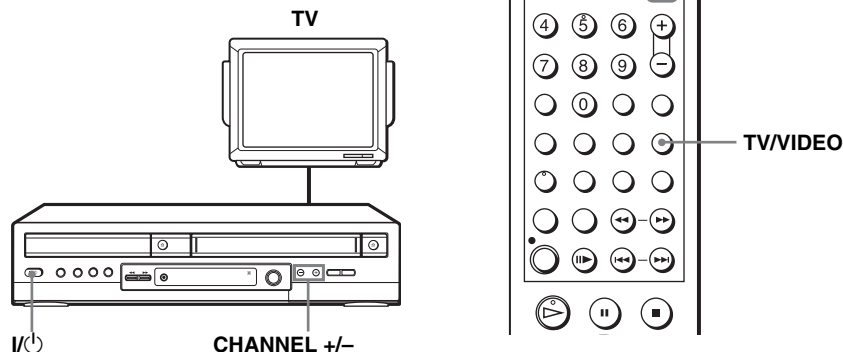
Menu choices

Initial settings are indicated in bold print.

Menu option	Set this option to
RF Output Channel	• 3CH when using channel 3 to receive the VCR signal. • 4CH when using channel 4 to receive the VCR signal. For details, see page 101.
Auto Power Off	• 1Hr to turn off the VCR automatically one hour after the last operation. • 2Hr to turn off the VCR automatically two hours after the last operation. • Off to set no specific time to turn off.

Setting the RF Output channel

When connecting the DVD-VCR to the TV using only the antenna cable, you must set the RF Output channel in the “OPTION SETUP” menu so that the TV can receive the correct signal from the DVD-VCR.



- 1** Set the RF Output channel to “3CH” or “4CH” (see page 100 to set the channel), whichever channel is not used in your area. If both are used, set the switch to either channel.
- 2** Press I/ψ to turn on the DVD-VCR.
- 3** Press TV/VIDEO to turn on “VCR” in the DVD-VCR’s display window.
- 4** Press CH +/- to display a channel number in the display window.
Select an active channel number in your area.
- 5** Turn on your TV and set it to the channel you selected in step 1 (3CH or 4CH).
The channel you selected in step 4 appears on the TV screen. If the channels change when you press CH +/-, you have made the correct setting.
Whenever you use the DVD-VCR, set the TV to the channel selected in step 1.

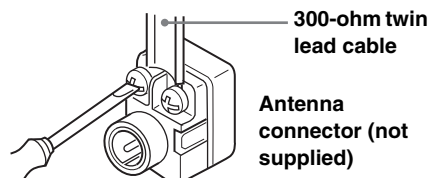
Additional Information

continued

General setup information 101

Attaching the external antenna connector

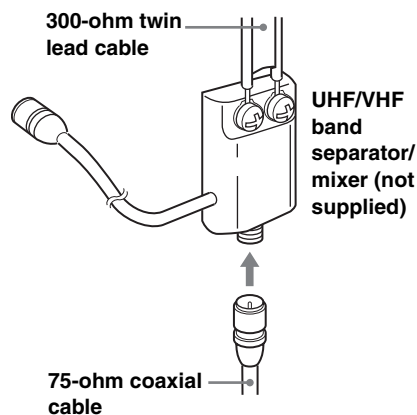
When using a 300-ohm twin lead cable for a VHF/UHF antenna, use an antenna connector (not supplied) to connect the antenna to the DVD-VCR.



- 1** Loosen the screws on the antenna connector.
- 2** Wind the twin leads around the screws on the antenna connector.
- 3** Retighten the screws.

Attaching a UHF/VHF band mixer

When using both a 75-ohm coaxial cable and a 300-ohm twin lead cable for a VHF/UHF antenna, use a UHF/VHF band separator/mixer (not supplied) to connect the antenna to the DVD-VCR.



- 1** Loosen the screws on the mixer.
- 2** Wind the twin leads around the screws on the mixer.
- 3** Retighten the screws.
- 4** Connect the 75-ohm coaxial cable to the mixer.

Troubleshooting

If you have any questions or problems not covered below, please consult your nearest Sony dealer. (For customers in USA)

General Troubleshooting

	Symptom	Remedy
Power	The I/⏻ switch does not function.	• Connect the AC power cord securely.
	The power is turned on but the DVD-VCR does not operate.	• Moisture condensation has occurred. Turn the power off, unplug the AC power cord and leave the DVD-VCR to dry for over three hours.
Clock	The clock has stopped and "--:--" appears in the display window.	• The clock stops if the DVD-VCR is disconnected from the wall outlet. Reset the clock (and timer).
Others	The remote commander does not function.	• Make sure you are pointing the remote commander at the remote sensor on the DVD-VCR. • Replace all the batteries in the remote commander with new ones if they are weak. • Make sure the <u>TV / DVD-VIDEO</u> switch is set correctly. • Select correctly VIDEO or DVD with the SELECT DVD/VIDEO button.
	The tracking meter does not appear on the screen.	• The recording condition of the tape is very poor and tracking cannot be adjusted.
	You cannot control other TVs.	• Set your TV's code number. The code number may change when you replace the batteries of the remote commander.

Additional Information

continued

Troubleshooting 103

DVD Troubleshooting

	Symptom	Remedy
Picture	There is no picture/picture noise appears.	• Re-connect the connecting cord securely. • The connecting cords are damaged. • Check the connection to your TV (page 12) and switch the input selector on your TV so that the signal from the player appears on the TV screen. • The disc is dirty or flawed. • If the picture output from your player goes through your VCR to get to your TV or if you are connected to a combination TV/VIDEO player, the copy-protection signal applied to some DVD programs could affect picture quality. If you still experience problems even when you connect your player directly to your TV, please try connecting your player to your TV's S VIDEO input (page 57). • You have set the player to progressive format (the PROGRESSIVE indicator lights up in blue) even though your TV cannot accept the progressive signal. In this case, press the PROGRESSIVE button on the front panel until the PROGRESSIVE indicator turns off (page 64). • Even if your TV is compatible with progressive format (480p) signals, the image may be affected when you set the player to progressive format. In this case, press the PROGRESSIVE button so that the PROGRESSIVE indicator turns off and the player is set to normal (interlace) format (page 64). • COMPONENT VIDEO OUT jack is not used or "Video Out" of the "SCREEN SETUP" menu is not set correctly while the PROGRESSIVE indicator lights up in blue. Check the setting (page 64) and connection (page 57) or press the PROGRESSIVE button so that the PROGRESSIVE indicator turns off.
	Even though you set the aspect ratio in "TV Type" of the "SCREEN SETUP" menu the picture does not fill the screen.	• The aspect ratio of the disc is fixed on your DVD.
	There is no picture from your VCR connected to the LINE IN jacks.	• The DVD player must be in standby mode to view pictures from your VCR.
Sound	There is no sound.	• Re-connect the connecting cord securely. • The connecting cord is damaged. • The player is connected to the wrong input jack on the amplifier (receiver) (page 13). • The amplifier (receiver) input is not correctly set. • The player is in pause mode or in Slow-motion Play mode. • The player is in fast forward or fast reverse mode. • If the audio signal does not come through the DIGITAL AUDIO OUT (OPTICAL or COAXIAL) jack, check the audio settings (page 59).
	Sound is noisy.	• When playing a CD with DTS sound tracks, noise will come from the LINE OUT L/R (AUDIO) jacks (page 33) or DIGITAL OUT (OPTICAL or COAXIAL) jack.
	The sound volume is low.	• The sound volume is low on some DVDs. The sound volume may improve if you set "Audio DRC" to "TV Mode" (page 60).

	Symptom	Remedy
Operation	The disc does not play.	• The disc is turned over. • Insert the disc with the playback side facing down on the disc tray. • The disc is skewed. • The player cannot play certain discs (page 6). • The region code on the DVD does not match the player. • Moisture has condensed inside the player (page 3). • The player cannot play CD-Rs, CD-RWs, or DVD-Rs that are not finalized (page 7). • Make sure the TV / DVD-VIDEO switch is set correctly. • Select correctly VIDEO or DVD with SELECT DVD/VIDEO button.
	The MP3 audio track cannot be played (page 83).	• The DATA CD is not recorded in the MP3 format that conforms to ISO9660 Level 1/Level 2 or Joliet. • The MP3 audio track does not have the extension “.MP3.” • The data is not formatted in MP3 even though it has the extension “.MP3.” • The data is not MPEG1 Audio Layer 3 data. • The player cannot play audio tracks in MP3PRO format.
	The JPEG image file cannot be played.	• The DATA CD is not recorded in JPEG format that conforms to ISO9660 Level 1/Level 2 or Joliet. • The JPEG image file does not have the extension “.JPG” or “.JPEG.” • The data is not formatted in JPEG even though it has the extension “.JPG” or “.JPEG.” • Length or width of the image is more than 4720 dots.
	The title of the MP3 audio album/track or JPEG image album/file is not correctly displayed.	• The player can only display numbers and alphabet. Other characters are displayed as asterisks.
	The disc does not start playing from the beginning.	• Program play, shuffle play, or repeat play, has been selected (pages 74, 76, 77). • Resume play has taken effect (page 32).
	The player starts playing the disc automatically.	• The disc features an auto playback function.
	Playback stops automatically.	• While playing discs with an auto pause signal, the player stops playback at the auto pause signal.
	You cannot perform some functions such as stop, search, slow-motion play, repeat play, shuffle play, or program play.	• Depending on the disc, you may not be able to do some operations. See the operating manual that comes with the disc.
	The language for the sound track cannot be changed.	• Try using the DVD's menu instead of the direct selection button on the remote (page 70). • Multilingual tracks are not recorded on the DVD being played. • The DVD prohibits the changing of the language for the sound track.

continued

	Symptom	Remedy
Operation	The subtitle language cannot be changed or turned off.	- Try using the DVD's menu instead of the direct selection button on the remote (page 70). - Multilingual subtitles are not recorded on the DVD being played. - The DVD prohibits the changing of the subtitles.
	The angles cannot be changed.	- Try using the DVD's menu instead of the direct selection button on the remote (page 70). - Multi-angles are not recorded on the DVD being played. - The DVD prohibits changing of the angles.
	The player does not operate properly.	When static electricity, etc., causes the player to operate abnormally, unplug the player.

VCR Troubleshooting

	Symptom	Remedy
Playback	The playback picture does not appear on the TV screen.	Make sure the TV is set to the channel for the VCR. If you are using a monitor, set it to video input.
	The picture is not clear.	- Adjust the tracking with the TRACKING +/- buttons. - The video heads are dirty (see the last page of "Troubleshooting"). Clean the video heads using a Sony video head cleaning cassette. If a Sony cleaning cassette is not available in your area, have the heads cleaned at your nearest Sony dealer (a standard service fee will be charged). Do not use a commercially available liquid type cleaning cassette, as it may damage the video heads. - The video heads may have to be replaced. Consult your local Sony dealer for more information.
	The picture rolls vertically during picture search.	Adjust the vertical hold control on the TV or monitor.
	The picture has no sound.	- The tape is defective. - If you made A/V connections, check the audio cord connection.
Recording	A TV program does not appear on the TV screen.	- Make sure the TV is set to the channel for the VCR. If you are using a monitor, set it to video input. - Select the correct source with the INPUT SELECT or CH +/- buttons. Select a channel number when recording TV programs; select "L1" or "L2" when recording from other equipment.
	TV reception is poor.	Adjust the TV antenna.
	The tape starts playing as soon as it is inserted.	The safety tab has been removed. To record on this tape, cover the tab hole.
	The tape is ejected when you press ● REC.	Check that the safety tab has not been removed.
	Nothing happens when you press ● REC.	Make sure the tape is not at its end.

	Symptom	Remedy
Timer recording	The timer does not operate.	• Check that the clock is set. • Make sure a tape has been inserted. • Check that the safety tab has not been removed. • Make sure the tape is not at its end. • Make sure a program has been set for timer recording. • Make sure your timer settings are past the current time. • Check that the cable box is turned on. • The clock stops if the DVD-VCR is disconnected from the wall outlet for more than one minute. Reset the clock and timer. • Turn the power off and unplug the AC power cord.
	A tape cannot be inserted.	• Check that a tape is not already in the tape compartment.
Others	The VCR mechanism needs to be cleaned.	• Clean the cabinet, panel and controls with a dry, soft cloth, or a soft cloth slightly moistened with a mild detergent solution. Do not use any type of solvent, such as alcohol or benzene.

Symptoms caused by contaminated video heads

• Normal picture



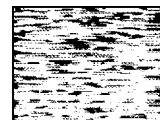
• Rough picture



• Unclear picture



• No picture (or
black & white
screen appears)



initial
contamination



terminal

Additional Information

Glossary

Chapter (page 34)

Sections of a picture or a music feature that are smaller than titles. A title is composed of several chapters. Depending on the disc, no chapters may be recorded.

Dolby Digital (pages 55 and 60)

Digital audio compression technology developed by Dolby Laboratories. This technology conforms to 5.1-channel surround sound. The rear channel is stereo and there is a discrete subwoofer channel in this format. Dolby Digital provides the same 5.1 discrete channels of high quality digital audio found in Dolby Digital cinema audio systems. Good channel separation is realized because all of the channel data are recorded discretely and little deterioration is realized because all channel data processing is digital.

Dolby Surround (Pro Logic) (page 55)

Audio signal processing technology that Dolby Laboratories developed for surround sound. When the input signal contains a surround component, the Pro Logic process outputs the front, center and rear signals. The rear channel is monaural.

DTS (page 60)

Digital audio compression technology that Digital Theater Systems, Inc. developed. This technology conforms to 5.1-channel surround sound. The rear channel is stereo and there is a discrete subwoofer channel in this format. DTS provides the same 5.1 discrete channels of high quality digital audio.

Good channel separation is realized because all of the channel data is recorded discretely and little deterioration is realized because all channel data processing is digital.

DVD (page 6)

A disc that contains up to 8 hours of moving pictures even though its diameter is the same as a CD.

The data capacity of a single-layer and single-sided DVD is 4.7 GB (Giga Byte), which is 7 times that of a CD. The data capacity of a double-layer and single-sided DVD is 8.5 GB, a single-layer and double-sided DVD is 9.4 GB, and double-layer and double-sided DVD is 17GB.

The picture data uses the MPEG 2 format, one of the worldwide standards of digital compression technology. The picture data is compressed to about 1/40 (average) of its original size. The DVD also uses a variable rate coding technology that changes the data to be allocated according to the status of the picture. Audio information is recorded in a multi-channel format, such as Dolby Digital, allowing you to enjoy a more real audio presence.

Furthermore, various advanced functions such as the multi-angle, multilingual, and Parental Control functions are provided with the DVD.

DVD-RW (page 6)

A DVD-RW is a recordable and rewritable disc that is the same size as a DVD VIDEO. The DVD-RW has two different modes: VR mode and Video mode. DVD-RWs created in Video mode have the same format as a DVD VIDEO, while discs created in VR (Video Recording) mode allow the contents to be programmed or edited.

DVD+RW (page 6)

A DVD+RW (plus RW) is a recordable and rewritable disc. DVD+RWs use a recording format that is comparable to the DVD VIDEO format.

Interlace format (page 64)

Interlace format shows every other line of an image as a single “field” and is the standard method for displaying images on television. The even number field shows the even numbered lines of an image, and the odd numbered field shows the odd numbered lines of an image.

Progressive format (pages 58 and 64)

Compared to the Interlace format that alternately shows every other line of an image (field) to create one frame, the Progressive format shows the entire image at once as a single frame. This means that while the Interlace format can show 30 frames/60 fields in one second, the Progressive format can show 60 frames in one second. The overall picture quality increases and still images, text, and horizontal lines appear sharper. This player is compatible with the 480 progressive format.

Title (page 34)

The longest section of a picture or music feature on a DVD, movie, etc., in video software, or the entire album in audio software.

Track (page 34)

Sections of a picture or a music feature on a CD or VIDEO CD (the length of a song).

Specifications

System

Laser
Semiconductor laser

Format
VHS NTSC standard

Video recording system
Rotary head helical scanning FM system

Video heads
Double azimuth four heads

Video signal
NTSC color, EIA standards

Tape speed
SP: 33.35 mm/s (1 $\frac{3}{8}$ inches/s)
EP: 11.12 mm/s ($\frac{7}{16}$ inches/s)
LP: 16.67 mm/s ($\frac{1}{16}$ inches/s),
playback only

Maximum recording/playback time
8 hrs. in EP mode (with T-160 tape)

Rewind time
Approx. 1 min (with T-120 tape)

Tuner section

Channel coverage
VHF 2 to 13
UHF 14 to 69
CATV A-8 to A-1, A to W, W+1 to W+84

Antenna
75-ohm antenna terminal for VHF/UHF

Audio characteristics

Frequency response
DVD VIDEO (PCM 96 kHz): 2 Hz to 44 kHz (± 1.0 dB)/DVD VIDEO (PCM 48 kHz): 2 Hz to 22 kHz (± 0.5 dB)/CD: 2 Hz to 20 kHz (± 0.5 dB)

Signal-to-noise ratio (S/N ratio)
115 dB (LINE OUT (L/R) AUDIO jacks only)

Harmonic distortion
0.003 %

Dynamic range
DVD VIDEO: 103 dB/CD: 99 dB

Wow and flutter
Less than detected value (± 0.001 % W PEAK)

The signals from LINE OUT L/R (AUDIO) jacks are measured. When you play PCM sound tracks with a 96 kHz sampling frequency, the output signals from the DIGITAL OUT (OPTICAL or COAXIAL) jack are converted to 48 kHz sampling frequency.

Inputs and outputs

LINE IN 1 and LINE-2 IN
VIDEO IN, phono jack (1 each)
Input signal: 1 Vp-p, 75 ohms, unbalanced, sync negative
AUDIO IN, phono jacks (2 each)
Input level: 327 mVrms
Input impedance: more than 47 kilohms

LINE OUT
VIDEO OUT, phono jack (1)
Output signal: 1 Vp-p, 75 ohms, unbalanced, sync negative
AUDIO OUT, phono jacks (2)
Standard output: 327 mVrms
Load impedance: 47 kilohms
Output impedance: less than 10 kilohms

DIGITAL OUT
OPTICAL, Optical output jack
-18 dBm (wave length: 660 nm)
COAXIAL, phono jack
Output signal: 0.5 Vp-p, 75 ohms

COMPONENT VIDEO OUT (Y, Pb, Pr)
Phono jack
Y: 1.0 Vp-p/Pb, Pr: 0.7 Vp-p, 75 ohms

S-VIDEO OUT
4-pin, mini-DIN jack
Y: 1.0 Vp-p, unbalanced, sync negative
C: 0.286 Vp-p, load impedance 75 ohms

Timer section

Clock
Quartz locked

Timer indication
12-hour cycle

Timer setting
8 programs (max.)

General

Power requirements

120 V AC, 60 Hz

Power consumption

28 W

Operating temperature

0°C to 45°C (32°F to 113°F)

Storage temperature

–20°C to 60°C (–4°F to 140°F)

Operating humidity

25% to 80%

Dimensions including projecting parts and controls
(w/h/d)

Approx. 430 × 95 × 303 mm

(Approx. 17 × 3.7 × 11.8 inches)

Mass

Approx. 4.0 kg (Approx. 8.8 lbs)

Supplied accessories

Remote commander (1)

Size AA (R6) batteries (2)

75-ohm coaxial cable with F-type connectors (1)

Audio/video cord (pinplug ×3 ↔ pinplug ×3) (1)

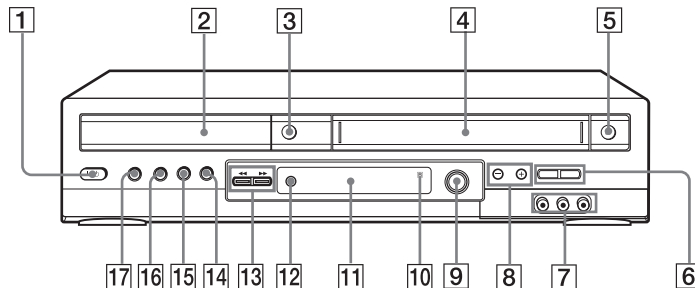
Design and specifications are subject to change without
notice.

Additional Information

Index to parts and controls

Refer to the pages indicated in parentheses () for details.

Front panel

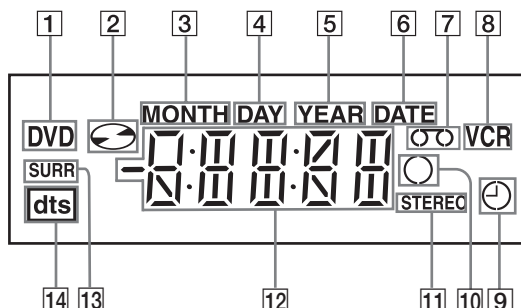


- | | |
|---|--|
| 1 I/⏻ POWER switch (10) (37) | 11 Display window (32) (37) |
| 2 Disc tray (31) | 12 ● REC (record) button (40) |
| 3 ≡ (open/close) button (31) (32) | 13 ◀◀ (rewind)/▶▶ (fast-forward) button (32) (37) |
| 4 Tape compartment (39) | 14 ■ (stop) button (32) (37) |
| 5 ≡ (eject) button (37) | 15 (pause) button (32) (37) |
| 6 SELECT DVD/VIDEO (9) | 16 ▷ (play) button (32) (37) |
| 7 LINE-2 IN VIDEO/AUDIO L/R jacks* ¹ (98) | 17 PROGRESSIVE button/indicator (58) (64) |
| 8 CHANNEL +/- buttons* ² (39) | |
| 9 DIAL TIMER (45) | |
| 10 □ Remote sensor | |

*¹ Covered

*² CHANNEL + button has a tactile dot. Use the tactile dot as a reference.

Display window



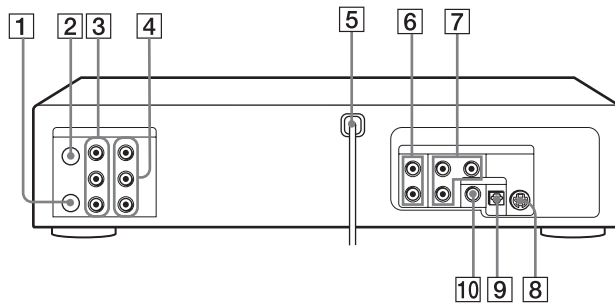
- | | |
|------------------------|---|
| 1 DVD indicator (32) | 8 VCR indicator (37) |
| 2 Disc indicator (32) | 9 Timer indicator (43) |
| 3 MONTH indicator (45) | 10 Record indicator (40) |
| 4 DAY indicator (48) | 11 STEREO indicator (93) |
| 5 YEAR indicator (48) | 12 Playing time/clock/current status indicator (32) |
| 6 DATE indicator (45) | 13 SURR (surround) indicator (81) |
| 7 Tape indicator (37) | 14 DTS indicator (60) |

Additional Information

continued

Index to parts and controls 113

Rear panel



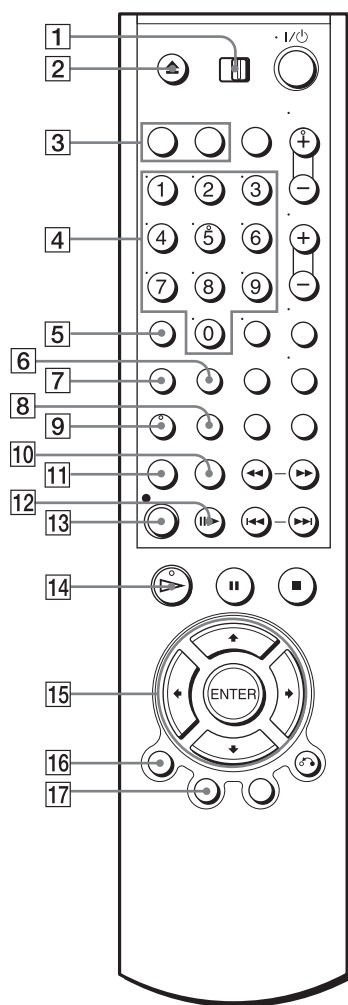
DVD player and VCR

- 1** RF OUT (TO TV) connector (14)
- 2** RF IN (FROM ANT.) connector (14)
- 3** LINE OUT VIDEO/AUDIO L/R jacks (13)
- 4** LINE IN 1 VIDEO/AUDIO L/R jacks (13)
- 5** AC power cord (12) (15) (17)

DVD player only

- 6** LINE OUT AUDIO L/R jacks (57)
- 7** COMPONENT VIDEO OUT Pr/Pb/Y jacks (58)
- 8** S VIDEO OUT jack (57)
- 9** DIGITAL AUDIO OUT/OPTICAL jack (56)
- 10** DIGITAL AUDIO OUT/COAXIAL jack (56)

Remote commander



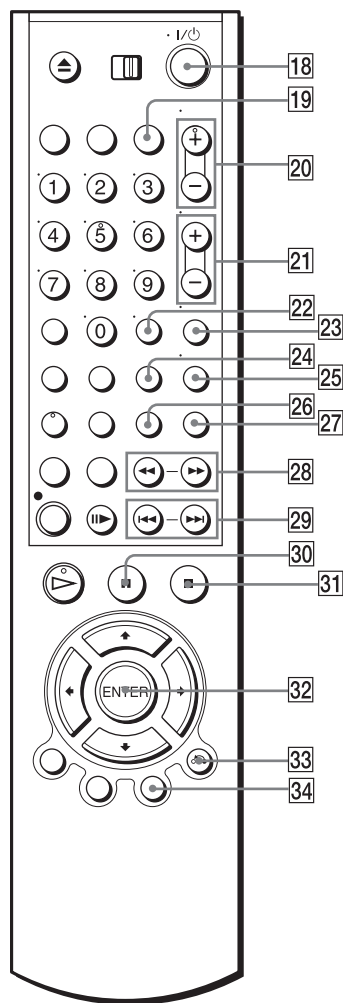
- 1 TV / DVD•VIDEO switch (9)
- 2 ▲ button (31) (32) (37)
[for DVD] (open/close) button
[for VIDEO] (eject) button
- 3 SELECT DVD/VIDEO buttons (9)
- 4 Number buttons* (27)
- 5 CLEAR button (38) (43) (75)
- 6 SURROUND button (81)
- 7 SET UP button (19)
- 8 SUBTITLE/TIMER button (42) (73)
[for DVD] SUBTITLE button
[for VIDEO] TIMER button
- 9 AUDIO button* (80) (93)
- 10 BOOKMARK/SEARCH MENU button
(78) (94)
[for DVD] BOOKMARK button
[for VIDEO] SEARCH MENU button
- 11 REPEAT/REPLAY button (37) (75)
[for DVD] REPEAT button
[for VIDEO] REPLAY button
- 12 II ► SKIP button (32) (38)
- 13 ● REC (record) button (40)
- 14 ▷ PLAY button* (32) (37)
- 15 ▲/▼/◀/▶ button (19)
- 16 DISPLAY button (34) (40)
- 17 TOP MENU button (70)

* Number 5, AUDIO and ▷ PLAY buttons have a tactile dot. Use the tactile dot as a reference.

Additional Information

continued

Index to parts and controls 115



- 18** I/⏻ (power) switch (10) (37)
- 19** VCR Plus+ button (50)
- 20** CH (channel)/TRACKING +/- buttons*¹ (39) (96)
- 21** VOL (volume) +/- buttons (10)
- 22** ENTER button*² (19)
- 23** MUTING/ZOOM button (10) (71)
[for DVD] ZOOM button
[for VIDEO] No function
[for Sony TV only] MUTING button
- 24** SP (Standard Play)/EP (Extended Play) button (40)
- 25** TV/VIDEO button (41)
- 26** ANGLE button (72)
- 27** INPUT SELECT button (41)
- 28** ◀◀/▶▶ SCAN/SLOW ▶▶ buttons (32) (37)
[for DVD] ◀◀ SCAN button
▶▶ SCAN button
SLOW ▶▶ button
[for VIDEO] ◀◀ (rewind) button
▶▶ (fast-forward) button
SLOW ▶▶ button
- 29** ◀◀/▶▶ SHUTTLE PREV/NEXT buttons (32) (38)
[for DVD] ◀◀ PREV (previous) button
▶▶ NEXT (next) button
[for VIDEO] ◀◀/▶▶ SHUTTLE button
- 30** || PAUSE button (32) (37)
- 31** ■ STOP button (32) (37)
- 32** ENTER button*² (19)
- 33** ↶ RETURN button (19)
- 34** MENU button (70)

*¹ CH/TRACKING + button has a tactile dot.
Use the tactile dot as a reference.

*² The ENTER buttons 22 and 32 can be used interchangeably.

DVD Audio/Subtitle Language

Abbreviation	Language
ARA	Arabic
CHI	Chinese
CRO	Croatian
CZK	Czech
DAN	Danish
DEU	German
ENG	English
ESP	Spanish
FIN	Finish
FRA	French
GRE	Greek
HUN	Hungarian
IDN	Indonesian
IND	Hindi
ISL	Islandic
ITA	Italian
IWR	Hebrew
JPN	Japanese
KOR	Korean
MAL	Malay
NLD	Dutch
NOR	Norwegian
POL	Polish
POR	Portuguese
RUS	Russian
SVE	Swedish
THA	Thai
TUR	Turkish
VIE	Vietnamese
ZAF	Afrikaans

Additional Information

Index

Numerics

16:9 63
4:3 Letter Box 63
4:3 Pan Scan 63

A

Adjusting
 picture 96
 tracking 96
Angle 72
Antenna hookup 14
Audio track 93
Audio/video (A/V) hookup 13
Auto Clock Set 20

B

Bookmark 78

C

Cable hookup 12
Changing menu option 97
Channel line-up chart 28
Cleaning the video heads 106
Clock setting 20
Commercial Skip 37
Connecting
 Cable TV 18
 external antenna connector
 102
 UHF/VHF band mixer 102
Counter 38

D

DATA CD 6, 83, 87
Demonstration Mode 49
Dial Timer 45
Disabling channels 26
DOLBY DIGITAL 55, 80
DTS 56, 80
Dubbing. *see* Editing
DVD 6

E

Editing 98
EP mode 40

H

Handling discs 7
Hi-fi audio track 93

J

JPEG 6, 87

L

Language selecting 19
LP mode 41

M

Monoaural 93
Monitoring audio during
 playback 93
MP3 6, 83

N

Normal audio track 93

P

Parental Control 67
PBC (Playback control) 90
Picture adjustment 96
Playback
 at various speeds 32, 37
 frame by frame 32, 38
 MP3 audio track 83
 program play 74
 repeat play 77
 selecting the sound 93
 shuffle play 76
 skip 37
 slow motion 33, 38
 VIDEO CDs 90
Presetting channels 24
Program play 74
Progressive 58, 109

R

Recording
 bilingual programs 93
 SAP broadcasts 93
 saving 41
 stereo broadcasts 93
 using the Dial Timer 45
 using the VCR Plus+
 system 50
 while watching another
 program 41, 44
Repeat play 77
RF channel 101

S

Safety tab 41
SAP (Second Audio Program)
 93
Searching
 at various speeds 32, 37
 for a blank portion 95
 for the counter 0 point 95
 Scan and Play 94
Shuffle play 76
SP mode 40
STEREO 80
Stereo 93
Subtitle 73

T

Timer setting
 daily/weekly recording 44
 using the Dial Timer 45
 using the VCR Plus+
 system 50
Tracking adjustment. *see*
Adjusting

U

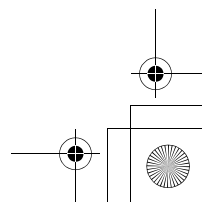
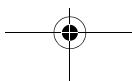
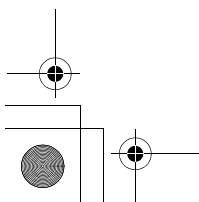
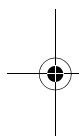
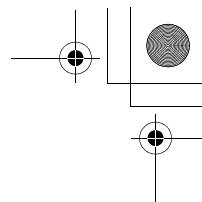
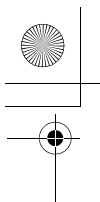
Usable discs 6

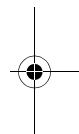
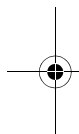
V

VCR Plus+ system
 channel set up 28
 recording 50
VIDEO CD 6

Z

Zoom 71





Sony Corporation Printed in China

<http://www.sony.net/>
AK68-00160A

