JVC

DVD PLAYER

XV-N412S

DVD VIDEO™

DOLBY DIGITAL

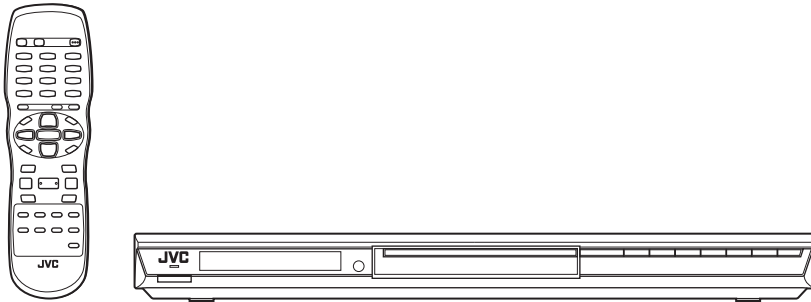**3D** 3D-PHONIC

dts 2.0+DIGITAL OUT™

COMPACT disc SUPER VIDEO

MPEG Multichannel

Digital Direct Progressive Scan

Region code of DVD VIDEO

This player can play back DVD VIDEO discs whose region code numbers include "2."

Examples of playable DVD VIDEO discs:

ALL   2   2 5   1 2 3 4   1 2 3 4 5 6

The player's region code is printed on the rear of the player.

INSTRUCTIONS

Warnings, Cautions and Others

IMPORTANT for the U.K.
DO NOT cut off the mains plug from this equipment. If the plug fitted is not suitable for the power points in your home or the cable is too short to reach a power point, then obtain an appropriate safety approved extension lead or consult your dealer.
BE SURE to replace the fuse only with an identical approved type, as originally fitted.
If nonetheless the mains plug is cut off ensure to remove the fuse and dispose of the plug immediately, to avoid a possible shock hazard by inadvertent connection to the mains supply.
If this product is not supplied fitted with a mains plug then follow the instructions given below:

IMPORTANT.
DO NOT make any connection to the terminal which is marked with the letter E or by the safety earth symbol or coloured green or green-and-yellow.
The wires in the mains lead on this product are coloured in accordance with the following code:

Blue : Neutral
Brown : Live

As these colours may not correspond with the coloured markings identifying the terminals in your plug proceed as follows:
The wire which is coloured blue must be connected to the terminal which is marked with the letter N or coloured black.
The wire which is coloured brown must be connected to the terminal which is marked with the letter L or coloured red.

**IF IN DOUBT - CONSULT A COMPETENT ELECTRICIAN.**

CAUTION
To reduce the risk of electrical shocks, fire, etc.:
1. Do not remove screws, covers or cabinet.
2. Do not expose this appliance to rain or moisture.

Caution — ⏻/| STANDBY/ON button!
Disconnect the mains plug to shut the power off completely (the STANDBY/ON lamp goes off).
The ⏻/| STANDBY/ON button in any position does not disconnect the mains line.
• When the unit is on standby, the STANDBY/ON lamp lights red.
• When the unit is turned on, the STANDBY/ON lamp lights green.
The power can be remote controlled.

CAUTION
• Do not block the ventilation openings or holes.
 (If the ventilation openings or holes are blocked by a newspaper or cloth, etc., the heat may not be able to get out).
• Do not place any naked flame sources, such as lighted candles, on the apparatus.
• When discarding batteries, environmental problems must be considered and local rules or laws governing the disposal of these batteries must be followed strictly.
• Do not expose this apparatus to rain, moisture, dripping or splashing and that no objects filled with liquids, such as vases, shall be placed on the apparatus.

Caution: Proper Ventilation
To avoid risk of electric shock and fire and to protect from damage, locate the apparatus as follows:
Front: No obstructions and open spacing.
Sides: No obstructions in 3 cm from the sides.
Top: No obstructions in 5 cm from the top.
Back: No obstructions in 15 cm from the back
Bottom: No obstructions, place on the level surface.
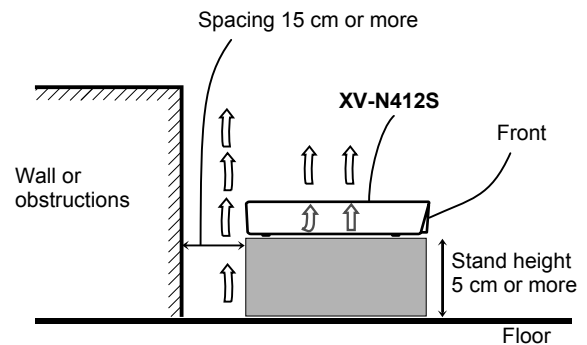
IMPORTANT FOR LASER PRODUCTS

1. CLASS 1 LASER PRODUCT
2. **CAUTION:** Do not open the top cover. There are no user serviceable parts inside the unit; leave all servicing to qualified service personnel.
3. **CAUTION:** Visible and invisible laser radiation when open and interlock failed or defeated. Avoid direct exposure to beam.
4. REPRODUCTION OF LABEL: CAUTION LABEL, PLACED INSIDE THE UNIT.

Supplied accessories

Check that you have all the following accessories supplied to you. If anything is missing, consult your dealer immediately.

• Remote control unit (× 1)
• R6P(SUM-3)/AA(15F) battery (× 2)

About this manual

• The display window information and OSD (On Screen Display) menu items are put in brackets [ ] in the operation procedures.
• Usable disc(s) for each operation/function is (are) referred to by the icons;

DVD VIDEO **Super VCD** **Video CD** **Audio CD**

Precautions

Notes on the power cord
• When you are away on travel or otherwise for an extended period of time, remove the plug from the wall outlet. A small amount of power (2.0 W) is always consumed while the power cord is connected to the wall outlet.
• When unplugging the unit from the wall outlet, always pull the plug, not the power cord.
• Do not handle the power cord with wet hands!

Avoid moisture, water and dust
• Do not place the unit in moist or dusty places.
• If water gets inside the unit, turn off the power and remove the plug from the wall outlet, then consult your dealer. Using the unit in this state may cause a fire or electrical shock.

Avoid high temperatures
• Do not expose the unit to direct sunlight or place it near a heating device.

Notes on installation
• Select a place which is level, dry and neither too hot nor too cold between 5°C and 35°C.
• Leave sufficient distance between the player and the TV.
• Do not install the player in a place subject to vibrations.
• Do not put heavy objects on the player.

To prevent malfunction of the unit
• There are no user-serviceable parts inside. If anything goes wrong, unplug the power cord and consult your dealer.
• Do not insert any metallic objects, such as wires, hairpins, coins, etc. into the player.
• Do not block the vents. Blocking the vents may damage the player.

To clean the cabinet
• Use a soft cloth. Follow the relevant instructions on the use of chemically-coated cloths.
• Do not use benzene, thinner or other organic solvents and disinfectants. These may cause deformation or discoloring.

Table of contents

Before operation

About discs

Playable disc types

Discs with the following marks can be played back on the player.

DVD VIDEO	SVCD	Video CD	Audio CD
DVD VIDEO	COMPACT disc SUPER VIDEO	Video CD COMPACT disc DIGITAL VIDEO	COMPACT disc DIGITAL AUDIO

The DVD Logo is a trademark.
The player can also play back the following discs:
• DVD-R and DVD-RW discs written in the DVD VIDEO format and finalized
• CD-R and CD-RW discs written in the SVCD, Video CD or Audio CD format and finalized
• CD-R and CD-RW discs written in MP3 or WMA in accordance with the "ISO 9660" format (See page 22 for details.)
• CD-R and CD-RW discs written in JPEG in accordance with the "ISO 9660" format (See page 24 for details.)

NOTE

If a disc gets dirty, scratched or warped, or due to the disc characteristics or recording conditions, it may take considerable time for the unit to read the content, or the unit may not be able to play back such discs.

The player can play back audio signals recorded in MIX-MODE CD, CD-G, CD-EXTRA and CD TEXT.

Color system format

This player accommodates the PAL system, and also can play back discs recorded with NTSC system whose Region Code numbers include "2."
Note that the NTSC video signal on a disc is converted to a PAL signal and output.

Unplayable discs

The player does not play back discs listed below. If you try to play back these discs, noise may generate causing damage to speakers.

• DVD-RW discs written in the VR format
• DVD-ROM, DVD-RAM, DVD AUDIO, CD-ROM, PHOTO CD, SACD

In addition, the player does not play:
• Unfinalized discs.
• Discs of irregular shape or discs with tape, seals or paste on either the label side or playback side. Playing back these discs may damage the player.

Digital audio formats

The player supports the following digital audio formats (see page 35 "Glossary" for descriptions of each audio format):

Linear PCM, Dolby Digital, MPEG Multichannel, DTS (Digital Theater Systems)

NOTE

Depending on the player's [DIGITAL AUDIO OUTPUT] setting, digital audio signals may not be output as they are recorded on the disc. See "DIGITAL AUDIO OUTPUT" on page 28 for details.

Notes on discs

• With some DVD VIDEO discs, the player starts playback automatically after inserting the disc.
• The image may be sometimes poor or noisy due to defects in the disc itself.
• With some discs, operations described in this manual may not be possible.

Care and handling of discs

If a disc gets dirty, dusty, scratched or warped, playback sound and picture may be deteriorated. Take proper precautions when handling discs.

Handling
• Do not touch the surface of the disc.
• Do not damage, stick paper to, or use any adhesive on either the label side or playback side.

Storing discs
• Keep discs in their cases. If discs are piled on top of one another without their protective cases, they can be damaged.
• Do not put discs in a location where they may be exposed to direct sunlight, or where the humidity or temperature is high. Avoid leaving discs in a car!

Cleaning discs
• Wipe with a soft dry cloth, moving from the center outwards. If a disc is difficult to clean, wipe with a cloth moistened with water.
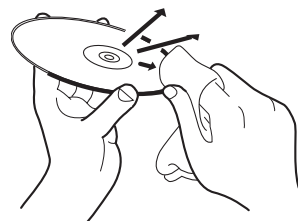
• Never use record cleaners, petrol, alcohol or any anti-static agents.

Notes on copyright
Check the copyright laws in your country before recording from DVD VIDEO, SVCD, Video CD, Audio CD, MP3, WMA and JPEG discs.
Recording of copyrighted material may infringe copyright laws.

Names of parts and controls

Front panel
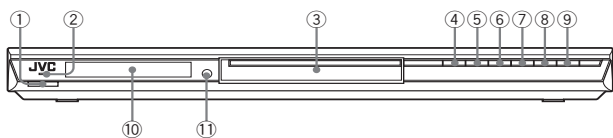
① ⏻/❙ STANDBY/ON button (10)
② STANDBY/ON indicator (10)
③ Disc tray (11)
④ ⏏ button (11)
⑤ |◄◄ button (13, 14, 24)
⑥ ►►| button (13, 14, 24)
⑦ ■ button (11,12)
⑧ ► button (11,12,13)
⑨ ❙❙ button (11, 13)
⑩ Display window (see the illustration below)
⑪ Remote sensor (9)

Display window
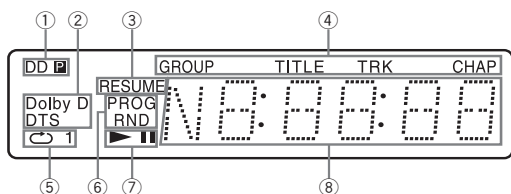
① **Progressive mode indicators**
   [P] turns on in the progressive scanning mode.
   [DDP] turns on depending on the [PICTURE SOURCE] preference setting and the source type of the current DVD VIDEO disc (see page 6 for details).
② **Dolby Digital/DTS indicators**
   [Dolby D] turns on when playing back a Dolby Digital sound source. [DTS] turns on when playing back a DTS-encoded digital sound source.
③ **Resume indicator**
   Turns on when playback is interrupted with the resume function activated.
④ **Group/title/track/chapter indicators**
   Show what is indicated by the multi-information display during playback.
⑤ **Repeat mode indicator**
   Turn on in the repeat playback mode and shows the currently selected repeat mode.
⑥ **Program/random indicators**
   Turn on in the program playback mode/random playback mode respectively.
⑦ **► (play)/❙❙ (pause) indicators**
   Turn on in the playback mode/pause mode respectively.
⑧ **Multi-information window**
   Indicates various kinds of information by numbers and alphabets, such as the player's current status ("READ," "OPEN," etc.) or currently played DVD's title and chapter number.

Remote control unit
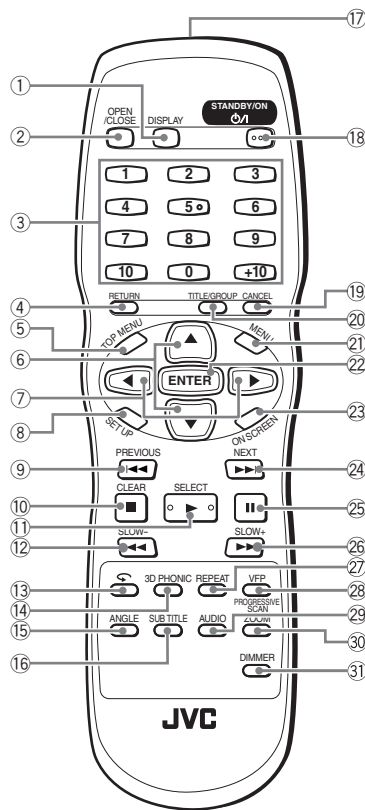
① **DISPLAY button** (11)
② **OPEN/CLOSE button** (11)
③ **Numeric buttons**
④ **RETURN button** (14)
⑤ **TOP MENU button** (14)
⑥ **Cursor selection (▲ Up, ▼ Down) buttons**
⑦ **Cursor selection (◄ Left, ► Right) buttons**
⑧ **SET UP button** (11, 26)
⑨ **|◄◄/PREVIOUS button** (13, 14, 24, 25)
⑩ **■/CLEAR button** (11, 16, 17, 23, 24, 25)
⑪ **►/SELECT button** (11, 12, 13, 16, 23, 25)
⑫ **◄◄/SLOW– button** (13)
⑬ **↩ button** (13)
⑭ **3D PHONIC button** (19)
⑮ **ANGLE button** (18)
⑯ **SUBTITLE button** (17)
⑰ **Infrared signal window** (9)
⑱ **STANDBY/ON ⏻/❙ button** (10)
⑲ **CANCEL button** (16)
⑳ **TITLE/GROUP button** (15, 23, 25)
㉑ **MENU button** (14, 24, 25)
㉒ **ENTER button**
㉓ **ON SCREEN button** (11, 15, 16, 17, 20, 23, 25)
㉔ **►►|/NEXT button** (13, 14, 24, 25)
㉕ **❙❙ button** (11, 13, 22, 25)
㉖ **►►/SLOW+ button** (13)
㉗ **REPEAT button** (17, 23, 25)
㉘ **VFP - PROGRESSIVE SCAN button** (6, 19)
㉙ **AUDIO button** (18)
㉚ **ZOOM button** (18, 25)
㉛ **DIMMER button**
   Press to change the brightness of the display window.
   You can select the display window brightness from three levels or off. If the brightness is set to off, nothing will be shown on the display.
   By pressing this button, the brightness of the blue illumination around the disc tray also changes.

Before operation

3

Preparations

Before making connections
- **Do not connect the AC power cord until all other connections have been made.**
- **Connect VIDEO OUT of the player directly to the video input of your TV. Connecting VIDEO OUT of the player to a TV via a VCR may cause a monitor problem when playing back a copy-protected disc. You may also have a monitor problem when connecting the player to an integrated TV/Video system.**

- In the following description, "TV" may be substituted with "monitor" or "projector."
- Terminal names used for other components may be different from those used in the following description.

Connections

Before using the player, connect the player to a TV and/or amplifier.

Connecting to a TV

The following sections Ⓐ to Ⓓ describe TV connections where only a TV is connected to the player so that you will hear audio from the TV.

Ⓐ Connecting to a TV with the SCART connector

You can enjoy using the player by simply connecting it to your television set with a 21-pin SCART cable.

NOTE

When you connect a SCART cable, do not connect any other cables to other video signal output jacks (VIDEO/S-VIDEO/COMPONENT VIDEO OUT). If you do so, you will not be able to obtain correct signals from the SCART connector of the player.

SCART cable (not supplied)
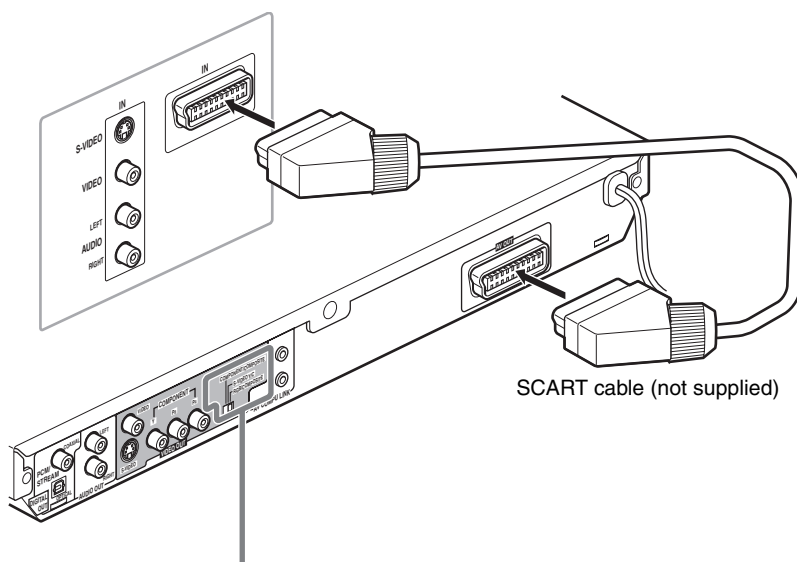
Setting the selector
When you connect the player to a TV with the SCART connector, set the COMPONENT/COMPOSITE -
S-VIDEO Y/C - RGB/COMPOSITE selector correctly according to your TV.
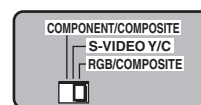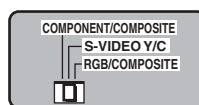
- If your TV only accommodates the composite video signal:
Set the selector to "COMPONENT/COMPOSITE" or "RGB/COMPOSITE."

- If your TV accommodates Y/C signals:
Set the selector to "S-VIDEO Y/C."

- If your TV accommodates RGB signals:
Set the selector to "RGB/COMPOSITE."

Preparations

Ⓑ Connecting to a TV having composite video input jack

TV

Yellow

White

Red

The player

COMPONENT/COMPOSITE
S-VIDEO Y/C
RGB/COMPOSITE

or

COMPONENT/COMPOSITE
S-VIDEO Y/C
RGB/COMPOSITE

Set the selector to "COMPONENT/COMPOSITE" or "RGB/COMPOSITE."

Audio/video cable (not supplied)

Yellow

Red

White
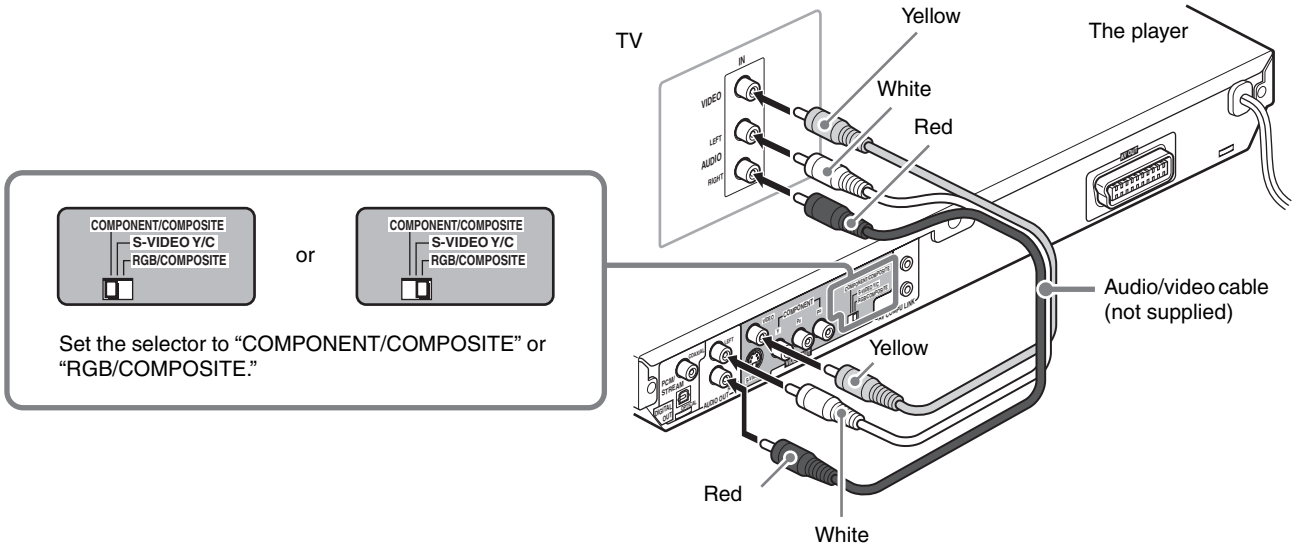
NOTES

- When you connect cables to both the VIDEO jack and COMPONENT VIDEO OUT jacks, set the selector to "COMPONENT/COMPOSITE."
- Do not connect cables to S-VIDEO jack and SCART connector. If you do so, you will not be able to obtain correct signals from the VIDEO (and COMPONENT VIDEO OUT) jacks.
- If your TV has a monaural audio input instead of stereo, you need to use an optional audio cable which converts stereo audio output to monaural.

Ⓒ Connecting to a TV with an S-video jack

If your TV has an S-VIDEO input, you can get better picture quality by connecting it with the S-VIDEO output of the player using an S-video cable instead of connecting the video input of the TV to the VIDEO jack of the unit.

NOTE

To obtain correct signals from the S-VIDEO output, do not connect cables to the VIDEO jack, COMPONENT VIDEO OUT jacks, and SCART connector of the player.

TV

White

Red

The player

COMPONENT/COMPOSITE
S-VIDEO Y/C
RGB/COMPOSITE

Set the selector to "S-VIDEO Y/C."

S-video cable (not supplied)

White

Audio cable (not supplied)

Red

Preparations

5
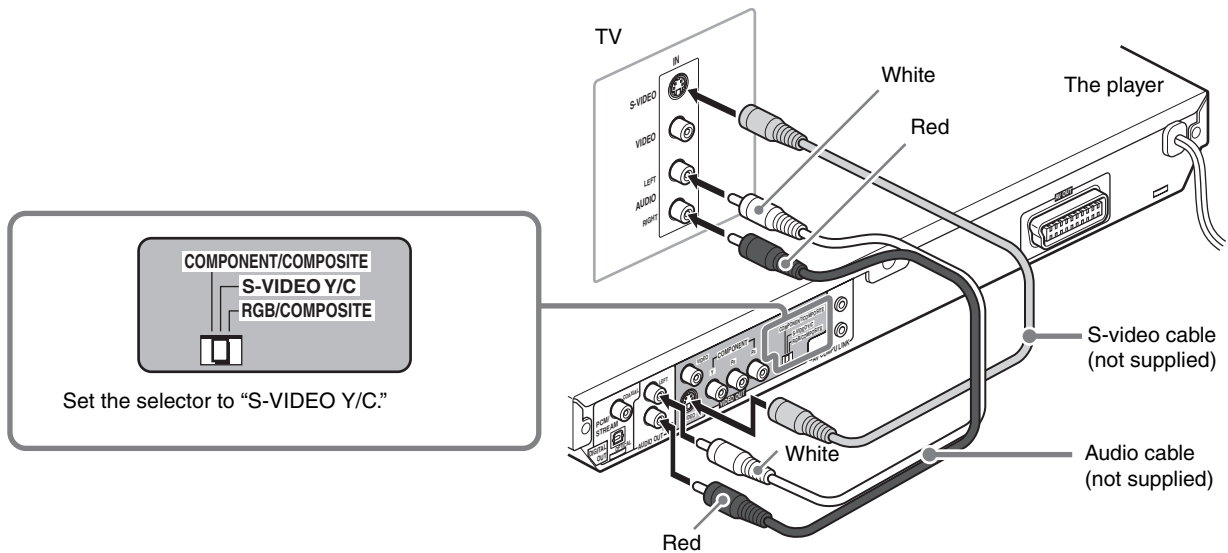
Ⓓ **Connecting to a TV with component jacks**

You can enjoy picture of high-fidelity color reproduction by connecting the COMPONENT VIDEO OUT jacks on the player to your TV.

NOTES

• Connect "Y" to "Y," "P$_B$" to "P$_B$" (C$_B$), "P$_R$" to "P$_R$" (C$_R$) correctly.
• Do not connect cables to S-VIDEO jack and SCART connector. If you do so, you will not be able to obtain correct signals from the COMPONENT VIDEO OUT jacks.
• If your TV has component video input jacks of BNC type, use an adapter which converts a pin jack to a BNC jack (not supplied).

Progressive scan video playback available
In the Progressive scanning mode, you can enjoy high quality picture with less flickers when the COMPONENT VIDEO OUT jacks are connected to a TV or monitor that supports the progressive video input.

Hint

Depending on the source material format, DVD VIDEO discs can be classified into two types; film source and video source (note that some DVD VIDEO discs contain both film source and video source).
When the player plays back a film source material, Progressive (uninterlaced) signals are created using the original information. When a video source material is played back, the unit interleaves lines between the interlaced lines on each to create the interpolated picture and outputs as the progressive signal.

COMPONENT/COMPOSITE
S-VIDEO Y/C
RGB/COMPOSITE

Set the selector to "COMPONENT/ COMPOSITE."
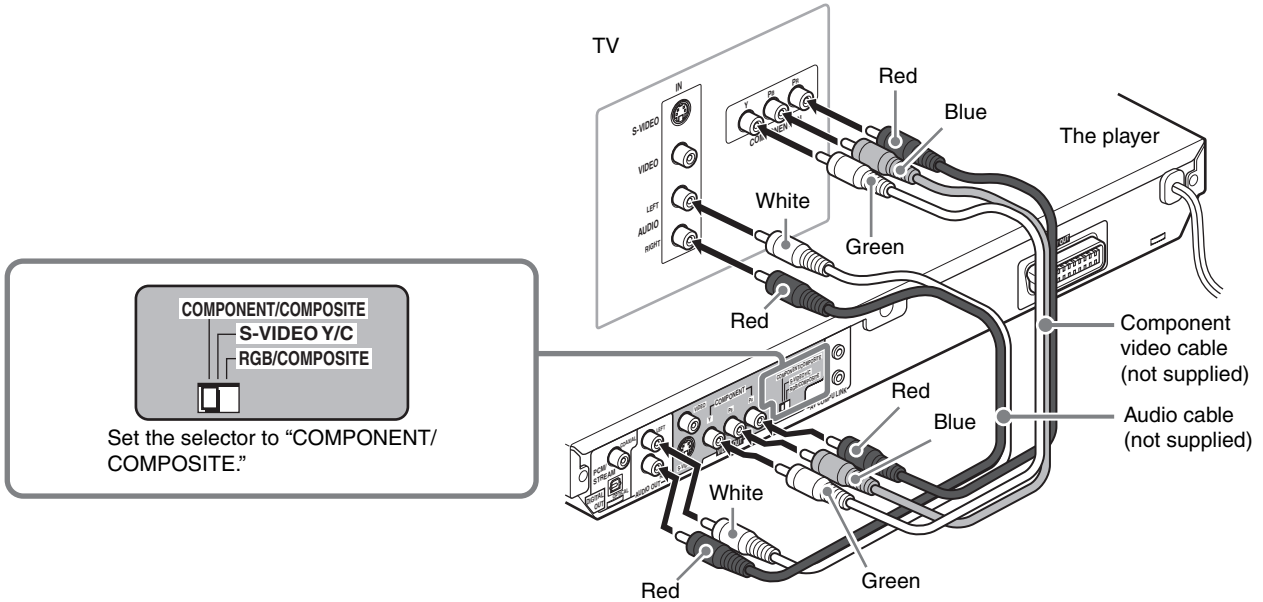
Activating the Progressive scanning mode using the remote control unit
While the player is turned on, press and hold down VFP - PROGRESSIVE SCAN for a few seconds.

VFP -
PROGRESSIVE SCAN
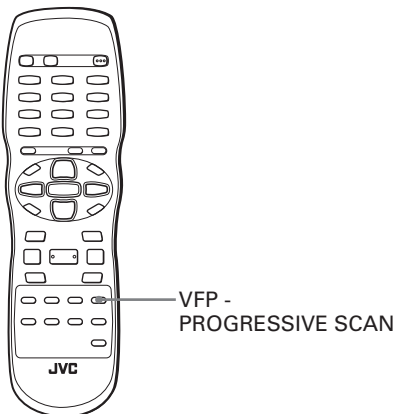
The scanning mode switches between the Progressive scanning and Interlaced scanning modes.
When the scanning mode is set to the Progressive mode, the [P] indicator lights up in the display window.
[DD] also turns on when Progressive scanned signals on a DVD VIDEO disc are directly output as they are from the player. Depending on the [PICTURE SOURCE] preference display and whether the current DVD VIDEO disc is film-source or video-source, the indicator that lights up in the display window differs, as shown in the table below.

Setting of [PICTURE SOURCE]	Source type of DVD VIDEO	
	Film source	Video source
AUTO	[DDP]	[P]
FILM	[DDP]	[DDP]
VIDEO (NORMAL)/ (ACTIVE)	[P]	[P]

NOTES

• The Progressive scanning mode works only when you connect the player's COMPONENT VIDEO OUT jacks to your TV.
• There are some progressive TV and High-Definition TV sets that are not fully compatible with the player, resulting in the unnatural picture when playing back a DVD VIDEO disc in the Progressive scanning mode. In such a case, use the Interlaced scanning mode. To check the compatibility of your TV set, contact your local JVC customer service center.
• All JVC progressive TV and High-Definition TV sets are fully compatible with the player (Example: AV-61S902).

Connecting to optional audio equipment

Connecting to a stereo audio amplifier/receiver

Connect the player's AUDIO OUT (LEFT/RIGHT) jacks to any line-level inputs (such as AUX, DVD, CD, etc.) of an audio amplifier or receiver.

Amplifier or receiver

White

Red

The player

Audio cable (not supplied)

White

Red

Preparations

7
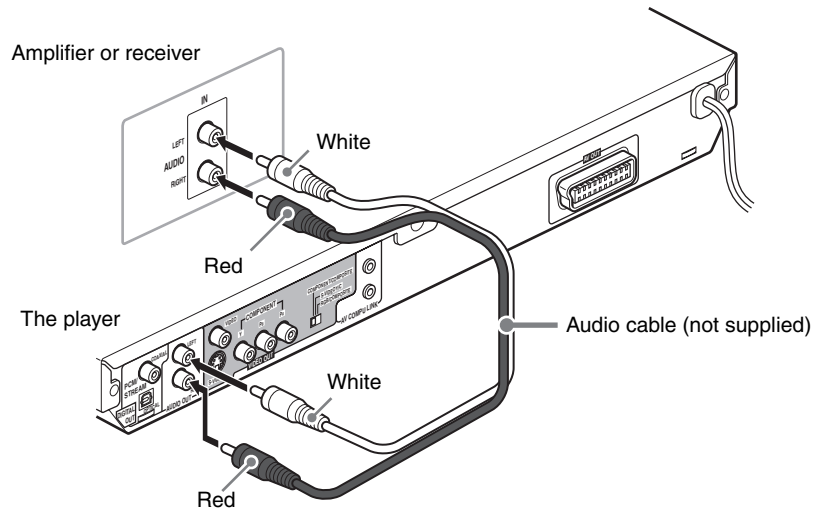
Connecting to a digital audio device

You can enjoy sound of enhanced quality by connecting the player's DIGITAL OUT (either OPTICAL or COAXIAL) jack to a digital input of an amplifier, etc., using an optical or coaxial digital cable. The digital audio signal on a disc will be transferred directly from the player. If the connected digital audio equipment is a Dolby Digital or DTS decoder or an amplifier with a built-in decoder, you can enjoy high-quality surround sound.

- Connect the player and the digital audio device by using either an optical digital cable or a coaxial digital cable.
- It is not recommended to use the digital jacks for dubbing. When recording the sounds (DVD VIDEO, SVCD, Video CD or Audio CD) played back on the player, record them through the analog jacks.
- Depending on the disc, no signal may be output from the DIGITAL OUT. Make an analog connection in this case.
- **Set [DIGITAL AUDIO OUTPUT] in the [AUDIO] preference display correctly according to the connected digital audio equipment. If setting made for [DIGITAL AUDIO OUTPUT] is incorrect, loud noise may be generated causing damage to the speakers (see page 28).**

Digital equipment

The player

Coaxial digital cable (not supplied)

Audio cable (not supplied)

Optical digital cable (not supplied)
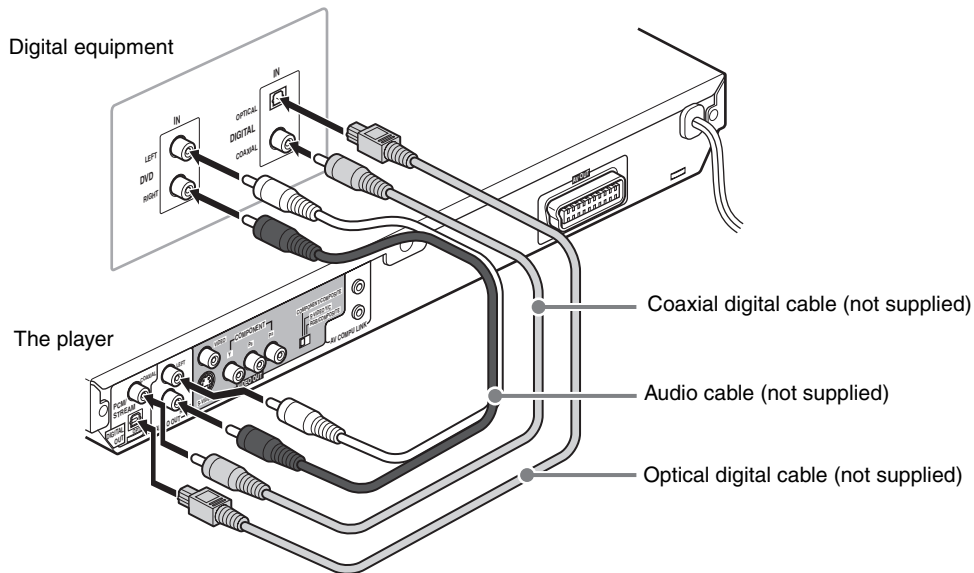
Connecting the power cord

When all the audio/video connections have been made, connect the AC power plug to the wall outlet. Make sure that the plugs are inserted firmly.
The STANDBY/ON indicator lights in red.

⚠ **Warning**

- Disconnect the power cord:
  - if you are not going to use the player for a long time.
  - before cleaning the player.
  - before moving the player.
- Do not:
  - connect or disconnect the power cord with wet hands.
  - pull the power cord when disconnecting it, as this may damage the cord and cause fire, electric shock, or other accidents.

⚠ **Caution**

- Do not alter, twist or pull the power cord, or put anything heavy on it, which may cause fire, electric shock, or other accidents.
- If the cord is damaged, consult a dealer and have the power cord replaced with a new one.

Using the remote control unit

To install batteries

Open the compartment cover, and place the two supplied R6P (SUM-3)/AA(15F) batteries in the remote control unit according to the polarity markings ("+" and "–") inside the compartment. Then replace the cover.
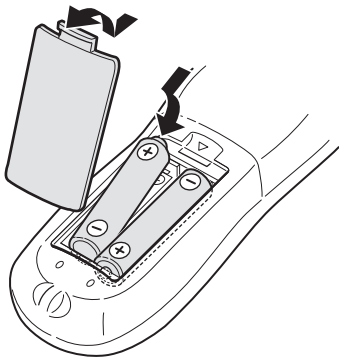
The batteries will last about six months with normal use.
If the functions of the remote control unit become erratic, replace the batteries.

Precautions of the safe use of batteries

Observe the following precautions for the safe use of batteries. If they are used improperly their lives will be shortened, they may burst or their contents may leak.
- Remove the batteries from the remote control unit if it is not going to be used for a long period of time.
- Remove dead batteries and dispose of them properly.
- Never leave dead batteries lying around, take them apart, mix them with other refuse, or throw them into an incinerator.
- Never touch liquid that has leaked out of a battery.
- Do not mix new and old batteries, or batteries of different types, when replacing them.

Remote sensor

Point the top of the remote control unit toward the remote sensor as directly as possible. If you operate it from a diagonal position, the operating range (approx. 5 m) may be shorter.

Remote sensor

Preparations

9

Basic playback

STANDBY/ON indicator

⏏ ■ ►II

JVC

⏻/I STANDBY/ON

DISPLAY
OPEN/CLOSE ———————— STANDBY/ON ⏻/I

ENTER ———————— ▲/▼/◄/►
SET UP ———————— ON SCREEN
■ ———————— ► (SELECT)
II

JVC

About invalid operation icon

When you press a button, and if the player does not accept its operation, ⊘ appears on your TV screen. Operations are occasionally unacceptable even if ⊘ is not displayed.
Note that some operations may not be accepted. For example, some discs may not allow rapid advance/reverse or slow-motion playback.

Turning the player on and off

Press STANDBY/ON ⏻/I on the remote control unit or press ⏻/I STANDBY/ON on the front panel.

The STANDBY/ON indicator on the front panel, which lights in red during standby, lights in green.
The blue illumination around the disc tray turns on.

The opening display appears on the TV screen, and the following messages may appear at the bottom of the opening display.

JVC

NOW READING

Message area

- NOW READING (The player is reading the disc information.)
- REGION CODE ERROR! (The region code of the DVD VIDEO disc does not match the player. The disc cannot be played back.)
- OPEN (The disc tray is opening.)
- CLOSE (The disc tray is closing.)
- NO DISC (No disc is loaded.)

NOTE

Even if you turn off the player, the player is not disconnected from the AC power source as long as it is connected to the wall outlet. This state is called standby mode. In this state, the player consumes a very small amount of power.

Initial setup

When you turn on the player for the first time after purchase, the following message appears on the TV screen.

EXECUTE DVD PLAYER SETUP? - BASIC PICTURE/AUDIO SETTING
YES - PRESS ENTER   NO - PRESS CANCEL

You can set the display language, TV monitor type and digital output before using the player, by following the procedure below.

1 Press ENTER.

The first page of the DVD PLAYER SET UP display appears. The pull-down menu of the [ON SCREEN LANGUAGE] is already open.

DVD PLAYER SET UP

MENU LANGUAGE	ENGLISH
AUDIO LANGUAGE	ENGLISH
SUBTITLE	ENGLISH
ON SCREEN LANGUAGE	ENGLISH FRENCH GERMAN

SELECT
ENTER   USE ▲▼◄► TO SELECT, USE ENTER TO CONFIRM
            TO EXIT, PRESS SETUP.
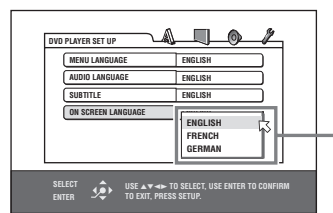
ON SCREEN LANGUAGE options

2 Press ▲/▼ to select the desired language.

You can select the on-screen language for the preference displays, etc. from among ENGLISH, FRENCH and GERMAN.

3 Press ENTER.

The second page is shown, in which the pull-down menu of the [MONITOR TYPE] is already open.

DVD PLAYER SET UP

MONITOR TYPE	16:9 NORMAL 16:9 AUTO 4:3 LB 4:3 PS
PICTURE SOURCE	
SCREEN SAVER	
MP3&WMA/JPEG	

SELECT
ENTER   USE ▲▼◄► TO SELECT, USE ENTER TO CONFIRM
            TO EXIT, PRESS SETUP.

MONITOR TYPE options

4 Press ▲/▼ to select the desired monitor type.

For a normal (conventional) TV, select [4:3 LB] or [4:3 PS].
For a wide-screen TV, select [16:9 NORMAL] or [16:9 AUTO]. (See page 27.)

5 Press ENTER.

The third page is shown, in which the pull-down menu of the [DIGITAL AUDIO OUTPUT] is already open.

```
DVD PLAYER SET UP        ♪  ▓  ⊕  ✎
  DIGITAL AUDIO OUTPUT      PCM ONLY
  ANALOG DOWN MIX           DOLBY DIGITAL/PCM
  D RANGE CONTROL           STREAM/PCM
  OUTPUT LEVEL              STANDARD

  SELECT        USE ▲▼◄► TO SELECT, USE ENTER TO CONFIRM
  ENTER         TO EXIT, PRESS SETUP.
```

DIGITAL AUDIO OUTPUT options

6 Press ▲/▼ to select a desired digital output signal type.

Set this item correctly when you connect the player to an external surround decoder or D/A converter. (If you do not connect the player to such a device, you do not have to set this item.)
• When connecting to other digital device, select [PCM ONLY].
• When connecting to a Dolby Digital decoder, select [DOLBY DIGITAL/PCM].
• When connecting to a Dolby Digital decoder or a DTS decoder, select [STREAM/PCM].

7 Press ENTER.

The TV screen returns to the opening display.

To bring up the DVD PLAYER SET UP display later

Press SET UP for a few seconds until the DVD PLAYER SET UP display appears.

Starting playback

| DVD VIDEO | Super VCD | Video CD | Audio CD |

1 Press ▲ (or OPEN/CLOSE on the remote control unit) to open the disc tray.

2 Place a disc in the disc tray.

With the label side up
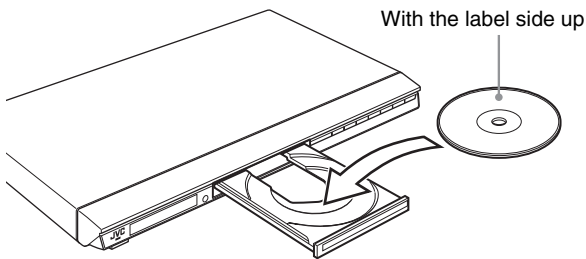
• To insert an 8-cm disc, place it in the inner recess.

3 Press ▲ (or OPEN/CLOSE on the remote control unit) to close the disc tray.

4 Press ► on the player or ► (SELECT) on the remote control unit.

The player starts playback from the beginning.
• Depending on the disc, playback starts when you close the disc tray.

If a menu is shown on the TV screen

When inserting a DVD VIDEO, SVCD or Video CD disc, a menu may be shown on the TV screen. From the menu, you can select a desired item to be played back.

For DVD VIDEO:
1 Press ▲/▼/◄/► to select a desired item.
2 Press ENTER.
   The player starts playback of the selected item.

For SVCD/Video CD:
Press the numeric buttons to select a desired item.
The player starts playback of the selected item.

NOTES
• Do not insert an unplayable disc. (See page 2.)
• When inserting a disc on the disc tray, be sure to position the disc inside the recess. Otherwise, the disc may be damaged when the disc tray is closed, or you may not be able to remove the disc from the player.

To check the playback status

You can see the current selection number (the title/chapter number for DVD VIDEO or track number for SVCD/Video CD/ Audio CD), time information (the track or chapter time while stopped, or elapsed track or chapter time during playback) and the transport status (stop, playback, pause, etc.) on the TV screen.

Press ON SCREEN.

Example: for DVD VIDEO

Transfer rate — Current chapter number — Current transport status

```
DVD-VIDEO   8.5Mbps   TITLE 33  CHAP 33   TOTAL 1:25:58   ▶
```

Current title number — Disc elapsed time
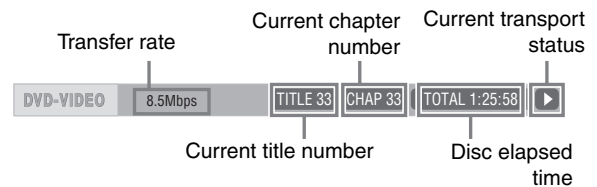
Note that pressing ON SCREEN again brings up the menu bar under the status bar, from which you can access various functions. See page 20 for details about the menu bar.

To turn off the status bar
Press ON SCREEN repeatedly until the status bar goes off.

To change the display window contents

Press DISPLAY.

Example: for DVD VIDEO
Each time you press DISPLAY, the elapsed time display and the title/chapter number display appear alternately.

```
  0:36:15    ⟷    TITLE  CHAP
                     1     2
```

Elapsed time — Title number — Chapter number
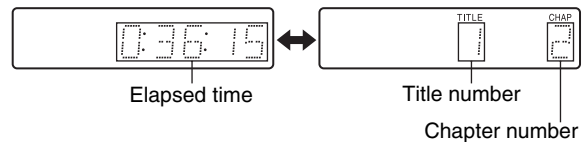
To stop playback completely

Press ■.

Hint
If you press ▲ during playback, the player stops playback and opens the disc tray.

To stop playback temporarily

Press ❙❙.

To resume playback, press ► (SELECT).

(SELECT)
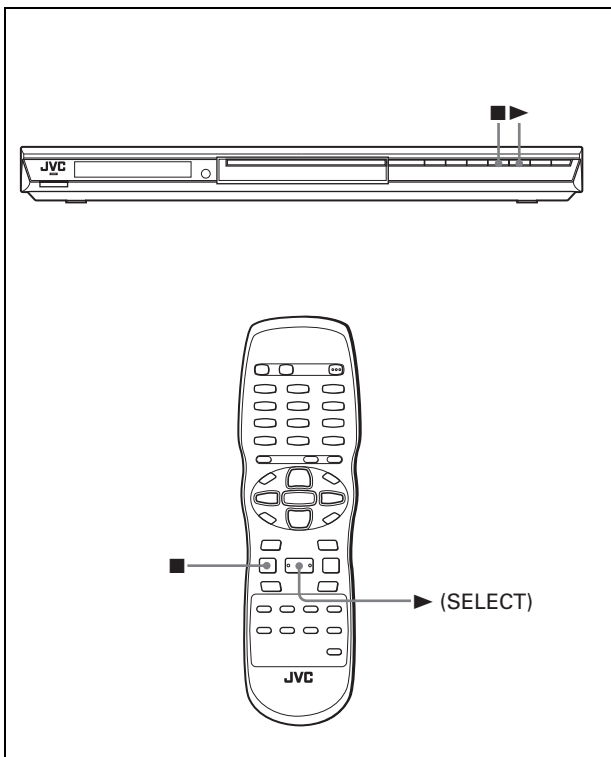
Restarting playback after stopping (resuming playback)

DVD VIDEO **Super VCD** **Video CD**

The player resumes playback from the position you interrupted playback, as long as the disc you interrupted playback is still on the disc tray.
This is because the player's resume mode is set to ON when you purchased the player.
When the resume mode is set to ON, the player memorizes the position on a disc where you interrupted playback.
• When you press ■ to interrupt playback, the TV screen shows [RESUME STOP] and the [RESUME] indicator lights up in the display window.
• When you re-start playback, the TV screen shows [RESUME PLAY].

Hint
The memory of the interrupted position is not cleared even if you turn off the player.

To play back from the beginning
Press ■ while the disc is stopped.
The memory is cleared.
Then press ► (SELECT).

NOTES
• The player remembers the interrupted position even if you turn the power off.
• The memory is cleared if you open the disc tray.

Changing the resume mode
The player has three resume modes; ON, OFF and DISC RESUME.
• You can select the mode using the preference display (see page 28).

When the resume mode is "OFF"
Playback always starts from the beginning.

When the resume mode is "DISC RESUME"
The player memorizes interrupted positions for the last 30 discs played. Storing a new interrupted position will erase the interrupted position stored for the first disc.
The memory of the interrupted positions are not cleared even if you open the disc tray or turn off the player.

NOTES
• If you change the [RESUME] setting from [DISC RESUME] to [OFF] or [ON], you cannot resume playback of a disc whose "resuming" position is stored. However, when you again set [RESUME] to [DISC RESUME], you will then be able to resume playback of the disc.
• If you interrupt the playback of a disc for which an interrupted position has already been stored, the memory will be updated with the new interrupted position.
• For a double-sided DVD VIDEO disc, the player regards each side as a different disc. Therefore, to resume playback of such a disc, the disc must be inserted with the same side down.
• When the player memorizes an iterrupted point for a disc, it also memorizes Audio, Subtitle and Angle settings.
• The player may not resume playback exactly from the interrupted point. In the case of an SVCD/Video CD disc with PBC function, the player may resume playback from a point slightly earlier or later than the point where playback was interrupted.

About On-screen guide icons
You may see the following icons displayed over the picture. They have the following meanings.

▶ : Appears at the beginning of playback mode.

❚❚ : Appears at the beginning of pause mode.

◀◀ ▶▶ : Appears at the beginning of fast forward/backward playback with the current speed (see page 13).

◀❙ ❙▶ : Appears at the beginning of slow-motion playback with the current speed (see page 13).

📹 : Appears at the beginning of a scene recorded from multiple angles (see page 18).

🔊 : Appears at the beginning of a scene recorded with multiple audio languages (see page 18).

💬 : Appears at the beginning of a scene recorded with multiple subtitle languages (see page 17).

You can change the setting so that the on-screen guide icons do not appear on the TV screen (see page 28).

About screen saver function
A television monitor may have an image burned into it if a static image is displayed for a long time. To prevent this, the player automatically activates the screen saver function if a static picture, such as an on-screen display or menu, is displayed while no button is pressed for over 5 minutes.
When the screen saver function is activated, the TV screen gets darker.
Pressing any buttons will release the screen saver function.
You can set the screen saver function to ON or OFF (see page 27).

Various kinds of playback
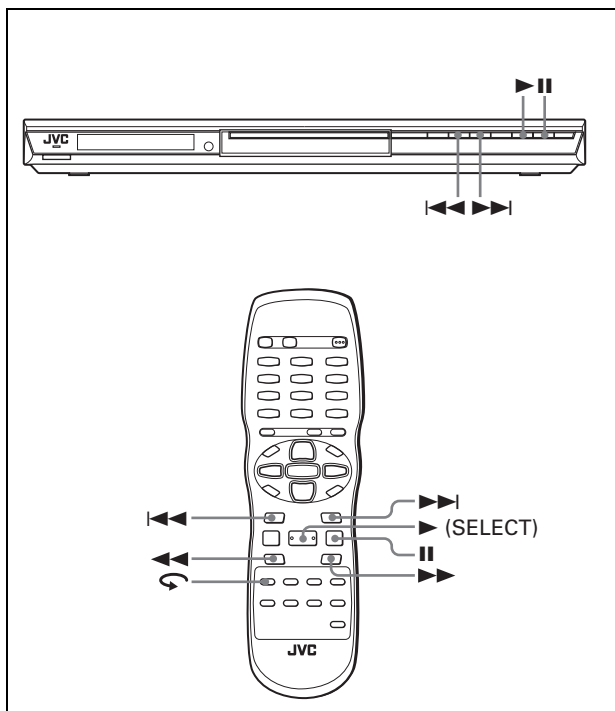
Playback at various speeds

To advance or reverse playback rapidly while monitoring

During playback, press ►► or ◄◄ on the remote control unit.

You can select from 1.5 times, 5 times, 20 times and 60 times normal speed. Pressing ► (SELECT) returns the player to normal playback.

During playback, hold down ►►| or |◄◄.

Playback is advanced or reversed at 5 times normal speed.

NOTE

During rapid playback, the sound will be muted except when playing an Audio CD, and when playing a DVD VIDEO or Video CD at 1.5 times normal speed. For Audio CD discs, the sound will be heard intermittently.

x1.5 Quick Playback with sound

When you select 1.5 times normal speed playback, the disc is played back with sound.
• For DVD VIDEO discs, the subtitle does not go off.
• At the x1.5 Quick Playback mode, the digital sound is output in stereo linear PCM format.
• To switch from rapid reverse playback to x1.5 Quick Playback, first press ► (SELECT), then press ►► once.

To advance a still picture frame by frame

While paused, press II.

Each time you press II, the still picture advances to the next frame.
Pressing ► (SELECT) returns to normal playback.

To play back in slow motion

You can select from 1/32 times, 1/16 times, 1/4 times and 1/2 times normal speed.

During playback, press II, then press ►► (to play forward slow motion), or ◄◄ (to play reverse slow motion, for DVD VIDEO disc only).

Pressing ► (SELECT) returns to normal playback.

NOTES

• During slow motion playback, the sound will be muted.
• Reverse slow motion playback is not possible for an SVCD and Video CD.

To replay the previous scenes (One touch replay function)

During DVD VIDEO playback, press ↺ .

The playback position moves back 10 seconds before the current position.

NOTES

• This function works only within the same title, though it works between chapters.
• This function may not work with some DVD VIDEO discs.

Various kinds of playback

13

Numeric buttons

RETURN
TOP MENU
△/▽/◀/▶
ENTER
⏮
■

TITLE/GROUP
MENU
ON SCREEN
▶▶⏭
▶ (SELECT)

JVC

Locating the beginning of a scene or song

| DVD VIDEO | Super VCD | Video CD | Audio CD |

For DVD VIDEO: During playback, you can skip a chapter or title, depending on the disc configuration.
For SVCD/Video CD: During playback without PBC function, you can skip a track.
For Audio CD: During playback or while in stop mode, you can skip a track.

To skip forward, press ▶▶⏭.

To skip backward, press ⏮◀◀ twice.

Using the numeric buttons

For DVD VIDEO/Audio CD: During playback or while in stop mode
For SVCD/Video CD: During playback without PBC function or while in stop mode

Press the numeric buttons to specify the number.

To select 5: press 5.
To select 23: press +10, +10, then 3.
To select 40: press +10, +10, +10, then 10.

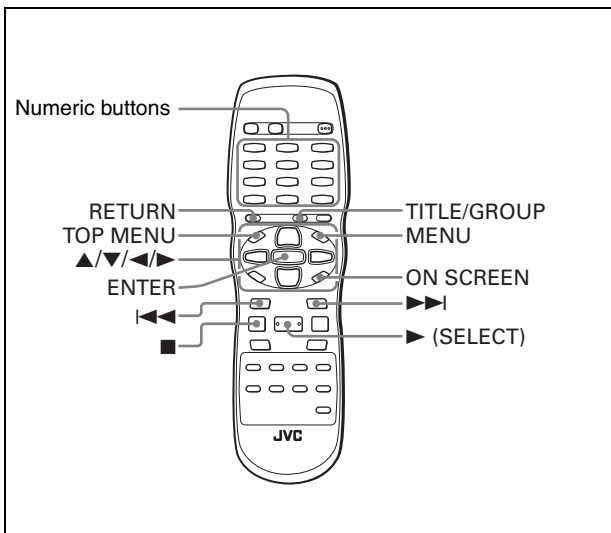The player starts playback from the beginning of the selection.

NOTES
• Depending on the disc type and the unit status, what is specified differs:

Player status	Disc type	What is specified
While stopped	DVD VIDEO	title
	SVCD/Video CD/Audio CD	track
During playback	DVD VIDEO	chapter
	SVCD/Video CD/Audio CD	track

• During DVD VIDEO playback, if a menu is shown on the TV screen, the numeric buttons may be used for selecting an item in the menu.

Playing from a specific position

Locating a desired scene from the DVD menu

| DVD VIDEO |

DVD VIDEO discs generally have their own menus which show the disc contents. These menus contain various items such as titles of movies, names of songs, or artist information, and display them on the TV screen. You can locate a desired scene using the DVD menu.

1 While a DVD VIDEO disc is inserted, press TOP MENU or MENU.

The menu appears on the TV screen.

2 Press △/▽/◀/▶ to select a desired item, then press ENTER or ▶ (SELECT).

The player starts playback of the selected item.

Hints
• Some DVD VIDEO discs may also have a different menu which appears when MENU is pressed.
• See the instructions of each DVD VIDEO disc for its particular menu.
• With some discs, you can select items by entering the corresponding number using the numeric buttons, which may cause the player to automatically start playback.

NOTE
The MENU button does not work while stopped.

Locating a desired scene from the menu of a SVCD/Video CD with PBC

| Super VCD | Video CD |

Some SVCD/Video CD discs support the PBC function. PBC is an abbreviation of "Playback Control." Some SVCD/Video CD discs recorded with PBC have their own menus, such as a list of the songs of the disc. You can locate a specific scene by using the PBC menu.

1 In stop mode, press ▶ (SELECT) or TOP MENU.

A disc menu appears on the TV screen.

2 Press the numeric buttons to select the desired item.

To select 5: press 5.
To select 23: press +10, +10, then 3.
To select 40: press +10, +10, +10, then 10.

The player starts playback of the selected item.
To return to the menu, press RETURN.

Hint
If something like [NEXT] or [PREVIOUS] appears on the TV screen, pressing ▶▶⏭ advances to the next page, and pressing ⏮◀◀ returns to the previous page.

14

About PBC (Playback Control)

Some SVCD/Video CD discs support the PBC function.
The PBC function allows you to enjoy menu-driven operation and high-resolution still images which have a resolution four times greater than moving pictures.
- To play a PBC-compatible SVCD/Video CD disc without activating the PBC function, press the numeric buttons instead of ▶ (SELECT) to start playback.
- To activate the PBC function again,
  1) press TOP MENU or MENU,
              or
  2) press ■ to stop playback, then press ▶ (SELECT) .

Specifying a desired title/group

DVD
VIDEO

1 During playback, press TITLE/GROUP.

[--] is shown in the title display area of the display window.

2 Press the numeric buttons to specify a title or group to be played.

To select 5: press 5.
To select 23: press +10, +10, then 3.
To select 40: press +10, +10, +10, then 10.

The player starts playback from the specified title or group.

NOTE

This function may not work with some DVD VIDEO discs.

Locating a desired position in the current title, group or track (Time search)

DVD VIDEO | Super VCD | Video CD | Audio CD

You can play a disc from the desired position by specifying the time from the beginning of the current title (for DVD VIDEO) or the disc (for SVCD/Video CD/Audio CD).

For DVD VIDEO/Audio CD: During playback or while in stop mode
For SVCD/Video CD: In any condition except SVCD/Video CD playback with PBC

1 Press ON SCREEN twice.

The menu bar appears on the TV screen.

2 Press ◀/▶ to move ▷ to 🕐➡ , then press ENTER.

The pull-down menu for entering time appears.

Screen example for DVD VIDEO

| DVD-VIDEO | 8.5Mbps | | | TITLE 33 | CHAP 33 | TOTAL 1:25:58 | ▶ |

TIME | ⭮OFF | 🕐➡ | CHAP.➡ | ⟮⟯ 1/3 | ▭ 1/5 | 🎥 1/3
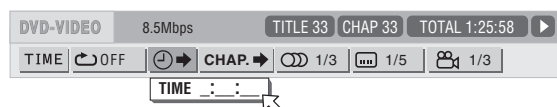
TIME _:_:_

3 Press the numeric buttons (0 to 9) to enter the desired time.

The specified time is displayed in the pull-down menu.

Example (for DVD VIDEO)
To play back from 2(H):34(M):00(S)
Press 2, 3, then 4.

TIME   2:34:__

Example (for SVCD/Video CD/Audio CD)
To play back from 23(M):40(S)
Press 2, 3, then 4.

TIME   23:4_

You do not have to press "0" to enter the trailing zeros (for the last two digits in the example above).

To correct a mistake
Press ◀ repeatedly to move back to the digit where you entered a wrong number, and reenter the correct one.

4 Press ENTER.

The player starts playback from the specified time.

To dismiss the menu bar

Press ON SCREEN.

Hint

"10" and "+10" buttons are not used with this function.

NOTES
- Some DVD VIDEO discs do not contain time information, and the time search function cannot be used.
- The time search function cannot be used during program and random playback modes.

Changing the playback order

To play back in a specific order (Program play)

Super VCD | Video CD | Audio CD

By programming tracks, you can play up to 99 tracks in any order. You may program the same track more than once.

1 In stop mode, press ON SCREEN twice.

The menu bar appears on the TV screen.

2 Press ◀/▶ to move ▷ to PROG. .

Screen example for Audio CD

| CD | | | | TRACK 33 | TIME | 25:58 | ■ |

TIME | ⭮OFF | 🕐➡ | PROG. | RND.
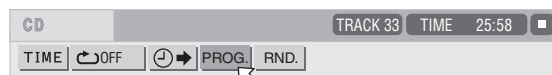
3 Press ENTER.

The program table appears.
The [PROG] indicator lights up in the display window.

Numeric buttons

▲/▼/◀/▶

ENTER

CANCEL

ON SCREEN

■

► (SELECT)

SUBTITLE

REPEAT

JVC
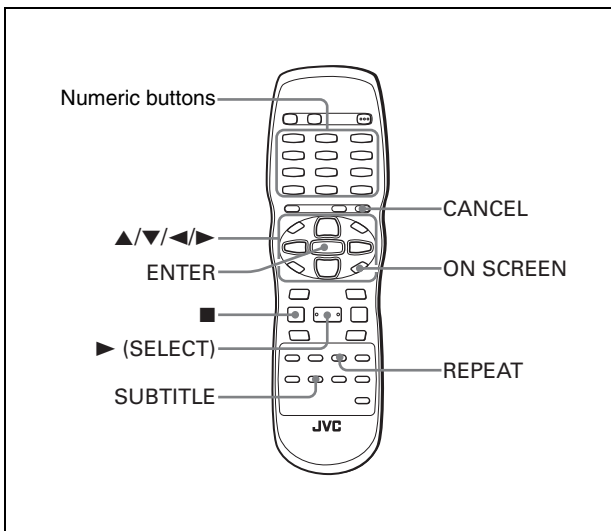
4 Press the numeric buttons to specify tracks in the desired order.

To select 5: press 5.
To select 23: press +10, +10, then 3.
To select 40: press +10, +10, +10, then 10.

The total program time

PROGRAM		Total Program Time	00:25:12
△	No.		Track
	1		1
	2		5
	3		4
	4		2
	5		3
	6		4
	7		6
	8		
	9		
	10		

USE NUMERIC KEYS TO PROGRAM TRACKS.
CANCEL DELETES THE LAST STEP. ■ DELETES ALL.

Selected track number
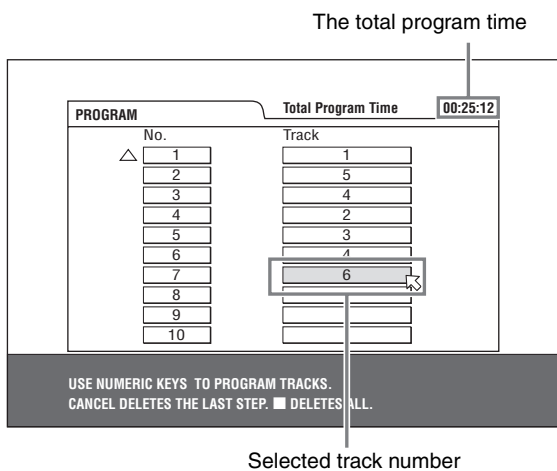
To correct the program

Press ▲/▼ to move 🖑 to the track to be corrected, then press CANCEL. The track is erased and the subsequent programmed tracks move up.
Pressing ■ clears all the programmed tracks.

5 Press ► (SELECT) to start program playback.

With an Audio CD disc, the program table remains on the TV screen during program playback. (Pressing ON SCREEN brings up the status bar.)
When all of the programmed tracks have finished playback, the player stops and the program table appears again.
Note that the program remains.
• During program playback, you cannot edit the program contents.

To check the program contents

During playback, press ■. Playback stops and the program table is shown.
When the player is playing back an Audio CD and the program table is not shown, you can bring up the table by carrying out steps 1 to 3.
During SVCD/Video CD playback, you can check the program contents via the menu bar.

To stop program playback

Press ■.

To clear the program

While stopped and the program table is shown, press ■.

To exit the program mode

After clearing the program, press ON SCREEN.

NOTE

When the disc tray is opened or the player is turned off, the program is cleared.

To play back in random order (Random play)

Super VCD   Video CD   Audio CD

1 In stop mode, press ON SCREEN twice.

The menu bar appears on the TV screen.

2 Press ◀/▶ to move 🖑 to RND.

Screen example for Audio CD

CD			TRACK 33	TIME	25:58	■
TIME	↺OFF	⏱→	PROG.	RND.		
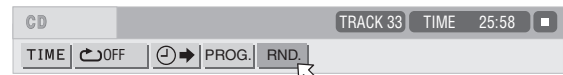
3 Press ENTER.

The player starts random playback.
With a SVCD/Video CD disc, the menu bar is automatically dismissed.
During random playback, the [RND] indicator lights up in the display window.
After playing all tracks of the disc, the player stops the disc and exits the random playback mode.

To stop and quit random playback

Press ■. The player stops playback and exits the random playback mode.

Repeat playback

To repeat the current selection or all tracks

DVD VIDEO **Super VCD** **Video CD** **Audio CD**

For DVD VIDEO: During playback
For SVCD/Video CD/Audio CD: In any condition except SVCD/
Video CD playback with PBC

Press REPEAT.

If you press REPEAT in stop mode, press ► (SELECT) to
start playback.
Each time you press REPEAT, the repeat mode cycles
among All repeat, Repeat 1 and off.
The indication on the display window shows the selected
repeat mode.

 ↺ **:** Repeats the current title for DVD VIDEO or all tracks
for SVCD/Video CD/Audio CD.

 ↺ **1:** Repeats the current chapter for DVD VIDEO or the
current track for SVCD/Video CD/Audio CD.
No indication: The repeat mode is off.

A window which indicates the current repeat mode will be
displayed on the TV screen. The mode indication on the window
is same as the one on the menu bar.
(Repeat mode example on the TV screen)

↺ CHAP

To stop repeat playback

Press ■.
When a DVD VIDEO disc is set, the player stops playback and
quits the repeat mode.
When an SVCD, Video CD or Audio CD disc is set, the player
stops playback but does not quit the repeat mode.

To quit repeat playback

Press REPEAT until the repeat mode indicator goes off in the
display window.

Hint
When the program playback mode is active with an SVCD, Video
CD or Audio CD, the repeat mode changes in the same manner.
Note, however, that in the " ↺ " mode the player repeats all the
programmed tracks instead of all tracks on the disc.

NOTE
The repeat playback may not work with some discs, even if you
select one of the repeat modes.

To repeat a desired part (A-B repeat playback)

DVD VIDEO **Super VCD** **Video CD** **Audio CD**

First make sure:
• The player is in playback mode except SVCD/Video CD
playback with PBC.

1 Press ON SCREEN twice.

The menu bar appears on the TV screen.

2 Press ◄/► to move ▽ to ↺ , then press ENTER.

The pull-down menu for repeat mode selection appears.

3 Press ▲/▼ to select [A-B].

4 Press ENTER at the beginning of the part you want to repeat (point A).

The pull down menu disappears.
The repeat icon shows ↺ A- .

5 Press ENTER at the end of the part you want to repeat (point B).

The repeat icon shows ↺ A-B .
The player locates "A" and starts repeat playback between
"A" and "B."
The [↺] indicator lights in the display window.

To quit A-B repeat playback

Press ◄/► to move ▽ to ↺ A-B , and press ENTER twice.
The A-B repeat mode turns off, then normal playback continues.

NOTE
The A and B points must be set in the same title/track.

Changing the language, sound and scene angle

To select the subtitle language (SUBTITLE)

DVD VIDEO **Super VCD**

Some DVD VIDEO and SVCD discs contain more than one
subtitle language. You can choose a desired one from them.

Hint
At the beginning of a DVD VIDEO disc where subtitles are
recorded, 🔲 appears on the TV screen (except when the [ON
SCREEN GUIDE] preference is set to [OFF]).

1 During playback, press SUBTITLE.

The subtitle selection window appears on the TV screen.

🔲 1/3
△
ENGLISH
▽
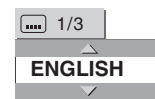
2 Press ▲/▼ or SUBTITLE to select the subtitle.

Each time you press ▲/▼ or SUBTITLE, the subtitle
language changes.

3 Press ENTER.

Subtitles are displayed in the selected language.
The subtitle selection window is dismissed.

NOTES
• An SVCD disc can have up to four subtitles. Pressing ▲/▼
cycles through those channels regardless of whether the
subtitles are recorded or not.
• The subtitle selection window will automatically disappear if you
do not change the subtitle for several seconds.
• For DVD VIDEO, the selected language may be abbreviated on
the TV screen. See "Appendix B: Table of languages and their
abbreviations" on page 33.

17

▲/▼/◄/►
ENTER

3D PHONIC
ANGLE

JVC

VFP -
PROGRESSIVE SCAN
ZOOM
AUDIO

To change the audio language or sound (AUDIO)

DVD VIDEO **Super VCD** **Video CD**
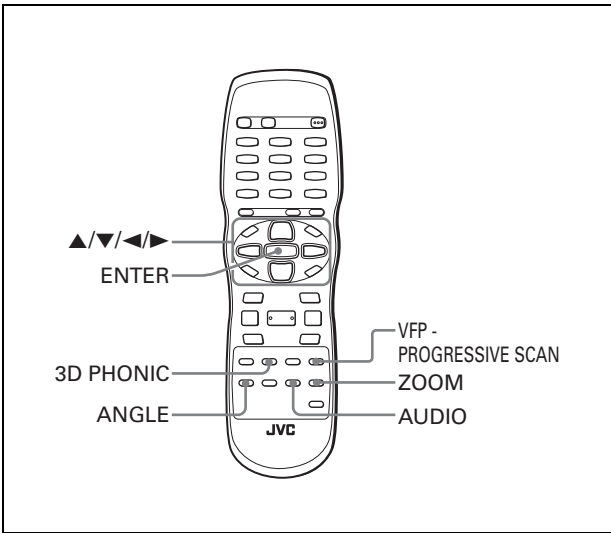
The audio selection setting allows you to change the audio language of a movie, or to listen to karaoke with or without the vocal.

Hint

At the beginning of the part where multiple audio tracks are recorded, ⓓⓓ appears on the TV screen (except when the [ON SCREEN GUIDE] preference is set to [OFF]).

1 **During playback, press AUDIO.**

The audio selection window appears on the TV screen.

ⓓⓓ 1/3

ENGLISH
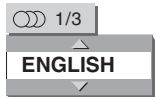
2 **Press ▲/▼ or AUDIO to select the desired audio.**

Each time you press ▲/▼ or AUDIO, the audio changes.

For DVD VIDEO (example)

→ 1/3 ENGLISH ↔ 2/3 FRENCH ↔ 3/3 SPANISH ←

For SVCD

→ ST1 ↔ ST2 ↔ L-1 ↔ R-1 ↔ L-2 ↔ R-2 ←

For Video CD

→ ST (Stereo) ↔ L ↔ R ←
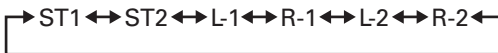
3 **Press ENTER.**

You can hear the selected audio.
The audio selection window is dismissed.

NOTES
• The audio selection window will automatically disappear if you do not change the audio for several seconds.
• For DVD VIDEO, the selected language may be abbreviated on the TV screen. See "Appendix B: Table of languages and their abbreviations" on page 33.

To select a scene angle of DVD VIDEO (ANGLE)

DVD VIDEO

You can enjoy a variety of scene angles if the DVD VIDEO disc contains "multi-angle" parts, where multiple cameras were used to shoot the same scene from different angles.

Hint

At the beginning of a "multi-angle" part, 🎥₁ appears on the TV screen (except when the [ON SCREEN GUIDE] preference is set to [OFF]).

1 **During playback, press ANGLE.**

The angle selection window appears on the TV screen.

🎥₁ 1/3

1
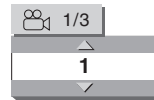
2 **Press ▲/▼ or ANGLE to select the desired angle.**

Each time you press ▲/▼ or ANGLE, the angle changes.

3 **Press ENTER.**

You can see the picture from the selected angle.
The angle selection window is dismissed.

NOTE
The angle selection window will automatically disappear if you do not change the angle for several seconds.

Special picture and sound effects

To zoom in pictures

DVD VIDEO **Super VCD** **Video CD**

1 **During playback or while paused, press ZOOM.**

Pressing ZOOM causes the player to zoom in on the image. At the top left of the screen, the information for the current magnification appears for about 5 seconds.
Each time you press ZOOM, the magnification is doubled (1.8, 4, 8, 16, 32 and 64 times).
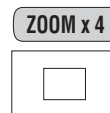
ZOOM x 4

When a picture of a DVD VIDEO disc is viewed on a normal TV screen (4:3, Letter Box), black bars may appear at the top and bottom of the screen. In this case, if you select the "ZOOM x1.8" mode, the black bars become almost invisible. When a 1:2.35 or 1:1.85 DVD VIDEO source is played back, however, the black bars are visible on the screen.

2 **Press ▲/▼/◄/► to move the zoomed position.**

To return to the normal playback

Press ENTER.

NOTE
While zoomed, the picture may look coarse.

Various kinds of playback

18

To adjust the picture character (VFP)

DVD VIDEO **Super VCD** **Video CD**

The VFP (Video Fine Processor) function allows you to adjust the picture character according to the type of programming, picture tone or personal preferences.

1 During playback, press VFP - PROGRESSIVE SCAN.

The VFP mode selection window appears on the TV screen.

2 Press ◄/► to select the desired preset.

Each time you press the button, the VFP mode changes as follows.
Set the video type most suitable to the current program or the room conditions.

→ NORMAL ↔ CINEMA ↔ USER 1 ↔ USER 2 ←

Selected preset

USER 1	
DNR	+ 0
DIGIPURE	+ 0
GAMMA	+ 0
BRIGHTNESS	+ 0
CONTRAST	+ 0
SATURATION	+ 0
TINT	+ 0
SHARPNESS	+ 3

Parameter

[NORMAL]: for watching TV in a general room.
[CINEMA]: for watching a movie software in a room with suppressed light.
[USER 1] [USER 2]: you can adjust parameters that affect the picture character and store the settings as a user preset. See the next step.

3 To define a user setting, press ▲/▼ to select a parameter to be edited from the following.

- **DNR (Digital Noise Reduction)**
  Adjust this if you notice "mosquito noise" (noise that randomly appears along the edges of digitally compressed pictures).
  Available range: 0 to +1.
- **DIGIPURE**
  Adjust this if you want to enhance clarity of pictures.
  Available range: 0 to +3.
- **GAMMA**
  Adjust this if the neutral color is bright or dark. The brightness of dark and bright portion is maintained.
  Available range: –4 (darkest) to +4 (brightest).
- **BRIGHTNESS**
  Adjust this if the picture is bright or dark on the whole.
  Available range: –16 (darkest) to +16 (brightest).
- **CONTRAST**
  Adjust this if the far and near position is unnatural.
  Available range: –16 to +16.
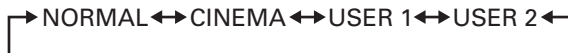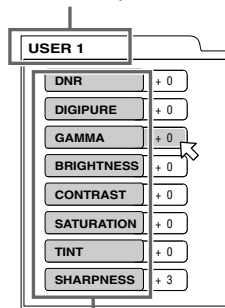- **SATURATION**
  Adjust this if the picture is whitish or blackish.
  Available range: –16 (blackest) to +16 (whitest).
- **TINT**
  Adjust this if the appearance of flesh tone is unnatural.
  Available range: –16 to +16.
- **SHARPNESS**
  Adjust this if the picture is indistinct.
  Available range: 0 to +3.

4 Press ENTER.

A window for setting parameters appears.

SATURATION	△ + 4 ▽

Selected parameter

5 Press ▲/▼ to adjust the level of the parameter.

The higher value enhances the effect.

6 Press ENTER.

Repeat steps 3 to 6 if you want to set other parameters.

To dismiss the VFP mode selection window

Press VFP - PROGRESSIVE SCAN.

NOTE

The window for VFP mode selection and parameter setting disappear if no operation is made for about 10 seconds.

To simulate surround sound (3D PHONIC)

DVD VIDEO

Using the 3D PHONIC function, you can get a simulated surround effect from your stereo system.

1 During playback, press 3D PHONIC.

The 3D PHONIC window appears on the TV screen.

2 Press ◄/► to select the desired mode.

Each time you press the button, the 3D PHONIC mode changes as follows:

→ ACTION ↔ DRAMA ↔ THEATER ↔ NONE ←
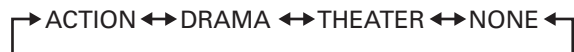
◁ ACTION ▷	△ 4 ▽

Selected effect mode

- **ACTION**
  Suitable for action movies and sports programs in which the sound source moves.
- **DRAMA**
  Natural and warm sound. You can enjoy movies in a relaxed mood.
- **THEATER**
  You can enjoy sound effects like in a theater.

3 Press ▲/▼ to adjust the effect level.

You can set the effect level from [1] to [5].
The higher value enhances the effect.

To dismiss the 3D PHONIC window

Press 3D PHONIC.

NOTES

- The 3D PHONIC window disappears if no operation is made for about 10 seconds.
- The 3D PHONIC function works correctly only when playing back a DVD VIDEO disc recorded with Dolby Digital.
- When playing back a DVD VIDEO disc recorded with Dolby Digital that does not contain the rear signal, you can change the 3D PHONIC setting, but you will not be able to achieve a correct 3D effect.
- The 3D PHONIC function does not affect the Dolby Digital bitstream signal from the DIGITAL OUT jack.
- When the 3D PHONIC function is active, the [ANALOG DOWN MIX] setting in the [AUDIO] setting display is not available.

Various kinds of playback

19

Numeric buttons

▲/▼/◄/►
ENTER — — ON SCREEN

Basic operation procedure

1 Press ◄/► to select the icon you want to work with.

The selected icon is pointed by ⬚.

2 Press ENTER.

With many icons, an appropriate pull-down window appears, however, there are some exceptions.

- A mark or text on the menu icon for the function or mode currently selected is shown in green.
- Some functions are not available during playback. (You cannot move ⬚ to the associated icon when it is not available.)
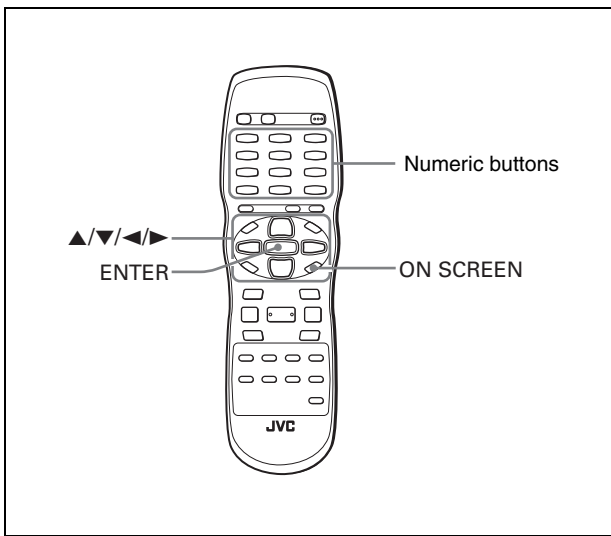
Menu bar functions

To bring up the menu bar

1 When a disc is inserted, press ON SCREEN.

A status bar for the type of disc inserted will appear on the TV screen.
See page 11 for details about the status bar.

2 Press ON SCREEN again.

A menu bar for the type of disc inserted will appear under the status bar.
(for DVD VIDEO)

| DVD-VIDEO | 8.5Mbps | | TITLE 33 | CHAP 33 | TOTAL 1:25:58 | ▶ |
| TIME | ⟲OFF | ⏱➡ | CHAP.➡ | ⏺ 1/3 | ⏹ 1/5 | 🎥 1/3 |

(for SVCD)

| SVCD | | TRACK 33 | TIME | 25:58 | ▶ |
| TIME | ⟲OFF | ⏱➡ | PROG. | RND. | ⏺ ST1 | ⏹ -/4 |

(for Video CD)

| VCD | | TRACK 33 | TIME | 25:58 | ▶ |
| TIME | ⟲OFF | ⏱➡ | PROG. | RND. | ⏺ ST |

(for Audio CD)
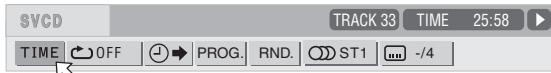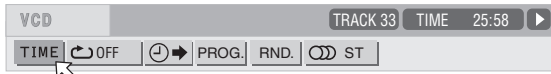
| CD | | TRACK 33 | TIME | 25:58 | ▶ |
| TIME | ⟲OFF | ⏱➡ | PROG. | RND. |
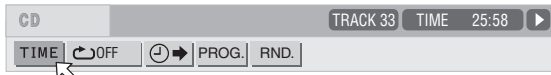
To dismiss the menu bar and status bar

Press ON SCREEN.

Various kinds of playback

Menu bar functions for DVD VIDEO

`TIME` Time mode selection

During playback, selects the time mode shown in the display window and in the status bar.

Press ENTER to select the time mode from the following.
• TOTAL: Current title elapsed time
• T.REM: Current title remaining time
• TIME: Current chapter elapsed time
• REM: Current chapter remaining time

↻ Repeat mode (See also page 17)

Selects the repeat mode during playback.

1. Open the pull-down window.
2. Press ▲/▼ to select the repeat mode from the following.
   • CHAPTER: Current chapter repeat
   • TITLE: Current title repeat
   • A-B: A-B repeat
   • OFF: Repeat mode deactivated
3. Press ENTER to make the selected repeat function active.

🕐➜ Time search (See also page 15)

Specifies a time from the beginning of the current title as the point from which to begin playback.

`CHAP.➜` Chapter search

During playback, specifies a desired chapter to be played back from.

1. Open the pull-down window.
2. Press numeric buttons (0 to 9) to enter a desired chapter number. (For example, to specify "10," press 1, then 0.)
3. Press ENTER to begin playback from the specified chapter.

⟺ Audio selection (See also page 18)

During playback, selects the audio language or sound track.

1. Open the pull-down window.
2. Press ▲/▼ to select a desired audio language or sound track.
3. Press ENTER to begin playback with the selected audio.

▭ Subtitle selection (See also page 17)

During playback, selects the subtitle language.

1. Open the pull-down window.
2. Press ▲/▼ to select a desired subtitle language.
3. Press ENTER to begin playback with the selected subtitle.

📹 Angle selection (See also page 18)

During playback, selects a desired scene angle in a multi-angle part.

1. Open the pull-down window.
2. Press ▲/▼ to select a scene angle.
3. Press ENTER to begin playback with the selected scene angle.

Menu bar functions for SVCD/Video CD/ Audio CD

`TIME` Time mode selection

Selects the time mode shown in the display window and in the status bar.

Press ENTER to select the time mode from the following.
• TIME: Current track elapsed time
• REM: Current track remaining time (while in stop mode, current track total time)
• TOTAL: Disc elapsed time
• T.REM: Disc remaining time (while in stop mode, disc total time)

↻ Repeat mode (See also page 17)

Selects the repeat mode.

1. Open the pull-down window.
2. Press ▲/▼ to select the repeat mode from the following.
   • TRACK: Current track repeat
   • ALL: All track repeat
   • A-B: A-B repeat
   • OFF: Repeat mode deactivated
3. Press ENTER to make the selected repeat function active.

🕐➜ Time search (See also page 15)

Specifies a time from the beginning of the disc as the point from which to begin playback.

`PROG.` Program playback (See also pages 15 and 16)

While stopped, specifies the playback order of tracks.

`RND.` Random playback (See also page 16)

While stopped, activates random playback.

⟺ Audio selection (See also page 18)

During SVCD/Video CD playback, selects the audio channel(s).

1. Open the pull-down window.
2. Press ▲/▼ to select a desired audio channel(s).
3. Press ENTER to play back with the selected audio channel(s).

▭ Subtitle selection (See also page 17)

During SVCD playback, selects the subtitle.

1. Open the pull-down window.
2. Press ▲/▼ to select a desired subtitle.
3. Press ENTER to begin playback with the selected subtitle.

Various kinds of playback

21

MP3/WMA disc playback

Numeric buttons

▲/▼/◄/►
ENTER
|◄◄
■
◄◄
► (SELECT)

TITLE/GROUP
ON SCREEN
►►|
II
►►
REPEAT

JVC

Operations

The player can play back MP3 files and WMA files on a home recorded CD-R/RW disc or commercially available CD. We refer to a disc that contains MP3 and/or WMA files as an "MP3/WMA disc" in this manual.
Note that if a disc contains both of MP3/WMA files and JPEG files, you can only play back files of the type selected by the [MP3&WMA/JPEG] setting in the [PICTURE] preference display (see page 28).

About MP3/WMA discs

On an MP3/WMA disc, each song is recorded as a file (track). Files are sometimes grouped into folders by artists, album, etc.
• Each file is regarded as a track.
• A folder which has one or more files is regarded as a group.
• A folder which does not directly contain any tracks is ignored.
• Files which do not belong to any folder are grouped into "group 1."
• The player recognizes up to 150 tracks per group, and up to 99 groups per disc. If there are files other than MP3/WMA files, they also count in the 150-file total.

Max. 99 groups per disc

Track 1.mp3
Track 2.mp3 — Group 1
Track 3.mp3

Group 2

Track 4.mp3
Track 5.mp3
Track 6.mp3

Group 4

Group 3

Max.150 tracks per group

Notes for making your own MP3/WMA disc using a CD-R/CD-RW disc

• Select "ISO 9660" as the disc format.
• As for MP3 files, we recommend you to record your material at a 44.1 kHz sampling rate, using the 128 kbps data transfer rate.
• As for WMA files, make sure that the copyright feature is set to off.
• As for WMA files, we recommend you to record your material at a bit rate of 64 kbps or higher.
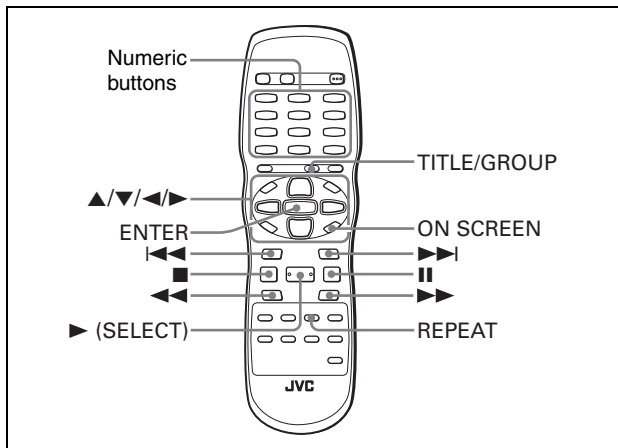
Basic operations

Use the following buttons to control MP3/WMA disc playback.

ENTER: Starts playback while stopped.
► (SELECT): Starts playback while stopped or paused.
■: Stops playback.
II: Pauses playback.
|◄◄/►►|: Skips back or forward a track during playback. Selects the previous or next track while stopped.

If you press ► (SELECT) during playback, or press ■ to stop playback followed by ► (SELECT), the player starts playback from the beginning of the current track.

NOTES
• The player does not support "packet writing (UDF file)" discs.
• The player does not support the ID3 tag and WMA tag.
• The player supports discs recorded with multiple sessions.
• Some discs may not play due to disc characteristics or recording conditions.
• Programmed and random playback functions do not work with MP3/WMA discs.
• As for MP3, the player only can play back tracks with the following file extensions; ".MP3," ".Mp3," ".mp3" and ".mP3."
• As for WMA, the player only can play back tracks with the following file extensions; ".WMA," ".wma," and any other combination of upper case and lower case letters (such as ".Wma").
• Time required for reading the disc contents may vary for different discs, depending on the numbers of groups (folders) and tracks (files) recorded, etc.
• You cannot advance or reverse playback by pressing ►► or ◄◄, or by holding down ►►| or |◄◄ during MP3/WMA disc playback.
• The player supports WMA files recorded with a bit rate of 48 kbps or higher. The player cannot play back WMA files recorded with a bit rate under 48 kbps.

Selecting the desired group and track

When inserting an MP3/WMA disc, after the disc contents are read, the MP3/WMA CONTROL display automatically appears on the TV screen.
You can specify the desired group/track from the display using the following procedure.

1 Make sure that the black (cursor) bar is in the left (group) column.

If it is in the right column, press ◄ to move it to the left column.

2 Press ▲/▼ to move the bar to a desired group.

On the right column, tracks in the selected group are shown.

3 Press |◀◀/▶▶| to select a desired track, then press ENTER or ▶ (SELECT).

or

Press the numeric buttons to directly specify a desired track number.

To select 5: press 5.
To select 23: press +10, +10, then 3.
To select 40: press +10, +10, +10, then 10.

The player starts playback from the selected track.

Current track elapsed time

```
MP3/WMA CONTROL        Time : 00:03:08
Group : 01 / 10        Track : 01 / 06 (Total 28)
spring                 begonia.mp3
summer                 german chamomile.mp3
fall                   kiwi fruit.mp3
winter                 orchard grass.mp3
sea                    petunia.mp3
mountain               north pole.mp3
camp
picnic
skiing
flower
```

Group column   Track column of the   Selected track
                     current group

Hint

You can also select a desired track by pressing ▶ to move the black bar to the right (track) column then using ▲/▼.

NOTES
- If an MP3/WMA file name includes any 2-byte character, the player cannot show the file name correctly.
- Only MP3/WMA files are shown on the MP3/WMA CONTROL display.
- The order of groups/tracks shown in the MP3/WMA CONTROL display may differ from the order shown on your personal computer when you set the disc on your computer.

Direct selection

You can select a desired group directly by specifying the group number.

1 During playback or while stopped, press TITLE/GROUP.

[--] is shown in the group display area of the display window.

2 Press the numeric buttons to specify a desired group number.

To select 5: press 5.
To select 23: press +10, +10, then 3.
To select 40: press +10, +10, +10, then 10.

Specify the group number within several seconds after pressing TITLE/GROUP (i.e. while the display window shows [--]).
The player starts playback from track 1 of the selected group.

3 Press the numeric buttons to specify a desired track number.

To select 5: press 5.
To select 23: press +10, +10, then 3.
To select 40: press +10, +10, +10, then 10.
The player starts playback from the specified track.

Repeat playback

During playback or while stopped, press REPEAT.

Each time you press REPEAT, the repeat mode changes as follows.
If you press REPEAT while stopped, you need to press ENTER or ▶ (SELECT) to start repeat playback.

MP3/WMA CONTROL display	Display window	Function
REPEAT TRACK	↻1	Repeats the current track.
REPEAT GROUP	↻	Repeats all tracks in the current group.
REPEAT ALL	↻	Repeats all tracks on the disc.
No indication	The repeat mode is off.	

(CONTROL display)

Selected repeat mode

```
MP3/WMA CONTROL    REPEAT TRACK
Group : 01 / 10              Track : 01 / 06 (Total 28)
spring                       begonia.mp3
summer                       german chamomile.mp3
fall                         kiwi fruit.mp3
```
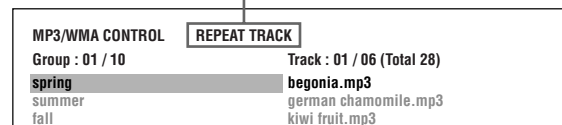
To stop repeat playback

Press ■. Note that the repeat mode remains active.

To quit repeat playback

During playback, press REPEAT until no repeat icon is shown on the display window.
While stopped, press REPEAT until repeat mode indication on the MP3/WMA CONTROL display goes off.

NOTE
You can change the repeat mode using ON SCREEN on the remote control unit.
Press ON SCREEN, and the repeat mode selection window appears on the TV screen. Press then ▲/▼ to select the desired repeat mode, and finally press ENTER to make the selected repeat mode active.

MP3/WMA disc playback

JPEG disc playback

Numeric buttons

ENTER

▲/▼/◄/►

◄◄

■

► (SELECT)

TITLE/GROUP
MENU
ON SCREEN
►►◄
II
REPEAT
ZOOM

JVC

The player can play back JPEG files on a home recorded CD-R/RW disc. We refer to a disc that contains JPEG files as a "JPEG disc" in this manual.
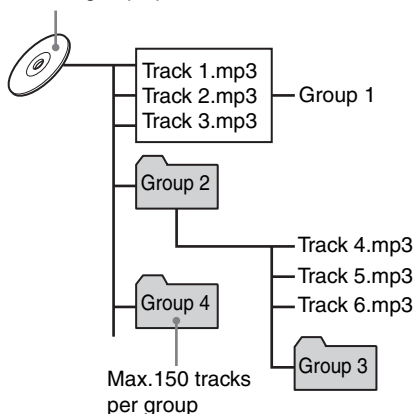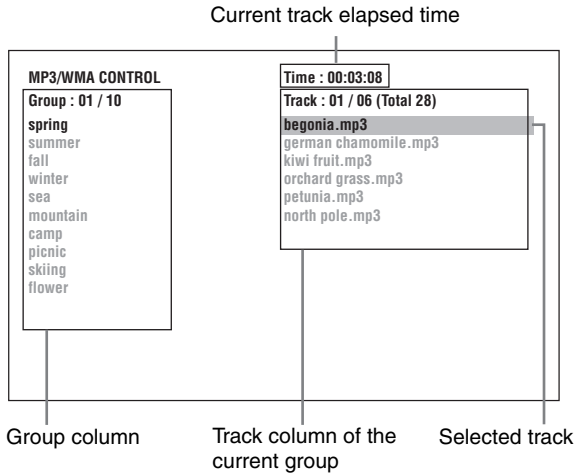Note that if a disc contains both of MP3/WMA files and JPEG files, you can only play back files of the type selected by the [MP3&WMA/JPEG] setting in the [PICTURE] preference display (see page 28).

About JPEG discs

On a JPEG disc, each picture is recorded as a file. Files are sometimes grouped into folders by category, etc.
• A folder which has one or more files is regarded as a group.
• A folder which does not directly contain any files is ignored.
• Files which do not belong to any folder are grouped into "group 1."
• The player recognizes up to 150 files per group, and up to 99 groups per disc. If there are files other than JPEG files, they also count against the 150-file total.

Max. 99 groups per disc

File 1.jpg
File 2.jpg — Group 1
File 3.jpg

Group 2

File 4.jpg
File 5.jpg
File 6.jpg

Group 4

Group 3
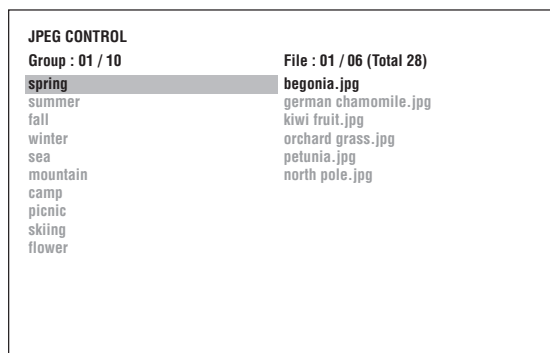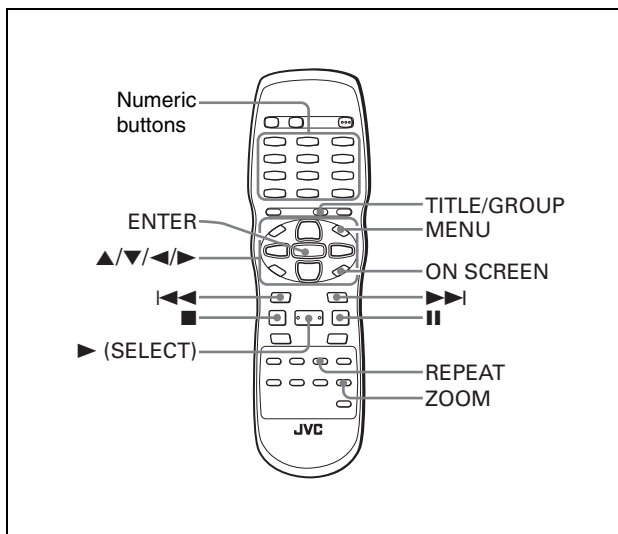
Max.150 files per group

Notes for making your own JPEG disc using a CD-R/CD-RW disc

• Select "ISO 9660" as the disc format.
• We recommend you to record your material at a 640 x 480 pixel resolution.
• This player supports the baseline JPEG format.

Basic operations

To see a desired picture

When inserting a JPEG disc, after the disc contents are read, the JPEG CONTROL display automatically appears on the TV screen.

JPEG CONTROL
Group : 01 / 10   **File : 01 / 06 (Total 28)**
spring   begonia.jpg
summer   german chamomile.jpg
fall   kiwi fruit.jpg
winter   orchard grass.jpg
sea   petunia.jpg
mountain   north pole.jpg
camp
picnic
skiing
flower

You can select a desired file for playback via this display.

1 Make sure that the black (cursor) bar is in the left (group) column.

If it is in the right column, press ◄ to move it to the left column.

2 Press ▲/▼ to move the bar to a desired group.

On the right column, files in the selected group are shown.

3 Press ◄◄/►► to select a desired file, then press ENTER.

The selected file (still picture) is shown on the TV.

Hint

You can also select a desired file by pressing ► to move the black bar to the right (file) column then using ▲/▼.

NOTE

If the selected file is unplayable, a black screen appears.

To display another picture

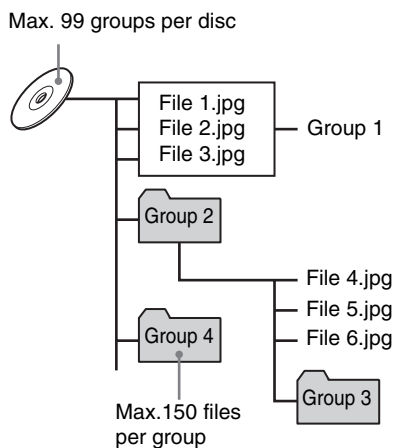Press ◄◄/►► or ▲/▼ to select the desired picture.

To dismiss the picture

Press ■ or MENU.
The TV screen returns to the JPEG CONTROL display.

- The player supports the baseline JPEG format.
- The player does not support "packet writing (UDF file)" discs.
- The player supports discs recorded with multiple sessions.
- The player may not be able to read some discs, or may take a long time to display a picture on the disc, due to disc characteristics, recording conditions, or numbers of groups (folders), etc.
- Programmed and random playback functions do not work with JPEG discs.
- The screen saver function will be activated if the same picture is displayed for more than 5 minutes except during slide show playback.
- The player only can play back files with the following file extensions; ".jpg," ".jpeg," ".JPG," ".JPEG" and any other combination of upper case and lower case letters (such as ".Jpg").
- If a JPEG file name includes any 2-byte character, the player may not show the file name correctly.
- If a picture has been saved at greater than 640 x 480 pixel resolution, it may take some time to display the picture.
- The player does not support pictures of more than 2400 pixels in horizontal resolution. Make sure that the horizontal resolution of the picture is 2400 pixels or less.

To zoom in the picture

1 While in pause mode, press ZOOM.

Pressing ZOOM causes the player to zoom in on the image. Each time you press ZOOM, the manginication is doubled (1.8, 4, 8, 16, 32 and 64 times).

2 Press ▲/▼/◄/► to move the zoomed position.

Viewing pictures continuously (slide show mode)

You can see files (still pictures) one after another automatically.

To start the slide show

Press ► (SELECT).

The slide show starts from the beginning of the disc. Each file (still picture) is displayed for approximately 3 seconds.

To stop slide show playback in the middle

Press ■ or MENU.
The TV screen returns to the JPEG CONTROL display.
Pressing ► (SELECT) resumes slide show playback from the last picture displayed.

To keep showing the current picture

Press ❚❚ or ENTER.
Pressing ► (SELECT) resumes the slide show playback.

To select the start point of the slide show

From the JPEG CONTROL display

1 Make sure that the black (cursor) bar is in the left (group) column.

If it is in the right column, press ◄ to move it to the left column.

2 Press ▲/▼ to move the bar to a desired group.

3 Press ◄◄/►►❘ to select a desired file.

4 Press ► (SELECT).

The slide show starts from the specified file.

Direct selection

1 During playback or while stopped, press TITLE/GROUP.

2 Press the numeric buttons to specify a desired group number.

To select 5: press 5.
To select 23: press +10, +10, then 3.
To select 40: press +10, +10, +10, then 10.

3 Press the numeric buttons to specify a desired file number.

The player starts slide show playback from the specified file. If you do not specify a file, the player starts slide show playback from the first file in the group.

Repeat function

In the slide show mode, you can repeat playback of JPEG files in a group or on the disc.

1 While the JPEG CONTROL display is shown, press REPEAT.

Pressing REPEAT switches the repeat mode.

When the repeat mode is turned on, the [⟳] indicator lights in the display window.
The selected repeat mode is shown on the JPEG CONTROL display.
REPEAT ALL: All files on the disc are repeated.
REPEAT GROUP: All files in the current group are repeated.
No indication: The repeat mode is off.

2 Press ► (SELECT) to start repeat playback.

To stop repeat playback

Press ■.
The repeat mode remains active.

To quit repeat playback

Press ■ or MENU while the JPEG CONTROL display is shown, and press REPEAT until the repeat mode indication goes off.

You can change the repeat mode using ON SCREEN on the remote control unit.
Press ON SCREEN, and the repeat mode selection window appears on the TV screen. Press then ▲/▼ to select the desired repeat mode, and finally press ENTER to make the selected repeat mode active.

JPEG disc playback

Changing the initial settings
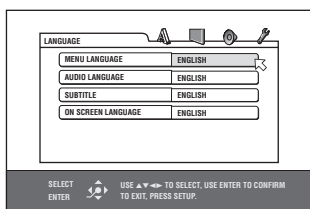

SET UP

▲/▼/◄/►

ENTER
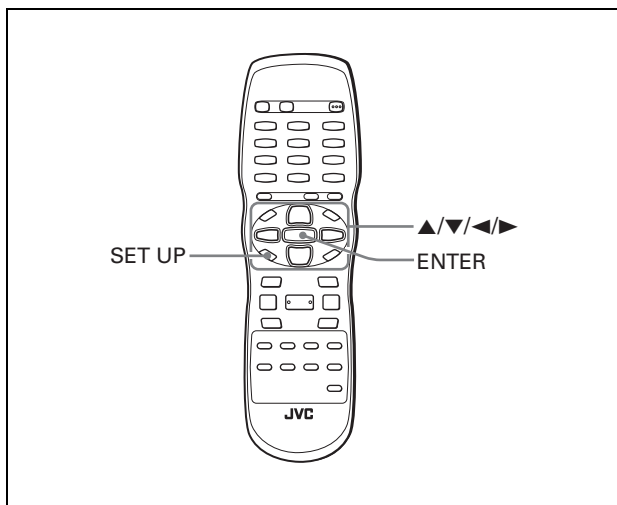
Selecting preferences

This section refers to the settings which are already made when you purchase the player. Read this section when you want to connect this player to a wide-vision TV set, or when you want to otherwise change the settings according to your preferences and viewing environment.

About the Preference display

The Preference display consists of the LANGUAGE, PICTURE, AUDIO, and OTHERS setting displays, each having setting items.

LANGUAGE

PICTURE
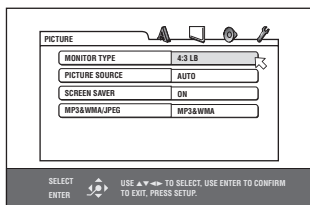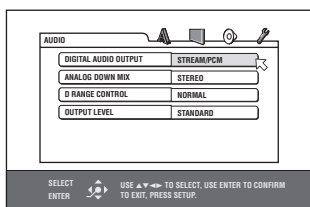
AUDIO

OTHERS
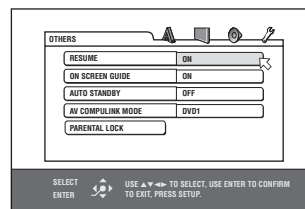
How to set preferences

1 Press SET UP.

One of the preference on-screen displays appears on the TV screen.
You can see four icons at the top right of the on-screen display for the settings.

◭ : LANGUAGE menu

▯ : PICTURE menu

◉ : AUDIO menu

🔧 : OTHERS menu

2 Press ◄/► to select the appropriate icon.

The appropriate display appears on the TV screen.

3 Press ▲/▼ to move ◇ to select the item you want to edit.

The color of the selected item changes.

4 Press ENTER.

A pull-down menu appears over the selected item.
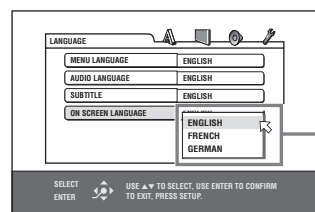
Selected item

5 Press ▲/▼ to select from the options then press ENTER.

The selected option is set.
• For details about each setting, see the following.

To dismiss a preference display

Press SET UP.

NOTES
• While an MP3/WMA or JPEG disc is inserted, you cannot bring up any preference display.
• When a preference display is shown on a wide TV screen, the upper and lower parts of the preference display sometimes may be cut off. If this happens, adjust the picture size control of the TV.

LANGUAGE menu

MENU LANGUAGE

You can select the default menu language to be displayed if it is contained on a DVD VIDEO disc.

Setting options

ENGLISH, SPANISH, FRENCH, CHINESE, GERMAN, ITALIAN, JAPANESE, language code from AA to ZU
• If the disc does not have a menu in the selected language, the disc's default language will be used.
• For details about language codes, see "Appendix B: Table of languages and their abbreviations" on page 33.
• You cannot change the setting during playback.

AUDIO LANGUAGE

You can select the default audio language to be played if it is contained on a DVD VIDEO disc.

Setting options

ENGLISH, SPANISH, FRENCH, CHINESE, GERMAN, ITALIAN, JAPANESE, language code from AA to ZU
• If the disc does not have the selected language, the disc's default language will be used.
• For details about language codes, see "Appendix B: Table of languages and their abbreviations" on page 33.
• You cannot change the setting during playback.

SUBTITLE

You can select the default subtitle language to be displayed if it is contained on a DVD VIDEO disc.

Setting options

OFF, ENGLISH, SPANISH, FRENCH, CHINESE, GERMAN, ITALIAN, JAPANESE, language code from AA to ZU
• If the disc does not have a subtitle in the selected language, the disc's default language will be used.
• For details about language codes, see "Appendix B: Table of languages and their abbreviations" on page 33.
• You cannot change the setting during playback.

ON SCREEN LANGUAGE

You can select the on-screen display language of the player.

Setting options

ENGLISH, FRENCH, GERMAN
• Some on-screen messages are shown in English regardless of the setting.
• You cannot change the on-screen language shown on the MP3/WMA display.

PICTURE menu

MONITOR TYPE

You can select the monitor type to match your TV when you play back DVD VIDEO discs recorded for wide-screen televisions.

Setting options

16:9 NORMAL, 16:9 AUTO, 4:3 LB, 4:3 PS
[16:9 NORMAL] (Wide television screen): select when you connect the player to a wide-screen (16:9) TV whose aspect ratio is fixed to 16:9 (the player automatically adjusts the screen width of the output signal correctly when playing back a 4:3 source).
If you play a 4:3 DVD VIDEO source using the [16:9 NORMAL] mode, the picture character changes slightly due to the process for converting the picture width.

[16:9 AUTO] (Wide television screen): select when you connect the player to a wide-screen (16:9) TV.
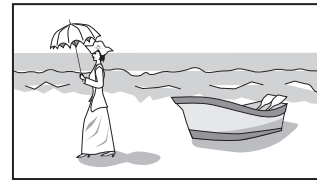
[4:3 LB] (Letter Box conversion): select when you connect the player to a normal (4:3) TV.
When playing back a DVD VIDEO disc recorded in wide picture format, the picture is shown with black bars at the top and bottom.

[4:3 PS] (Pan Scan conversion): select when you connect the player to a normal (4:3) TV.
When playing back a DVD VIDEO disc recorded in wide picture format, the picture is zoomed to fill the screen vertically, and the left and right sides of the image are chopped off.
Note, however, that the picture will be shown in the 4:3 LB mode even if you select the 4:3 PS mode depending on the disc.
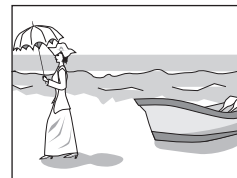
PICTURE SOURCE

This mode selects whether the content on the disc is processed by field (video source) or by frame (film source). You can obtain optimal picture quality according to the source type to be played back by selecting an appropriate option. This setting is available for both the interlaced mode and progressive scanning mode.

Setting options

VIDEO(NORMAL), VIDEO(ACTIVE), FILM, AUTO
[VIDEO(NORMAL)]: select when playing back a video source disc with relatively a few movements.
[VIDEO(ACTIVE)]: select when playing back a video source disc with relatively a lot of movements.
[FILM]: select when playing back a film source disc.
[AUTO]: select when playing back a disc containing both video and film source materials.
The player recognizes the picture type (film or video source) of the current disc according to the disc information. Normally, select this option.

SCREEN SAVER

You can set the screen saver function to ON or OFF. (See page 12.)

Setting options

ON, OFF

To change the setting, see "How to set preferences" on page 26.

Changing the initial settings

MP3&WMA/JPEG

The player can play MP3/WMA and JPEG files recorded on a CD-R/CD-RW disc. However, if a disc contains both MP3/WMA and JPEG files, you can only play files of the type selected in this menu item.

Setting options

MP3&WMA, JPEG
[MP3&WMA]: when selected, only MP3/WMA files can be played back.
[JPEG]: when selected, only JPEG files can be played back.

NOTE

If you have made a change to the [MP3&WMA/JPEG] setting, open and close the disc tray, or turn off and on the player. Doing so will make the change effective.

AUDIO menu

DIGITAL AUDIO OUTPUT

To connect the player's digital output to an external device equipped with a digital input, this item must be set correctly. See "Appendix C: Digital output signal chart" on page 34 for details about the relation between the setting and output signals.

Setting options

PCM ONLY, DOLBY DIGITAL/PCM, STREAM/PCM
[PCM ONLY]: select when you connect the DIGITAL OUT jack of the player to the linear PCM digital input of other audio equipment.
[DOLBY DIGITAL/PCM]: select when you connect the digital input of a Dolby Digital decoder or an amplifier with a built-in Dolby Digital decoder.
When this option is selected, playing back a DTS-encoded disc or disc recorded by the MPEG Multichannel format outputs a linear PCM digital signal.
[STREAM/PCM]: select when you connect the digital input of an amplifier with a built-in DTS, MPEG Multichannel or Dolby Digital decoder, or the stand-alone unit of such a decoder.

NOTE

When [STREAM/PCM] is selected, note the following points:
- With some DVD VIDEO discs that are not fully copy-protected, a 20 or 24 bit digital signal may be output.
- A signal recorded with the 96 kHz or higher sampling frequency is output from the DIGITAL OUT jack with the 48 kHz sampling frequency.
- When playing a DVD VIDEO or Audio CD disc with DTS, use a DTS decoder to get correct signals from your speakers.

ANALOG DOWN MIX

To correctly play the audio on a DVD VIDEO disc recorded with surround multichannel audio, you must set this item properly according to your audio system configuration.
(This function does not work when 3D PHONIC function is activated.)

Setting options

DOLBY SURROUND, STEREO
[DOLBY SURROUND]: select when listening to multichannel surround audio with the player's analog AUDIO OUT terminals connected to a surround decoder.
[STEREO]: select when listening to conventional two-channel stereo audio with the player's AUDIO OUT terminals connected to a stereo amplifier/receiver or television set, or in case you want to record the audio from a DVD VIDEO disc to MiniDisc, cassette, etc.

D. RANGE CONTROL

This setting provides optimal audio quality from the analog AUDIO OUT terminals for listening to DVD VIDEO discs recorded in Dolby Digital format, at low or middle volume.

Setting options

WIDE RANGE, NORMAL, TV MODE
[WIDE RANGE]: when selected, audio is played back with the widest dynamic range so that you can enjoy powerful playback sound.
[NORMAL]: normally, select this option.
[TV MODE]: select if DVD VIDEO disc sound level is lower than TV program sound level. Thus you can hear sound at a lower volume clearly.

OUTPUT LEVEL

This setting allows you to attenuate the level of the signal output from the player's analog AUDIO OUT jacks.

Setting options

STANDARD, LOW
• If the sound output from the speaker is distorted, select [LOW].

OTHERS menu

RESUME

You can select the resume playback mode.
See page 12 for details about the resume playback function.

Setting options

ON, OFF, DISC RESUME
[ON]: when selected, the player can resume playback of the disc from the position where playback was last interrupted, if the disc is still in the disc tray.
[OFF]: when selected, the resume function is deactivated.
[DISC RESUME]: when selected, the player can resume playback of the last 30 discs played. The player retains a memory of the interrupted positions of the last 30 discs played, even though they have been removed from the disc tray.

ON SCREEN GUIDE

The player can display "on-screen guide" icons or characters on the picture, which show what is happening to the disc or the player.

Example of "on-screen guide" icons: , ,

Setting options

ON, OFF
[ON]: when selected, the on-screen guide is activated.

AUTO STANDBY

When the player is stopped for more than 30 minutes or 60 minutes, the player enters standby mode automatically.

Setting options

60, 30, OFF

AV COMPULINK MODE

This item is provided for use in the future. Leave it as the default setting ("DVD 1").

Changing the initial settings

PARENTAL LOCK

When this option is selected, pressing ENTER on the remote control unit brings up the PARENTAL LOCK display shown below. This allows you to restrict children from playing DVD VIDEO discs.

PARENTAL LOCK
COUNTRY CODE   GB
SET LEVEL   NONE
PASSWORD   – – – –
EXIT

SELECT ENTER   USE ▲▼ TO SELECT, USE ENTER TO CONFIRM TO EXIT, PRESS SETUP.

• See this page for details about the parental lock setting.

Numeric buttons

▲/▼

ENTER

JVC

Limiting playback by children

This function restricts playback of DVD VIDEO discs which contain violent (and other) scenes according to the level set by the user. For example, if a movie which includes violent scenes supports the parental lock feature, such scenes which you do not want to let children view can be cut or replaced with other scenes.

To set Parental Lock for the first time

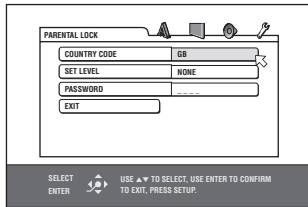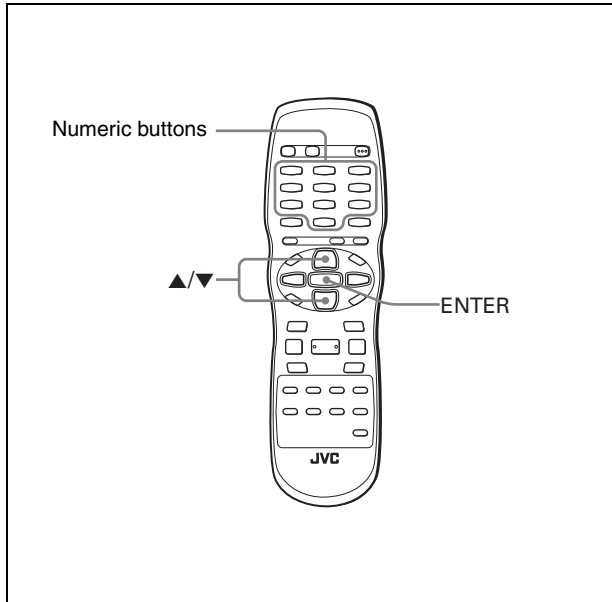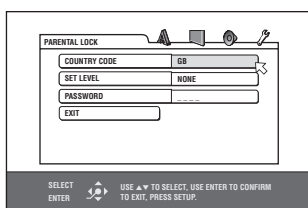**DVD VIDEO**

1 In stop mode, bring up the OTHERS menu.

2 Press ▲/▼ to move ⬫ to select [PARENTAL LOCK] then press ENTER.

The Parental Lock on-screen display appears on the TV screen.

PARENTAL LOCK
COUNTRY CODE   GB
SET LEVEL   NONE
PASSWORD   – – – –
EXIT

SELECT ENTER   USE ▲▼ TO SELECT, USE ENTER TO CONFIRM TO EXIT, PRESS SETUP.

3 While ⬫ is pointing to [COUNTRY CODE], press ENTER to bring up the pull-down menu.

4 Press ▲/▼ to select the country code.

Select the code of the country whose standards were used to rate the DVD VIDEO disc content.
See "Appendix A: Country/Area code list for Parental Lock" on page 33.

PARENTAL LOCK
COUNTRY CODE   GB   FX
SET LEVEL   NONE   GA
PASSWORD   GB
EXIT   GD
GE
GF
GH

SELECT ENTER   USE ▲▼ TO SELECT, USE ENTER TO CONFIRM TO EXIT, PRESS SETUP.

5 Press ENTER.

⬫ moves to [SET LEVEL].

6 Press ENTER to bring up the pull-down menu.

In the pull-down menu, [NONE] and levels [8] to [1] are available.
[NONE] does not restrict playback. Level [1] is the strictest level. Discs rated higher than the selected level are restricted.

PARENTAL LOCK
COUNTRY CODE   GB   NONE
SET LEVEL   NONE   8
PASSWORD   7
EXIT   6
5
4
3

SELECT ENTER   USE ▲▼ TO SELECT, USE ENTER TO CONFIRM TO EXIT, PRESS SETUP.
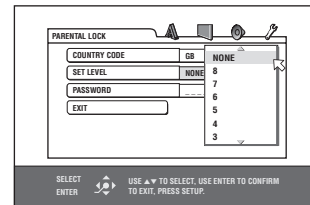
7 Press ▲/▼ to select a desired parental lock level, then press ENTER.

⬫ moves to [PASSWORD].

8 Press the numeric buttons (0 to 9) to enter a 4-digit password.

PARENTAL LOCK
COUNTRY CODE   GB
SET LEVEL   NONE
PASSWORD   1234
EXIT

SELECT ENTER   NEW PASSWORD? ⋯ PRESS 0 ~ 9 KEY TO EXIT, PRESS SETUP.
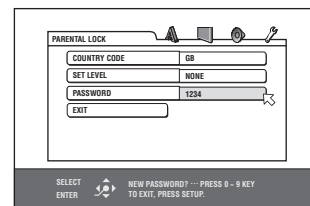
9 Press ENTER.

The parental lock feature is set.

⬫ moves to [EXIT]. Pressing ENTER again returns to the [OTHERS] menu of the preference display.

Hint

If you want to change the password at step 8, do it before pressing ENTER.

Changing the initial settings

29

Numeric buttons

▲/▼

ENTER

JVC

To change the settings

DVD
VIDEO
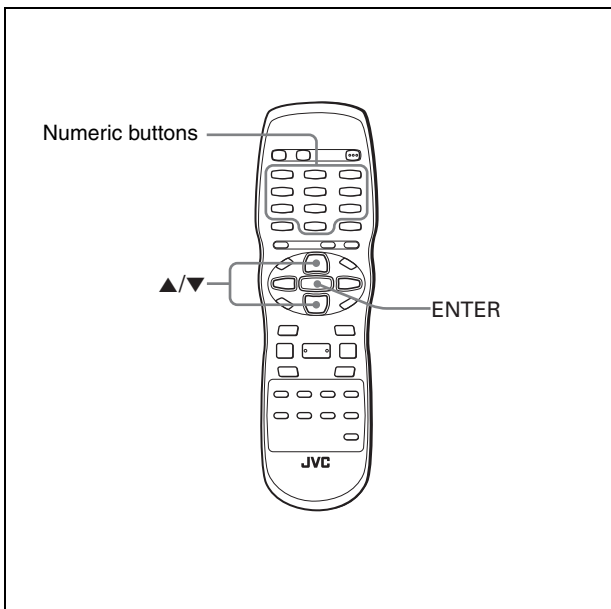
You can change the parental lock settings later.

1 In stop mode, bring up the OTHERS menu.

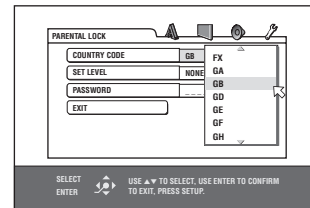**2 Press ▲/▼ to move ↘ to select [PARENTAL LOCK] and press ENTER.**

The parental lock on-screen display appears on the TV screen.

3 While ↘ is pointing to [PASSWORD], press the numeric buttons to enter your current 4-digit password then press ENTER.

↘ moves to [COUNTRY CODE] if you enter the correct password.
If you enter a wrong password, [WRONG! RETRY...] appears on the TV screen, and you cannot go to the next step.
If you forget your password, enter "8888." The current password is deleted and you can set a new password.

4 To change the [COUNTRY CODE] or [SET LEVEL], press ENTER to bring up the associated pull-down menu when ↘ is pointing to the desired item.

5 Press ▲/▼ to select the desired option then press ENTER.

If you change the country code, you must reselect the parental lock level.

6 While ↘ is pointing to [PASSWORD], press the numeric buttons to enter a 4-digit password.

The password entered in this step becomes the new password. If you want to keep the same password as before, enter the same password.

7 Press ENTER.

↘ moves to [EXIT]. Pressing ENTER again returns to the [OTHERS] menu of the preference display.

NOTE

If you enter the wrong password more than 3 times in step 3 above, ↘ moves to [EXIT] automatically and ▲/▼ do not work.

To temporarily release the Parental Lock

DVD
VIDEO

If the parental level is set to a strict value, some discs may not play at all.
When you insert such a disc and try to play it, the following parental lock on-screen display appears on the TV screen, asking you whether you want the parental lock to be temporarily released or not.

1 Press ▲/▼ to move ↘ to [TEMPORARY RELEASE], then press ENTER.

PARENTAL LOCK
TEMPORARY RELEASE
NOT RELEASE
PASSWORD

SELECT
ENTER   USE ▲▼ TO SELECT, USE ENTER TO CONFIRM
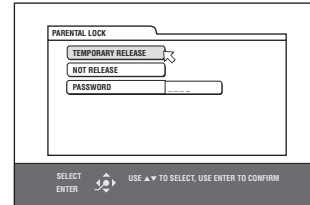
2 Press the numeric buttons (0 to 9) to enter your 4-digit password.

The Parental Lock is released, and the player starts playback.
If you enter a wrong password, [WRONG! RETRY...] appears on the TV screen. Enter the correct password.

NOTE

When you enter the wrong password 3 times at step 2 above, ↘ moves to [NOT RELEASE] automatically and ▲/▼ do not work.

Additional information

Troubleshooting

Power

Power does not come on.
➡ Power plug is not inserted securely. Plug in securely.

Operation

"REGION CODE ERROR!" is shown on the TV screen.
➡ Region code of the inserted disc does not match the player. Check the region code of the disc printed on the disc jacket.

Operation is not possible.
➡ Microcomputer malfunction due to lightning or static electricity. Turn off the power and unplug the power cord, then connect the power cord again.
➡ Moisture condensation caused by a sudden change of temperature or humidity. Turn off the power, then turn it on a few hours later.
➡ The disc does not allow the operation, or an unplayable disc is inserted. Check and replace the disc (see page 2).

[LOCK] is displayed on the display window and the disc tray does not open.
➡ When you press ⏏ while pressing down ■ on the player in standby mode, the tray lock function is activated. The disc tray cannot be opened or closed in this status. To release this status, press ⏏ while pressing down ■ on the player in standby mode.

Setting cannot be changed in the [LANGUAGE] preference display.
➡ Stop playback and change the setting in the [LANGUAGE] preference display.

The audio language and subtitle cannot be changed.
➡ Only one language is recorded on the disc currently being played back.
➡ The disc being played back does not accept the AUDIO button and SUBTITLE button operation. Change the subtitle using [SUBTITLE] in the [LANGUAGE] preference display (see page 27).

No subtitle is diplayed.
➡ No subtitle is recorded on the disc currently being played back.
➡ [OFF] is selected in [SUBTITLE] in the [LANGUAGE] preference display. Select the desired language in [SUBTITLE] (see page 27).
➡ Subtitle may not be displayed correctly during A-B repeat playback.

Picture

Picture is noisy.
➡ The player is connected to a VCR directly and the copyguard function is activated. Connect the player so that the picture signal flows directly to the TV.
➡ With some discs, the picture may be blurred when [PICTURE SOURCE] is set to [FILM] or [AUTO]. Set [PICTURE SOURCE] to [VIDEO (NORMAL)] or [VIDEO (ACTIVE)].

Correct picture cannot be obtained.
➡ Connect only one type of cable to the connector/jack(s) you want to use on this player, either the SCART connector, VIDEO jack, S-VIDEO jack or COMPONENT VIDEO OUT jacks. (Note that you can connect cables to the VIDEO jack and COMPONENT VIDEO OUT jacks at the same time.) If an S-VIDEO cable is connected to the S-VIDEO jack, the player is set to the S-VIDEO output mode automatically.
➡ Check to see that the COMPONENT/COMPOSITE - S-VIDEO Y/C - RGB/COMPOSITE selector on the rear of the player is correctly set.

No picture is displayed on the TV screen or the screen is blurred or divided into two parts.
➡ The player is in the Progressive scanning mode though it is connected to a TV via the VIDEO or S-VIDEO jack, or via the SCART connector. Make the Progressive scanning mode inactive by using the VFP - PROGRESSIVE SCAN button (see page 6).

Audio

DVD VIDEO disc playback sound level is lower than TV broadcast sound level.
➡ Set the [D.RANGE CONTROL] preference to [TV MODE] (see page 28).

Analog audio output is distorted.
➡ Set the [OUTPUT LEVEL] preference to [LOW] (see page 28).

MP3/WMA

No sound comes out.
➡ MP3/WMA disc is recorded with the "packet writing (UDF file)." It cannot be played.

Files (tracks) are not played in the recorded order.
➡ This player plays the files in the alphabetic order. So, the playback order can vary.

WMA files cannot be played back.
➡ The file is copy protected.
➡ The file is recorded with a bit rate under 48 kbps. The player does not support such WMA files.

JPEG

No picture is played back, or the screen turns black.
➡ Format of the files is not the baseline JPEG. The player supports only the baseline JPEG format.

The preference display cannot be turned on.
➡ You cannot turn on the preference display when a JPEG disc is inserted.

Specifications

Specifications and appearance are subject to change without prior notice.

General

Readable discs   DVD VIDEO, DVD-R (Video format), DVD-RW (Video format), SVCD, Video CD, Audio CD (CD-DA), CD-R/RW (CD-DA, SVCD, Video CD, MP3/WMA format, JPEG)

Video format   PAL, Interlaced scan/Progressive scan selectable

Other

Power requirements
    AC 230 V $\sim$, 50 Hz

Power consumption
    12 W (POWER ON), 2.0 W (STANDBY mode)

Mass   1.9 kg

Dimensions (W $\times$ H $\times$ D)
    435 mm $\times$ 44 mm $\times$ 258.6 mm

Video outputs

COMPONENT (pin jacks)
    Y Output: 1.0 Vp-p (75 Ω)
    P_B/P_R Output: 0.7 Vp-p (75 Ω)

VIDEO OUT (pin jack)
    1.0 Vp-p (75 Ω)

S-VIDEO OUT (S jack)
    Y Output: 1.0 Vp-p (75 Ω)
    C Output: 286 mVp-p (75 Ω)

RGB output   700mVp-p (75 Ω)

Horizontal resolution
    500 lines or more

Audio outputs

ANALOG OUT (pin jack)
    2.0 Vrms (10 kΩ)

DIGITAL OUT (COAXIAL)
    0.5 Vp-p (75 Ω termination)

DIGITAL OUT (OPTICAL)
    –21 dBm to –15 dBm (peak)

Audio characteristics

Frequency response
    CD (sampling frequency 44.1 kHz):
        2 Hz to 20 kHz
    DVD (sampling frequency 48 kHz):
        2 Hz to 22 kHz
        (4 Hz to 20 kHz for DTS and Dolby Digital bitstream signals)
    DVD (sampling frequency 96 kHz):
        2 Hz to 44 kHz

Dynamic range   16 bit: More than 98 dB
    20 bit/24 bit: More than 100 dB

Wow and flutter   Unmeasurable (less than ± 0.002%)

Total harmonic distortion
    16 bit: less than 0.008%
    20 bit/24 bit: less than 0.008%

Additional information

Appendix A: Country/Area code list for Parental Lock

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

Appendix B: Table of languages and their abbreviations

AA	Afar	FA	Persian	KM	Cambodian	OM	(Afan) Oromo	SU	Sundanese
AB	Abkhazian	FI	Finnish	KN	Kannada	OR	Oriya	SV	Swedish
AF	Afrikaans	FJ	Fiji	KO	Korean (KOR)	PA	Panjabi	SW	Swahili
AM	Ameharic	FO	Faroese	KS	Kashmiri	PL	Polish	TA	Tamil
AR	Arabic	FY	Frisian	KU	Kurdish	PS	Pashto, Pushto	TE	Telugu
AS	Assamese	GA	Irish	KY	Kirghiz	PT	Portuguese	TG	Tajik
AY	Aymara	GD	Scots Gaelic	LA	Latin	QU	Quechua	TH	Thai
AZ	Azerbaijani	GL	Galician	LN	Lingala	RM	Rhaeto-Romance	TI	Tigrinya
BA	Bashkir	GN	Guarani	LO	Laothian	RN	Kirundi	TK	Turkmen
BE	Byelorussian	GU	Gujarati	LT	Lithuanian	RO	Rumanian	TL	Tagalog
BG	Bulgarian	HA	Hausa	LV	Latvian, Lettish	RU	Russian	TN	Setswana
BH	Bihari	HI	Hindi	MG	Malagasy	RW	Kinyarwanda	TO	Tongan
BI	Bislama	HR	Croatian	MI	Maori	SA	Sanskrit	TR	Turkish
BN	Bengali, Bangla	HU	Hungarian	MK	Macedonian	SD	Sindhi	TS	Tsonga
BO	Tibetan	HY	Armenian	ML	Malayalam	SG	Sangho	TT	Tatar
BR	Breton	IA	Interlingua	MN	Mongolian	SH	Serbo-Croatian	TW	Twi
CA	Catalan	IE	Interlingue	MO	Moldavian	SI	Singhalese	UK	Ukrainian
CO	Corsican	IK	Inupiak	MR	Marathi	SK	Slovak	UR	Urdu
CS	Czech	IN	Indonesian	MS	Malay (MAY)	SL	Slovenian	UZ	Uzbek
CY	Welsh	IS	Icelandic	MT	Maltese	SM	Samoan	VI	Vietnamese
DA	Danish	IW	Hebrew	MY	Burmese	SN	Shona	VO	Volapuk
DZ	Bhutani	JI	Yiddish	NA	Nauru	SO	Somali	WO	Wolof
EL	Greek	JW	Javanese	NE	Nepali	SQ	Albanian	XH	Xhosa
EO	Esperanto	KA	Georgian	NL	Dutch	SR	Serbian	YO	Yoruba
ET	Estonian	KK	Kazakh	NO	Norwegian	SS	Siswati	ZU	Zulu
EU	Basque	KL	Greenlandic	OC	Occitan	ST	Sesotho		

Additional information

33

Appendix C: Digital output signal chart

Disc type	Output		
	PCM ONLY	**DOLBY DIGITAL/PCM**	**STREAM/PCM**
DVD with 48/44.1 kHz, 16/20/24 bit linear PCM	48/44.1 kHz, 16 bit, stereo linear PCM		
DVD with 96 kHz, 16/22/24 bit linear PCM	48 kHz, 16 bit, stereo linear PCM (Down sampling)		
DVD with DTS	48 kHz, 16 bit, stereo linear PCM		DTS bitstream
DVD with Dolby Digital	48 kHz, 16 bit, stereo linear PCM	Dolby Digital bitstream	
DVD with MPEG Multichannel	48kHz, 16 bit, stereo linear PCM		MPEG bitstream
SVCD/Video CD/Audio CD	44.1 kHz, 16 bit, stereo linear PCM		
Audio CD with DTS	44.1kHz, 16 bit, stereo linear PCM		DTS bitstream
CD-R/RW with MP3/WMA	Linear PCM		

Additional information

34

Appendix D: Glossary

Aspect ratio
A ratio which defines the shape of the rectangular picture in a TV. It is the width of the picture relative to the height. A conventional TV picture is 4:3 in aspect ratio.

Bitstream
The digital form of multichannel audio data (e.g., 5.1-channel) before it is decoded into its various channels.

Chapter/title
Chapter is the smallest division and title is the largest division on DVD VIDEO. A chapter is a division of a title and similar to a track for Video CD or Audio CD.

Component video
Video signals with three channels of separate information that makes up the picture. There are some types of component video, such as R/G/B and $Y/C_B(P_B)/C_R(P_R)$.

Composite video
A single video signal commonly used in most consumer video products that contains all luminance, color, and synchronization information.

Dolby Digital (AC3)
A six-channel system consisting of left, center, right, left rear, right rear and LFE (Low-Frequency Effect channel, for use with a sub-woofer) channels. All processing is done in the digital domain. Not all Dolby Digital discs contain six (5.1) channels of information.

Dolby Surround/Dolby Pro Logic
Dolby Surround records four channels of front and rear audio in two channels in a way that allows a decoder to recover the original four channels for playback. Because the audio is recorded in two channels, it can be played back naturally by a two-channel stereo system.
Dolby Pro Logic introduces directional circuits in decoder-side processing (increasing the level of specific channels and lowering the level of silent channels) for greater spatial perspective, and adds a center speaker used primarily for dialog. The result is enhanced channel separation.

Down-mix
Internal stereo mix of multichannel surround audio by a DVD player. The down-mix signals are output from stereo output connectors.

DTS
A Digital Surround audio encoding format configured with six (5.1) channels, similar to Dolby Digital. It requires a decoder, either in the player or in an external receiver. DTS stands for Digital Theater Systems.
Not all DTS discs contain six (5.1) channels of information.

Dynamic range
The difference between the loudest and softest sounds.

Interlaced scanning
In a conventional video system, a picture is shown on the display monitor in between lines of two halves. The Interlaced scanning system places lines of the second half of the picture in-between lines of the first half of the picture.

JPEG
A popular file format for still image compression and storage. JPEG stands for Joint Photographic Experts Group. There are three sub-types of the JPEG format as follows.
• baseline JPEG: used for digital cameras, the web, etc.
• progressive JPEG: used for the web
• lossless JPEG: an old type, rarely used now

Linear PCM audio
PCM stands for "pulse code modulation." Linear PCM is the usual method for digitally encoding audio without compression, and is used for the audio tracks on DVD VIDEO discs, Audio CDs, etc.

MP3
MP3 is an audio data compression format, which stands for MPEG-1 Audio Layer 3. Using MP3, you can achieve a data reduction of about 1:10.

MPEG Multichannel
This feature expands the 5.1 channel audio format recorded on the disc to a 7.1 channel format. The further expansion of the 5.1 channel audio makes it easy for you to reproduce the movie theater experience in your own home.

NTSC (National television system committee)
A black and white and color television system format used in the U.S.A., Canada, Mexico and Japan.

PAL (Phase Alternation by Line)
A color television system format used extensively in Western Europe.

PBC
PBC stands for "Playback control" and is a method of controlling disc play for Video CDs (VCD). You are able to interact with the disc through menus.

Progressive scanning
Progressive scanning displays all the horizontal lines of a picture at one time, as a single frame. A progressive scanning DVD player converts the interlaced video from DVD into progressive format for connection to a progressive display. It dramatically increases the vertical resolution.

RGB
An abbreviation for Red, Green and Blue. Color monitors and color television sets display different hues by mixing these three colors.

S-video
A video signal which improves picture quality over standard composite connections. Used on Super VHS, DVD, high end TV monitors, etc.

Track
The smallest division on SVCD, Video CD and Audio CD discs.

WMA
WMA is an abbreviation of "Windows Media Audio," and is an audio data compression format developed by Microsoft Corporation. Sound quality of data compressed using WMA is the same as that of MP3, though the WMA file size is smaller than that of MP3.

Additional information

SAFETY INSTRUCTIONS
"SOME DOS AND DON'TS ON THE SAFE USE OF EQUIPMENT"

This equipment has been designed and manufactured to meet international safety standards but, like any electrical equipment, care must be taken if you are to obtain the best results and safety is to be assured.

Do read the operating instructions before you attempt to use the equipment.

Do ensure that all electrical connections (including the mains plug, extension leads and interconnections between pieces of equipment) are properly made and in accordance with the manufacturer's instructions. Switch off and withdraw the mains plug when making or changing connections.

Do consult your dealer if you are ever in doubt about the installation, operation or safety of your equipment.

Do be careful with glass panels or doors on equipment.

DON'T continue to operate the equipment if you are in any doubt about it working normally, or if it is damaged in any way–switch off, withdraw the mains plug and consult your dealer.

DON'T remove any fixed cover as this may expose dangerous voltages.

DON'T leave equipment switched on when it is unattended unless it is specifically stated that it is designed for unattended operation or has a standby mode.

Switch off using the switch on the equipment and make sure that your family know how to do this.

Special arrangements may need to be made for infirm or handicapped people.

DON'T use equipment such as personal stereos or radios so that you are distracted from the requirements of traffic safety. It is illegal to watch television whilst driving.

DON'T listen to headphones at high volume as such use can permanently damage your hearing.

DON'T obstruct the ventilation of the equipment, for example with curtains or soft furnishings.

Overheating will cause damage and shorten the life of the equipment.

DON'T use makeshift stands and NEVER fix legs with wood screws — to ensure complete safety always fit the manufacturer's approved stand or legs with the fixings provided according to the instructions.

DON'T allow electrical equipment to be exposed to rain or moisture.

ABOVE ALL

—NEVER let anyone, especially children, push anything into holes, slots or any other opening in the case -this could result in a fatal electrical shock.;

—NEVER guess or take chances with electrical equipment of any kind -it is better to be safe than sorry!

JVC
VICTOR COMPANY OF JAPAN, LIMITED