

DENON

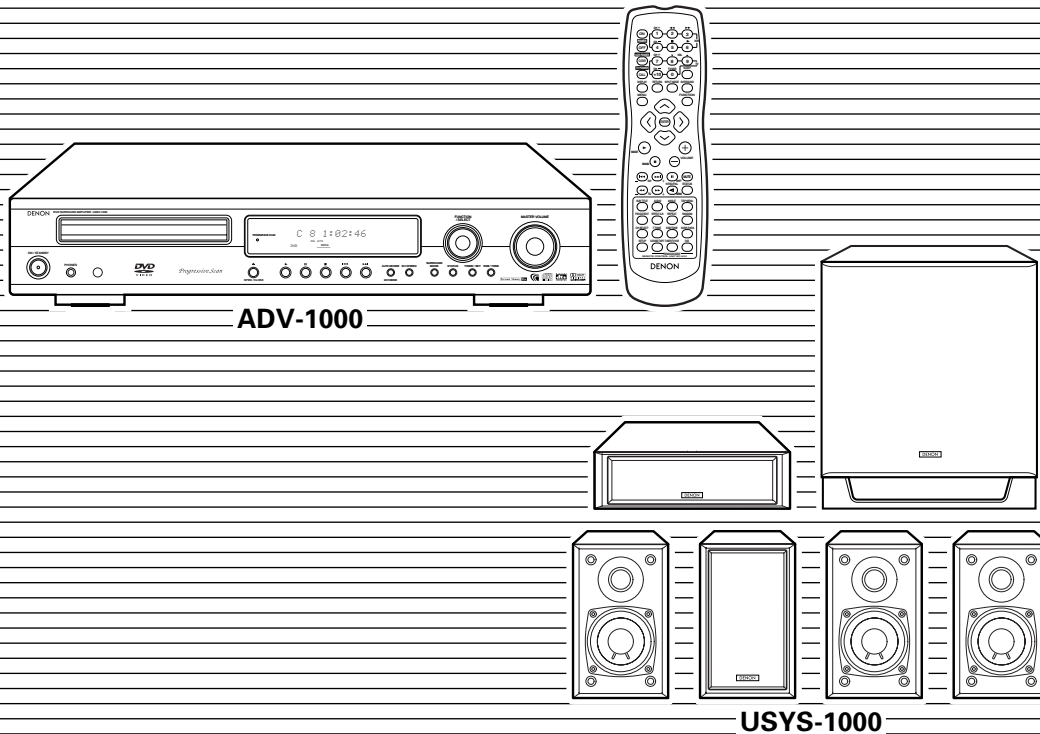
HOME THEATER SYSTEM

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DHT-1000DV

OPERATING INSTRUCTIONS

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■ INTRODUCTION

Thank you for choosing the DENON DHT-1000DV Home Theater System. This remarkable component has been engineered to provide superb surround sound listening with home theater sources such as DVD, as well as providing outstanding high fidelity reproduction of your favorite music sources. As this product is provided with an immense array of features, we recommend that before you begin hookup and operation that you review the contents of this manual before proceeding.

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■ ACCESSORIES

■ ADV-1000 (Main unit)

Check that the following parts are included in addition to the main unit:

① Operating instructions.....1	② Service station list.....1	③ Remote control unit
④ R6P/AA batteries.....2	⑤ AM loop antenna.....1	(RC-902).....1
⑥ FM indoor antenna.....1	⑦ Video cord.....1	

■ USYS-1000 (speaker unit pack)

Before using, check that the package contains the main speaker units (4 units of the USC-A1000 (2 pairs), 1 USC-C1000 and 1 USW-1000) and the accessories shown below.

① Speaker cord A.....2 (Used to connect the USC-A1000)	② Speaker cord B.....4 (Used to connect the USC-A1000, USC-C1000 and USW-1000)
Length: Approx. 10 meters	Length: Approx. 3 meters
③ Foot.....24	

1 BEFORE USING

Pay attention to the following before using this unit:

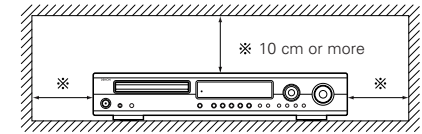
- **Moving the set**
To prevent short circuits or damaged wires in the connection cords, always unplug the power cord and disconnect the connection cords between all other audio components when moving the set.
- **Before turning the power switch on**
Check once again that all connections are proper and that there are not problems with the connection cords. Always set the power switch to the standby position before connecting and disconnecting connection cords.
- **Store this instructions in a safe place.**
After reading, store this instructions along with the warranty in a safe place.
- **Note that the illustrations in this instructions may differ from the actual set for explanation purposes.**

2 CAUTIONS ON INSTALLATION

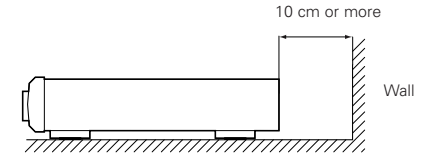
Noise or disturbance of the picture may be generated if this unit or any other electronic equipment using microprocessors is used near a tuner or TV.

If this happens, take the following steps:

- Install this unit as far as possible from the tuner or TV.
- Set the antenna wires from the tuner or TV away from this unit's power cord and input/output connection cords.
- Noise or disturbance tends to occur particularly when using indoor antennas or 300 Ω/ohms feeder wires. **We recommend using outdoor antennas and 75 Ω/ohms coaxial cables.**



For heat dispersal, leave at least 10 cm of space between the top, back and sides of this unit and the wall or other components.



3 CAUTIONS ON HANDLING

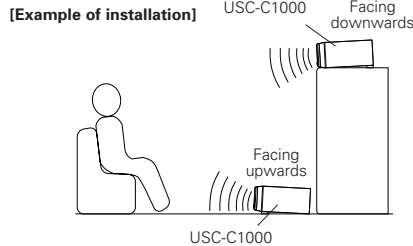
- **Switching the input function when input jacks are not connected**
A clicking noise may be produced if the input function is switched when nothing is connected to the input jacks. If this happens, either turn down the MASTER VOLUME control or connect components to the input jacks.
- **Muting of PRE OUT jacks, HEADPHONE jack and SPEAKER terminals**
The PRE OUT jacks, HEADPHONE jacks and SPEAKER terminals include a muting circuit. Because of this, the output signals are greatly reduced for several seconds after the power switch is turned on or input function, surround mode or any other-set-up is changed. If the volume is turned up during this time, the output will be very high after the muting circuit stops functioning. Always wait until the muting circuit turns off before adjusting the volume.
- **Whenever the power switch is in the STANDBY state, the apparatus is still connected on AC line voltage. Please be sure to unplug the cord when you leave home for, say, a vacation.**

Speaker units

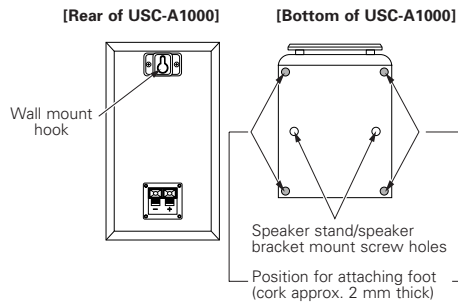
When installing the speakers, take careful considerations for safety when selecting the place and method of installation.
 When using stands or brackets, follow their instructions and check for safety before using and installing. To install on ceilings or walls, to ensure safety have a specialist do the installation work. Note that DENON will accept no responsibility for injuries or accidents resulting from the speakers falling, etc., due to improper installation or mounting.

Cautions on installation

- The quality of the sound produced from the speakers depends on the size of the room, the type of room (Japanese style or western style) and how the speakers are mounted. Consider the following when installing the speakers:
 - Note that installing a speaker system on the same table or shelf as a record player may result in howling.
 - If there is a wall or glass pane, etc., directly in front or in back of the speaker system, use thick curtains, etc., to prevent resonance or reflection of the sound.
 - The USYS-1000 speaker systems are of the anti-magnetic type allowing them to be used near televisions, etc. Depending on the type of TV, however, the colors on the TV's picture may be blotched. If so, turn the TV's power off, then wait 15 to 30 minutes before turning the power back on. The TV's self-degaussing circuit will reduce the influence on the picture. If color blotching persists, move the speaker further away from the TV.
 - The USC-C1000 is designed so that the front surface can be faced upwards or downwards according to the place of installation. We recommend facing it downwards when installed in a position above the ears, upwards when installed on the floor. Attach the included foot (cork approx. 2 mm thick) to adjust.



- When installing the USC-A1000 on a table, etc., attach four of the included foot (cork approx. 2 mm thick) to the four corners of the bottom of the speaker (see the diagram below). If the bass seems unnaturally emphasized when the speakers are installed directly on the floor, place the speakers on concrete blocks or other hard surfaces.
 - ※ When installing the speakers on stands, use the mount screws included with the stands and tighten them securely so that there is no looseness in the mount holes (nuts) on the bottoms of the speakers.



- Using the USC-A1000 suspended on a wall
 The USC-A1000 can be used suspended on a wall, using the wall mount hole on the rear of the speaker. To do so, suspend the speaker by catching a screw, etc., stuck in the wall in the hole in the wall mount hook (see the above diagram). Be sure the wall is strong enough to support the weight of the speaker.
 Note that Denon will accept no responsibility for injuries or accidents resulting from the speakers falling, etc., due to improper installation or mounting.

NOTES:

- For safety, do not place objects on top of the speakers or lean objects against them.
- The speakers may fall if force is applied to their sides. This could cause injury or serious accident. Be sufficiently careful.
- Fasten the speaker cords in place to prevent the risk of catching the cords on your hands or feet and causing the speakers to fall.

4 FEATURES

- 1. Dolby Digital decoder**
 Dolby Digital, a digital discrete system in which the different channels are completely independent, recreates "three-dimensional" sound fields (sounds with a sense of distance, movement and position) with no crosstalk between channels for greater reality. In addition, the 5 channels (excluding the 0.1 channel for low frequency effects) have a playback range extending to 20 kHz, the same as the range of CDs, thus resulting in clearer, more richly expressive sound.
- 2. Dolby Pro Logic II decoder**
 Dolby Pro Logic II is a new format for playing multichannel audio signals that offers improvements over conventional Dolby Pro Logic. It can be used to decode not only sources recorded in Dolby Surround but also regular stereo sources into five channels (front left/right, center and surround left/right). In addition, various parameters can be set according to the type of source and the contents, so you can adjust the sound field with greater precision.
- 3. DTS (Digital Theater Systems)**
 DTS provides up to 5.1 channels of wide-range, high fidelity surround sound, from sources such as laser disc, DVD and specially-encoded music discs.
- 4. High performance DSP simulates 7 sound fields**
 Playback is possible in 7 surround modes: 5-channel Stereo, Mono Movie, Rock Arena, Jazz Club, Video Game, Matrix and Virtual. You can enjoy a variety of sound effects for different movie scenes and program sources even with stereo sources not in Dolby Surround.
- 5. Personal Memory Plus function**
 Personal Memory Plus is an advanced version of Personal Memory. With Personal Memory Plus, the set automatically memorizes the surround mode and input mode for each of the separate input sources.
- 6. Remote control unit with pre-memory function**
 This unit comes with a remote control unit equipped with a pre-memory function. The remote control command codes for DENON remote controllable components as well as for video decks, TVs, etc., of other major manufacturers are prestored in the memory.
- 7. 6-channel digital power amplifier**
 The ADV-1000 is equipped with a 55W + 55W (6 Ω/ohms, 1 kHz, T.H.D. 10%) 6-channel digital power amplifier, allowing 5.1-channel surround playback when used in combination with the super woofer.
- 8. Many convenient functions**
 - (1) Multiple audio function
 Selection of up to 8 audio languages. (The number of languages offered differs from DVD to DVD.)
 - (2) Multiple subtitle function
 Selection of up to 32 subtitle languages. (The number of languages offered differs from DVD to DVD.)
 - (3) Multiple angle function
 The angle of view can be changed. (For DVDs on which multiple angles are recorded.)
 - (4) Playback disable function
 This function can be used to disable playback of DVDs you do not want children to watch.
- 9. Stylish 5.1-channel surround AV speaker system**
 Satellite speaker equipped with a super tweeter unit capable of reproducing a wide frequency range of up to 80 kHz, plus a passive super woofer producing clear, firm bass sound.

5 DISCS

- The types of discs listed on the table below can be used on the ADV-1000. The marks are indicated on the disc labels or jackets.

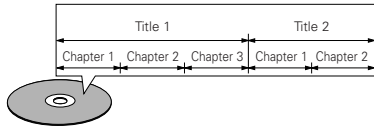
Usable discs	Mark (logo)	Recorded signals	Disc size
DVD video DVD audio (NOTE 1)		Digital audio + digital video (MPEG2)	12 cm 8 cm
Video CD		Digital audio + digital video (MPEG1)	12 cm 8 cm
CD CD-R CD-RW (NOTE 2)		Digital audio MP3	12 cm 8 cm

Disc terminology

Titles and chapters (DVD-videos)

DVD-videos are divided into several large sections called "titles" and smaller sections called "chapters". Numbers are allotted to these sections. These numbers are called "title numbers" and "chapter numbers".

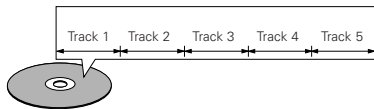
For example:



Tracks (video and music CDs)

Video and music CDs are divided into sections called "tracks". Numbers are allotted to these sections. These numbers are called "track numbers".

For example:



The following types of discs cannot be played on the ADV-1000:

- DVDs with region numbers other than "3" or "ALL"
- DVD audio discs (NOTE 1)
- DVD-R/ -RW / +RW
- DVD-ROM/RAMs
- CVD
- SVCD
- CD-ROMs (Only MP3 file can be played)
- VSDs
- CDVs (Only the audio part can be played.)
- CD-Gs (Only the audio is output.)
- Photo CDs (NEVER play such discs on the ADV-1000)

* If you attempt to play photo CDs, the data on the disc may be damaged.

NOTE 1: Video part which based on DVD-video specification only can be played.

NOTE 2: According to recording quality, some CD-R/RW cannot be played.

Playback control (video CDs)

Video CDs including the words "playback control" on the disc or jacket are equipped with a function for displaying menus on the TV screen for selecting the desired position, displaying information, etc., in dialog fashion. In this manual, playing video CDs using such menus is referred to "menu playback". Video CDs with playback control can be used on the ADV-1000.

NOTE:

- This DVD video player is designed and manufactured to respond to the Region Management Information that is recorded on a DVD disc. If the Region number described on the DVD disc does not correspond to the Region number of this DVD video player, this DVD video player cannot play this disc. The Region number for this DVD video player is 3.



6 CAUTIONS ON HANDLING DISCS

Discs

Only the discs including the marks shown on page 5 can be played on the ADV-1000.

Note, however, that discs with special shapes (heart-shaped discs, hexagonal discs, etc.) cannot be played on the ADV-1000. Do not attempt to play such discs, as they may damage the player.



Holding Discs

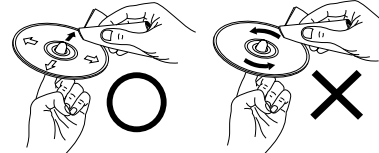
Avoid touching the surface of discs when loading and unloading them.

Be careful not to get fingerprints on the signal surface (the side which shines in rainbow colors).



Cleaning Discs

- Fingerprints or dirt on the disc may lower sound and picture quality or cause breaks in playback. Wipe off fingerprints or dirt.
- Use a commercially available disc cleaning set or a soft cloth to wipe off fingerprints or dirt.

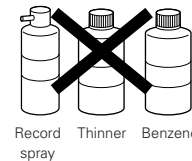


Wipe gently from the middle outwards.

Do not wipe with a circular motion.

NOTE:

- Do not use record spray or antistatic. Also do not use volatile chemicals such as benzene or thinner.



Cautions on Handling Discs

- Do not get fingerprints, grease or dirt on discs.
- Be especially careful not to scratch discs when removing them from their cases.
- Do not bend discs.
- Do not heat discs.
- Do not enlarge the center hole.
- Do not write on the labeled (printed) side with a ball-point pen or a pencil.
- Water droplets may form on the surface if the disc is moved suddenly from a cold place to a warm one. Do not use a hairdryer, etc., to dry the disc.

Cautions on Storing Discs

- Always eject discs after playing them.
- Keep discs in their cases to protect them from dust, scratches and warping.
- Do not put discs in the following places:
 - Places exposed to direct sunlight for long periods of time
 - Humid or dusty places
 - Places exposed to heat from heaters, etc.

Cautions on Loading Discs

- Only load one disc at a time. Loading one disc on top of another may result in damage or scratch the discs.
- Load 8 cm discs securely in the disc guide, without using an adapter. If the disc is not properly loaded, it may slip out of the guide and block the disc tray.
- Be careful not to let your fingers get caught when the disc tray is closing.
- Do not place anything but discs in the disc tray.
- Do not load cracked or warped discs or discs that have been fixed with adhesive, etc.
- Do not use discs on which the adhesive part of cellophane tape or glue used to attach the label is exposed, or discs with traces of tape or labels that have been peeled off. Such discs may get stuck inside the player, resulting in damage.

7 CONNECTIONS

- Do not plug in the AC cord until all connections have been completed.
- Be sure to connect the left and right channels properly (left with left, right with right).
- Insert the plugs securely. Incomplete connections will result in the generation of noise.
- Note that binding pin plug cords together with AC cords or placing them near a power transformer will result in generating hum or other noise.
- Noise or humming may be generated if a connected audio equipment is used independently without turning the power of this unit on. If this happens, turn on the power of the this unit.

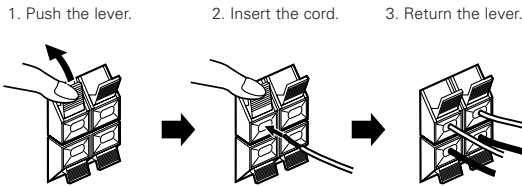
(1) Speaker system connections

- Use speaker cords with twisted wire cores and a diameter of 0.6 to 1.5 mm. Never use cords thicker than 1.5 mm or single-wire cords, as they may damage the speaker terminals.
- Be sure to interconnect the polarities of the terminals on the speakers and main unit (⊕ to ⊕, ⊖ to ⊖).
- When making connections, be careful that none of the core wires of the speaker cords stick out and touch neighboring terminals, other speaker cords or the rear panel.
- Speakers with an impedance of 6 to 16 Ω/ohms can be connected for use as center and surround speakers.

NOTE:
NEVER touch the speaker terminals when the power is on.
Doing so could result in electric shocks.

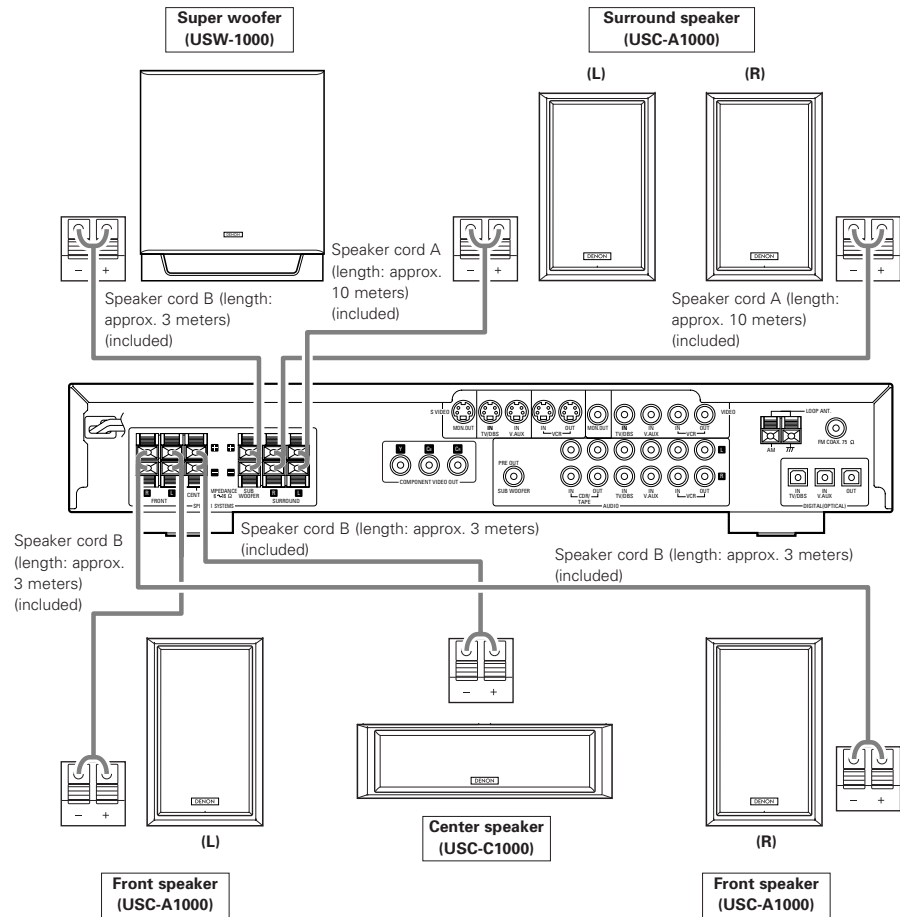
- The protector circuit may be activated if the set is played for long periods of time at high volumes when speakers with an impedance lower than the specified impedance are connected.

Connection the speaker terminals



- Connect using the speaker cords included with the USYS-1000.
Be sure to turn off the power of the ADV-1000 when connecting the speaker units to it.
- Use the included speaker cords to connect the input terminals on the backs of the speaker units (see diagram at right) to the speaker output terminals on the ADV-1000.
Note that if the polarities are not properly interconnected, the phase may be off and the sound may be unnatural (no bass).

NOTE:
DO NOT touch the speaker terminals when the power is on.
Doing so could result in electric shock.



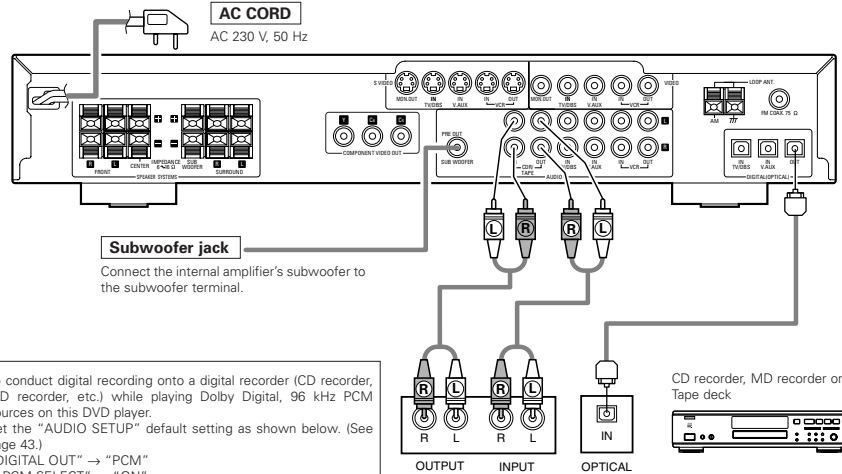
(2) Connecting the audio components

- When making connections, also refer to the operating instructions of the other components.

Connecting the DIGITAL (optical) jacks

Use these for connections to audio equipment with digital (optical) output.

- NOTE:**
- Use optical cables for optical connections, removing the cap before connecting.



- To conduct digital recording onto a digital recorder (CD recorder, MD recorder, etc.) while playing Dolby Digital, 96 kHz PCM sources on this DVD player.
 - Set the "AUDIO SETUP" default setting as shown below. (See page 43.)
 - "DIGITAL OUT" → "PCM"
 - "LPCM SELECT" → "ON"
- Playing DVDs with incorrect settings may result noise that could damage your ears or the speakers.

Connecting a recorder

- Connections for recording:**
Connect the tape deck's recording input jacks (LINE IN or REC) to this unit's tape recording (CDR/TAPE OUT) jacks using pin plug cords.
- Connections for playback:**
Connect the tape deck's playback output jacks (LINE OUT or PB) to this unit's tape playback (CDR/TAPE IN) jacks using pin plug cords.

- NOTES:**
- Track numbers may not be added automatically when making digital recordings of CDs being played on the ADV-1000 onto a connected recorder.
 - When making digital recordings on a CD recorder, set the CD recorder's recording setting to manual and add track numbers (track marks) manually as you record.
 - When making digital recordings on an MD recorder, use the editing function after the recording is completed to divide the tracks.

(3) Connecting video components

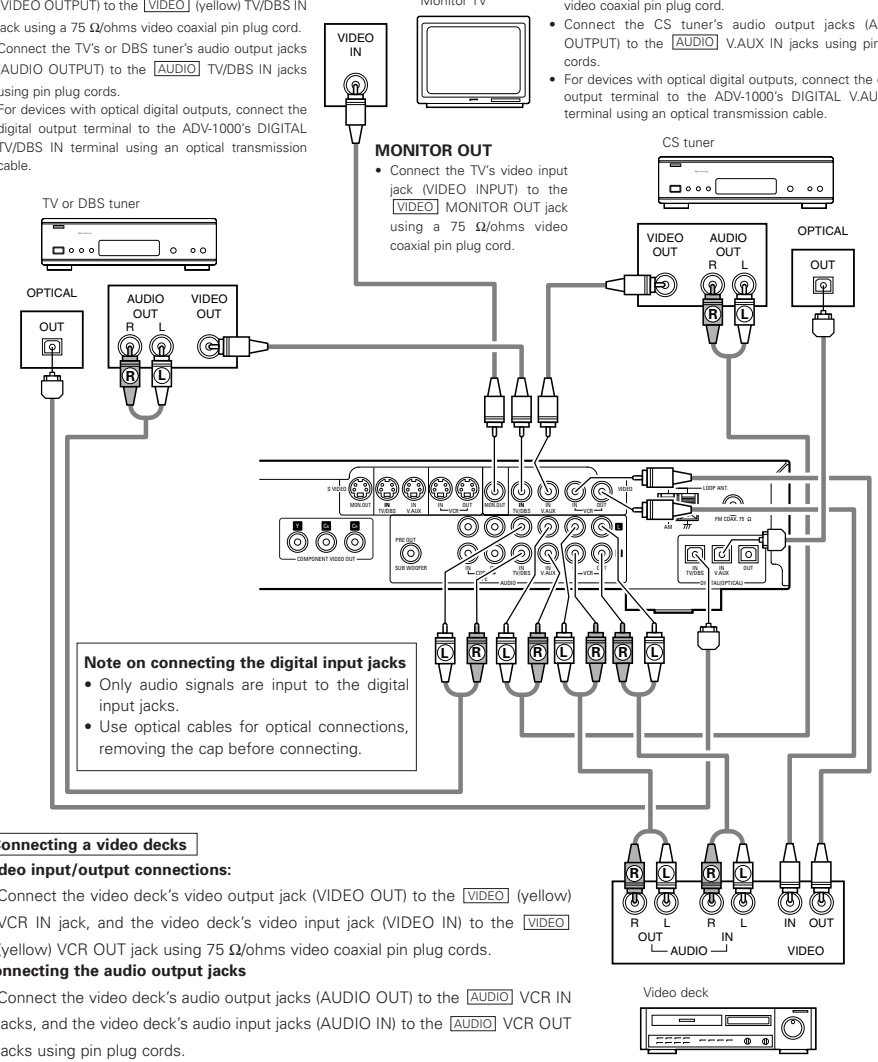
- To connect the video signal, connect using a 75 Ω/ohms video signal cable. Using an improper cable can result in a drop in video quality.
- When making connections, also refer to the operating instructions of the other components.

Connecting a TV/DBS tuner

- TV/DBS**
- Connect the TV's or DBS tuner's video output jack (VIDEO OUTPUT) to the VIDEO (yellow) TV/DBS IN jack using a 75 Ω/ohms video coaxial pin plug cord.
 - Connect the TV's or DBS tuner's audio output jacks (AUDIO OUTPUT) to the AUDIO TV/DBS IN jacks using pin plug cords.
 - For devices with optical digital outputs, connect the digital output terminal to the ADV-1000's DIGITAL TV/DBS IN terminal using an optical transmission cable.

Connecting a CS tuner V.AUX

- Connect the CS tuner's video output jack (VIDEO OUTPUT) to the VIDEO (yellow) V.AUX IN jack using a 75 Ω/ohms video coaxial pin plug cord.
- Connect the CS tuner's audio output jacks (AUDIO OUTPUT) to the AUDIO V.AUX IN jacks using pin plug cords.
- For devices with optical digital outputs, connect the digital output terminal to the ADV-1000's DIGITAL V.AUX IN terminal using an optical transmission cable.



MONITOR OUT

- Connect the TV's video input jack (VIDEO INPUT) to the VIDEO MONITOR OUT jack using a 75 Ω/ohms video coaxial pin plug cord.

- Note on connecting the digital input jacks**
- Only audio signals are input to the digital input jacks.
 - Use optical cables for optical connections, removing the cap before connecting.

Connecting a video decks

- Video input/output connections:**
- Connect the video deck's video output jack (VIDEO OUT) to the VIDEO (yellow) VCR IN jack, and the video deck's video input jack (VIDEO IN) to the VIDEO (yellow) VCR OUT jack using 75 Ω/ohms video coaxial pin plug cords.
- Connecting the audio output jacks**
- Connect the video deck's audio output jacks (AUDIO OUT) to the AUDIO VCR IN jacks, and the video deck's audio input jacks (AUDIO IN) to the AUDIO VCR OUT jacks using pin plug cords.

(4) Connecting a video component equipped with S-Video jacks

- When making connections, also refer to the operating instructions of the other components.
- **A note on the S input jacks**
The input selectors for the S inputs and pin jack inputs work in conjunction with each other.
- **Precaution when using S-jacks**

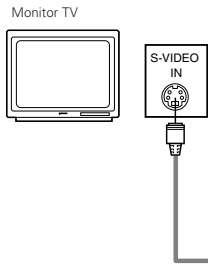
This unit's S-jacks (input and output) and video pin jacks (input and output) have independent circuit structures, so that video signals input from the S-jacks are only output from the S-jack outputs and video signals input from the pin jacks are only output from the pin jack outputs.

When connecting this unit with equipment that is equipped with S-jacks, keep the above point in mind and make connections according to the equipment's instruction manuals.

Connecting a monitor TV

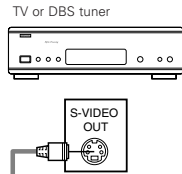
MONITOR OUT

- Connect the TV's S video input (S-VIDEO INPUT) to the [S-VIDEO] MONITOR OUT jack using a S jack connection cord.



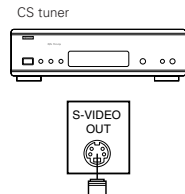
Connecting a TV/DBS tuner

- Connect the TV's or DBS tuner's S video output jack (S-VIDEO OUTPUT) to the [S-VIDEO] TV/DBS IN jack using an S jack connection cord.



Connecting a CS tuner

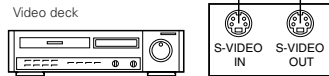
- Connect the CS tuner's S video output jack (S-VIDEO OUTPUT) to the [S-VIDEO] V.AUX. IN jack using an S jack connection cord.



Connect the components' audio inputs and outputs as described on page 7.

Connecting the video decks

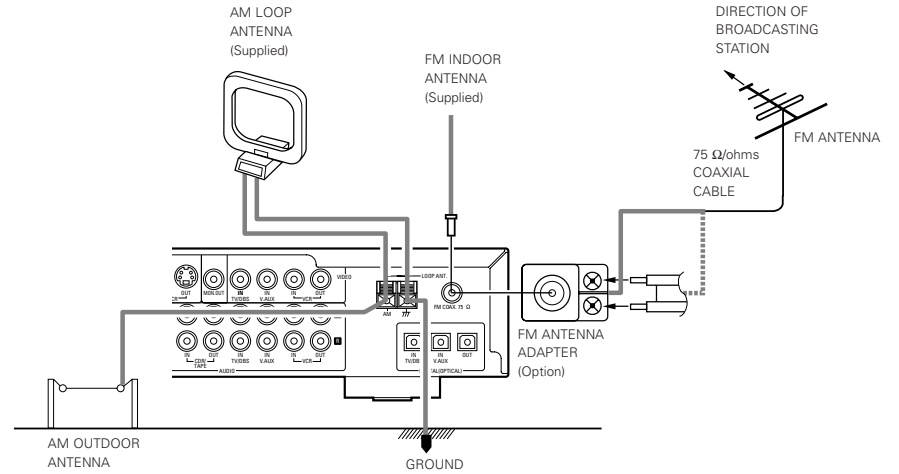
- Connect the video deck's S output jack (S-OUT) to the [S-VIDEO] VCR IN jack and the video deck's S input jack (S-IN) to the [S-VIDEO] VCR OUT jack using S jack connection cords.



NOTES:

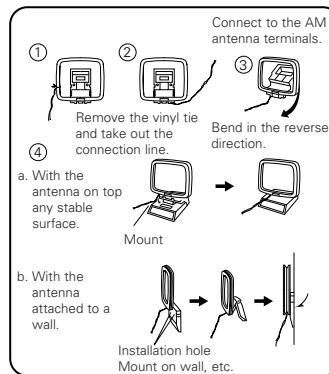
- Connect this unit video outputs to the TV either directly. Do not connect it via a VCR (video cassette recorder). Some discs contain copy prohibit signals. If such discs are played via a VCR, the copy prohibit system may cause disturbance in the picture.
- Set the "TV TYPE" in "VIDEO SETUP" in "DVD SETUP" to comply with your TV's video format. When the TV is PAL formatted set to PAL.

(5) Connecting the antenna terminals

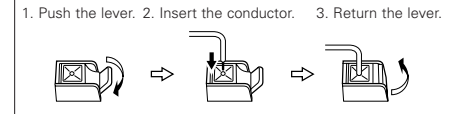


- An PAL-type FM antenna cable plug can be connected directly.
- If the FM antenna cable's plug is not of the PAL-type, connect using the PAL-type antenna adapter (option).

AM loop antenna assembly



Connection of AM antennas



- Notes:**
- Do not connect two FM antennas simultaneously.
 - Even if an external AM antenna is used, do not disconnect the AM loop antenna.
 - Make sure AM loop antenna lead terminals do not touch metal parts of the panel.

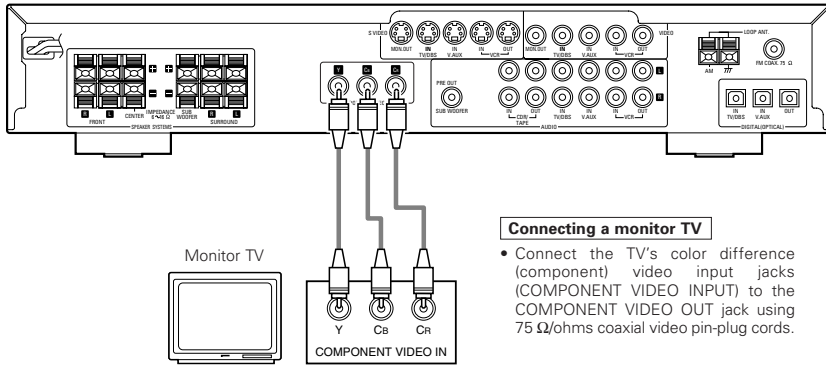
(6) Connecting to a TV or Monitor Equipped with Component Input Connectors

- When making connections, also refer to the operating instructions of the other components.
- The video signals input to the VIDEO input (yellow) and S-Video input jacks are not output to the color difference (component) video jacks.

Color component output connectors (Cr, Cs and Y)

The red (Cr), blue (Cs) and brightness (Y) signals are output independently, achieving more faithful reproduction of the colors.

- The color component input connectors may be marked differently on some TVs or monitors (Pr, Pb and Y/R-Y, B-Y and Y/Cr, Cs and Y, etc.). For details, refer to the TV's operating instructions.



Connecting a monitor TV

- Connect the TV's color difference (component) video input jacks (COMPONENT VIDEO INPUT) to the COMPONENT VIDEO OUT jack using 75 Ω/ohms coaxial video pin-plug cords.

NOTES:

- Use the three commercially available video cords to connect the ADV-1000's color component output connectors to the TV or monitor.
- Set the "TV TYPE" in "VIDEO SETUP" in "DVD SETUP" to comply with your TV's video format. When the TV is PAL formatted set to PAL.

■ Selecting the type of disc for the type of connected TV

Both DVD discs and video CDs have the material recorded in the PAL and NTSC systems. Refer to the table below to select the correct disc type for the type of connected TV.

• Connecting to the Multi-system TV

Disc	TV Monitor
	Played in the PAL system.
	Played in the NTSC system.

• Connecting to the PAL TV

Disc	TV Monitor
	Played in the PAL system.
	No clear images are shown on the screen.

• Connecting to the NTSC TV

Disc	TV Monitor
	No clear images are shown on the screen.
	Played in the NTSC system.

NOTE:

When a disc which does not comply with Video CD standard is played, the bottom part of the picture may disappear.

(7) Sound output from this unit digital audio output connectors

■ When a disc is played on the ADV-1000

	Audio recording format	Settings		Refer to page	Digital audio data output	
		Settings	Settings			
DVD video DVD audio (video part only)	Dolby Digital	Digital out : Normal	43	43	Dolby Digital bitstream	
		Digital out : PCM conversion			2 channels PCM data (48 kHz/16 bit)	
	DTS	Digital out : Normal			DTS bitstream	
		Digital out : PCM conversion			DTS bitstream	
	Linear PCM	48 kHz	LPCM conversion mode : OFF	43	43	48 kHz/16 ~24 bit PCM
			LPCM conversion mode : ON			48 kHz/16 bit PCM
		96 kHz	LPCM conversion mode : ON			48 kHz/16 bit PCM
			CP : ON			LPCM conversion mode : OFF
		CP : OFF	LPCM conversion mode : OFF			96 kHz PCM (when not copy-protected)
		Video CD	MPEG 1			
Music CD	Linear PCM				44.1 kHz/16 bit PCM	
MP3 CD	MP 3				32 ~ 48 kHz/16 bit PCM	

- Linear PCM audio is the signal recording format used for music CDs. While the signals are recorded at 44.1 kHz/16 bit for music CDs, for DVDs they are recorded at 48 kHz/16 bit to 96 kHz/24 bit, providing higher sound quality than music CDs.

Protector circuit

- This unit is equipped with a high-speed protection circuit. The purpose of this circuit is to protect the speakers under circumstances such as when the output of the power amplifier is inadvertently short-circuited and a large current flows, when the temperature surrounding the unit becomes unusually high, or when the unit is used at high output over a long period which results in an extreme temperature rise. When the protection circuit is activated, the speaker output is cut off and the power supply indicator LED flashes. Should this occur, please follow these steps: be sure to switch off the power of this unit, check whether there are any faults with the wiring of the speaker cables or input cables, and wait for the unit to cool down if it is very hot. Improve the ventilation condition around the unit and switch the power back on. If the protection circuit is activated again even though there are no problems with the wiring or the ventilation around the unit, switch off the power and contact a DENON service center.

Note on speaker impedance

- The protector circuit may be activated if the set is played for long periods of time at high volumes when speakers with an impedance lower than the specified impedance (for example speakers with an impedance of lower than 4 Ω/ohms) are connected. If the protector circuit is activated, the speaker output is cut off. Turn off the set's power, wait for the set to cool down, improve the ventilation around the set, then turn the power back on.

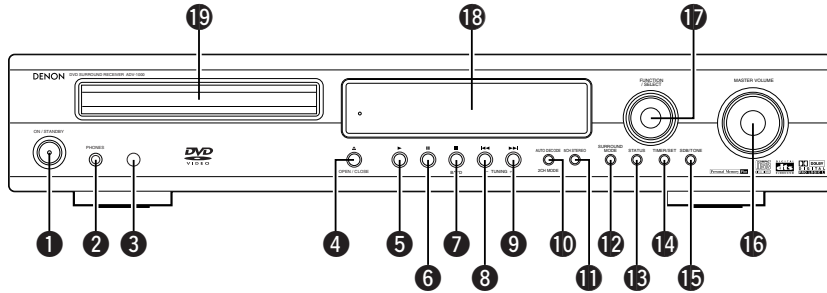
Cautions on connecting

- With this unit's speaker outputs, signals with the reverse phase of the "+" side output terminal's signals are also output from the "-" side output terminal. Do not connect to a device for switching between multiple speakers (a speaker selector or audio channel selector) or connect in ways other than described in this manual. Doing so will result in damage.

8 PART NAMES AND FUNCTIONS

Front Panel

- For details on the functions of these parts, refer to the pages given in parentheses ().



- | | |
|--|--|
| 1 Power operation switch (ON/STANDBY).....(17) | 10 AUTO DECODE/2CH MODE button.....(22, 23) |
| 2 Headphones jack (PHONES).....(20) | 11 5CH STEREO button.....(19) |
| 3 Remote control signal sensor
(REMOTE SENSOR).....(11) | 12 SURROUND MODE button.....(19) |
| 4 OPEN/CLOSE button (▲ OPEN/CLOSE).....(17) | 13 STATUS button.....(20) |
| 5 Play button (▶).....(18) | 14 TIMER/SET button.....(37, 38) |
| 6 Pause button (⏸).....(18, 19) | 15 SDB/TONE button.....(20) |
| 7 Stop/Tuner band button
(■/BAND).....(18, 28, 29) | 16 MASTER VOLUME control.....(20) |
| 8 Skip/Tuner tuning - button
(◀◀/TUNING -).....(19, 28, 29) | 17 Input function switching/select dial
(FUNCTION/SELECT).....(19~21, 37, 38) |
| 9 Skip/Tuner tuning + button
(▶▶/TUNING +).....(19, 28, 29) | 18 Display |
| | 19 Disc tray.....(17) |

Remote control unit

- For details on the functions of these parts, refer to the pages given in parentheses ().
- Some of the buttons on the remote control unit have two functions. The functions are switched using the remote control mode selector buttons (CDR/MD/TAPE, TUNER/TV/VCR and DVD). After one of these buttons is pressed, the function will not switch until another remote control mode selector button is pressed. The remote control unit's mode switches as described below when the buttons are pressed.

POWER ON/OFF button.....(17)	System buttons.....(12)
CLEAR button.....(33)	SLEEP button.....(39)
CALL button.....(33)	SURROUND mode selector button.....(19)
DISPLAY button.....(30)	INPUT MODE selector button.....(19)
RETURN button.....(18, 19)	FUNCTION selector button.....(19)
MENU button.....(37)	ENTER button.....(13)
Cursor buttons.....(13)	Main volume control buttons.....(20)
* System buttons.....(12)	MUTE button.....(20)
SUBTITLE button.....(35)	STATUS button.....(20)
AUDIO selector button.....(35)	NTSC/PAL button.....(8)
Program/direct button (PROG/DIRECT).....(33)	TOP MENU button.....(36)
A-B repeat button (REPEAT A-B).....(32)	ANGLE button.....(36)
Channel select button (CH. SELECT).....(22)	RANDOM button.....(33)
Test tone button (T.TONE).....(22)	REPEAT button.....(32)
SETUP button.....(13)	Surround parameter button (SURR.PARA).....(22~26)
	SDB/TONE selector button.....(20)
	Remote control mode selector buttons

Remote control mode	
<input type="radio"/> CDR/MD/TAPE	Audio modes
<input type="radio"/> TUNER/TV/VCR	AV modes
<input type="radio"/> DVD	DVD modes

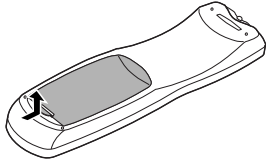
- Buttons indicated are DVD operation buttons. These can be used when the DVD mode is selected with the remote control mode selector buttons.
- The system buttons (*) are buttons whose functions differ according to which mode is selected with the remote control mode selector buttons.
- Other buttons are surround amplifier operation buttons that always operate in the same way, regardless of which mode is set with the remote control mode selector buttons.

9 REMOTE CONTROL UNIT

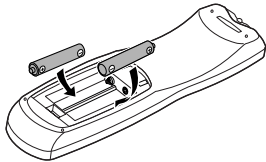
- The included remote control unit (RC-902) can be used to operate not only this unit but other remote control compatible DENON components as well. In addition, the memory contains the control signals for other remote control units, so it can be used to operate non-Denon remote control compatible products.

(1) Inserting the batteries

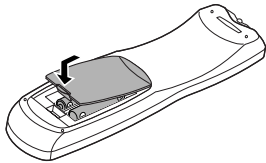
- Remove the remote control unit's rear cover.



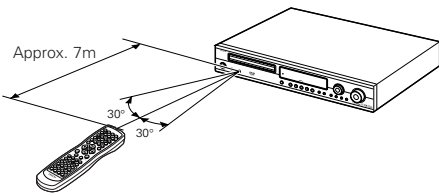
- Set three R6P/AA batteries in the battery compartment in the indicated direction.



- Put the rear cover back on.



(2) Using the remote control unit



Notes on Batteries

- Use R6P/AA batteries in the remote control unit.
- The batteries should be replaced with new ones approximately once a year, though this depends on the frequency of usage.
- Even if less than a year has passed, replace the batteries with new ones if the set does not operate even when the remote control unit is operated nearby the set. (The included battery is only for verifying operation. Replace it with a new battery as soon as possible.)
- When inserting the batteries, be sure to do so in the proper direction, following the “+” and “-” marks in the battery compartment.
- To prevent damage or leakage of battery fluid:
 - Do not use a new battery together with an old one.
 - Do not use two different types of batteries.
 - Do not short-circuit, disassemble, heat or dispose of batteries in flames.
- Remove the batteries from the remote control unit when you do not plan to use it for an extended period of time.
- If the battery fluid should leak, carefully wipe the fluid off the inside of the battery compartment and insert new batteries.
- When replacing the batteries, have the new batteries ready and insert them as quickly as possible.

- Point the remote control unit at the remote sensor on the main unit as shown on the diagram.
- The remote control unit can be used from a straight distance of approximately 7 meters from the main unit, but this distance will be shorter if there are obstacles in the way or if the remote control unit is not pointed directly at the remote sensor.
- The remote control unit can be operated at a horizontal angle of up to 30 degrees with respect to the remote sensor.

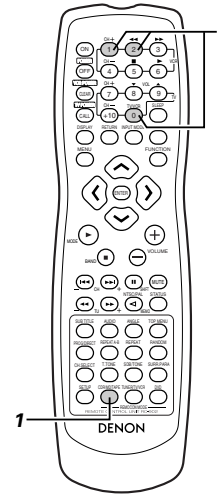
NOTES:

- It may be difficult to operate the remote control unit if the remote sensor is exposed to direct sunlight or strong artificial light.
- Do not press buttons on the main unit and remote control unit simultaneously. Doing so may result in malfunction.
- Neon signs or other devices emitting pulse-type noise nearby may result in malfunction, so keep the set as far away from such devices as possible.

(3) Preset memory

[1] Audio Component

- The signals of your other Denon products can be stored in the included remote control unit's preset memory to operate either the CDR, MD or TAPE function.
- Operation is not possible for some models.



- While pressing the CDR/MD/TAPE remote control mode selector button, input the 3-digit number (“000”, “111” and “222”) corresponding to the device you want to preset (CDR, MD or TAPE), referring to the table below.
 - Release the CDR/MD/TAPE button after inputting three digits. This completes the presetting operation.

Table 1: Combinations of Personal System Codes

CDR/MD/TAPE	Input the 3-digit number while pressing CDR/MD/TAPE.		
CDR	0	0	0
MD	1	1	1
TAPE	2	2	2

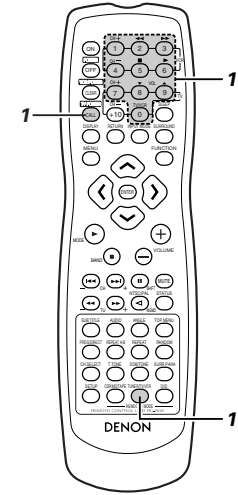
※ This is set to CDR by factory default.

NOTE:

- Only one device (CDR, MD or TAPE) can be stored in the preset memory.

[2] TV

- Other makes of components can be operated by setting the preset memory for your make of TV.
- This remote control unit can be used to operate components of other manufacturers without using the learning function by registering the manufacturer of the components as shown on the List of Preset Codes (attached sheet).
- Operation is not possible for some models.



- Press the CALL button while pressing the TUNER/TV/VCR remote control mode selector button, then input the three-digit number corresponding to the code of the manufacturer of the TV whose signals you want to store, referring to the included list of remote control unit codes.
 - Release the TUNER/TV/VCR button after inputting three digits. This completes the presetting operation.
- Example: To preset to “Hitachi 074”

TUNER/TV/VCR	Press the buttons below while pressing TUNER/TV/VCR.			
HITACHI “074”	CALL	0	7	4

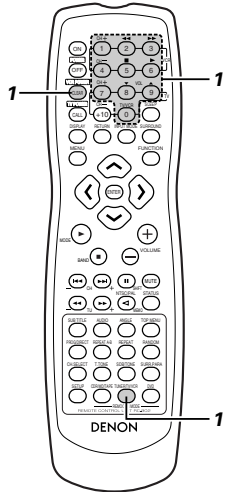
※ This is set to “Hitachi 074” by factory default.

NOTE:

- Preset codes set upon shipment from the factory and when reset.

[3] VCR

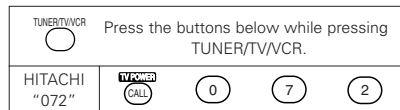
- Other makes of components can be operated by setting the preset memory for your make of video component. This remote control unit can be used to operate components of other manufacturers without using the learning function by registering the manufacturer of the components as shown on the List of Preset Codes (attached sheet). Operation is not possible for some models.



1 Press the CLEAR button while pressing the TUNER/TV/VCR remote control mode selector button, then input the 3-digit number corresponding to the code of the manufacturer of the VCR you want to store in the memory, referring to the included table of remote control codes.

- Release the TUNER/TV/VCR button after inputting three digits. This completes the presetting operation.

Example: To preset to Hitachi "072"

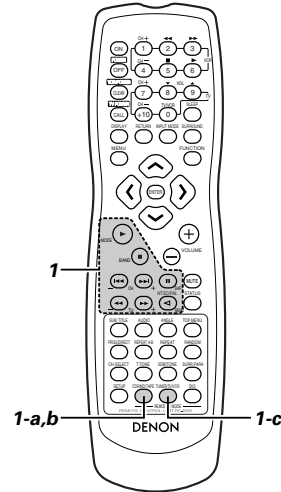


※ This is set to Hitachi "072" by factory default.

NOTES:

- Some models and years of manufacture of components of the manufacturers listed on the List of Preset Codes cannot be used.
- The unit is equipped with several types of remote control codes which depend on the manufacturer. If there is no operation, please change the preset code (a 3-digit number) and try again.

[4] Operating DENON audio components

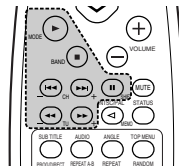


1 DENON remote-controllable audio components can be controlled using this unit's remote control unit. Note that some components, however, cannot be operated with this remote control unit.

Before operating the remote control unit!

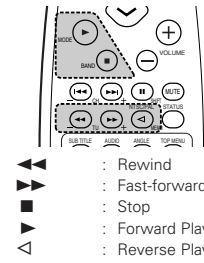
Be sure to set the audio device mode using the remote control mode selector buttons.

a. For CDR recorder or MD recorder



- Manual search (reverse and forward)
- Stop
- Play
- Auto search
- Pause

1 b. For tape deck (TAPE)

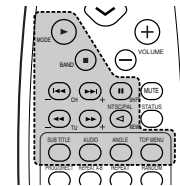


- Rewind
- Fast-forward
- Stop
- Forward Play
- Reverse Play

Before operating the remote control unit!

Be sure to press the proper remote control mode selector button to set the remote control unit to the AV mode.

c. For TUNER

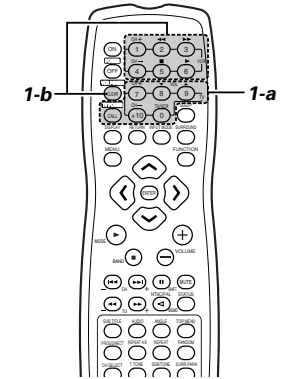


- SHIFT CHANNEL (+, -) : Switch preset channel range
- CHANNEL (+, -) : Preset channel up/down
- TUNING (+, -) : Tuning up/down
- BAND : Switch between AM and FM bands
- MODE : Switch between AUTO and MONO
- MEMORY : Preset memory

[5] Operating a video component stored in the preset memory

Before operating the remote control unit!

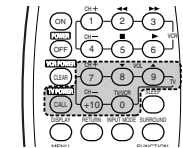
Be sure to press the proper remote control mode selector button to set the remote control unit to the AV mode.



1 Operate the TV or VCR. For details, refer to the component's operating instructions.

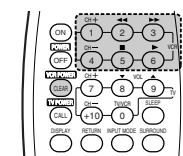
- Some models cannot be operated with this remote control unit.

a. For monitor TV



- TV POWER : Power on/off
- CHANNEL (+, -) : Switch channel
- VOLUME (▲, ▼) : Volume up/down
- TV/VCR : Switch between TV and VCR

b. For video deck (VCR)

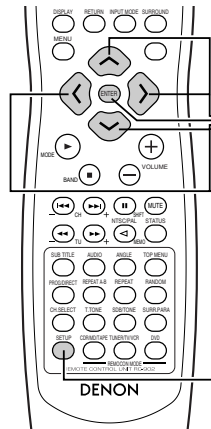


- VCR POWER : Power on/off
- CHANNEL (+, -) : Switch channel
- Forward and Reverse
- Play
- Stop

10 SETTING UP THE SYSTEM

(1) System setup items

- Once all connections with other AV components have been completed as described in "CONNECTIONS" (see pages 6 to 9), make the various settings described below on the monitor screen using the ADV-1000's on-screen display function.
- Use the following buttons to set up the system:



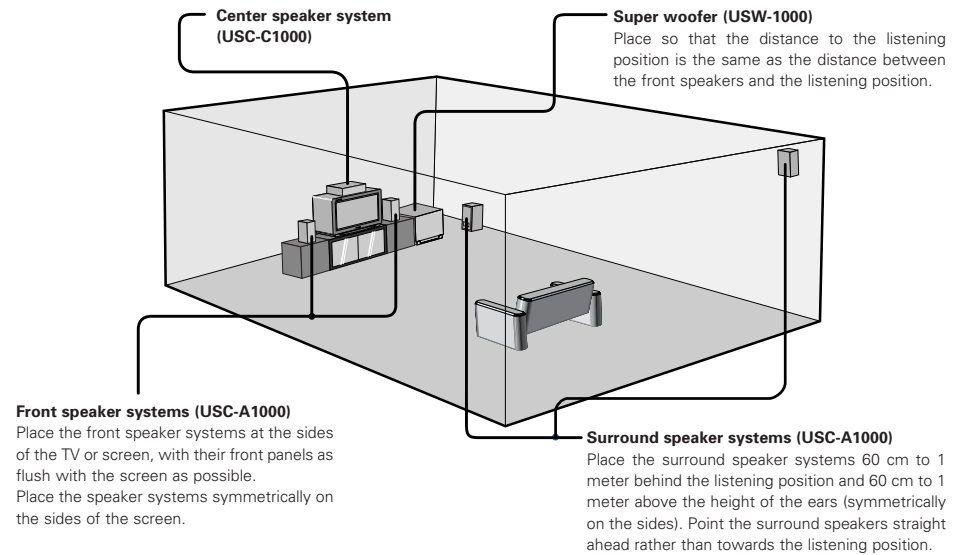
ENTER button
Press this to switch the display. Also use this button to complete the setting.
CURSOR buttons
< and > : Use these to move the cursors (< and >) to the left and right on the screen.
^ and v : Use these to move the cursors (^ and v) to the up and down on the screen.
SETUP button
Press this to display the system setup menu.

Setup items and default values (set upon shipment from the factory)

Setup		Default settings						
QUICK SETUP		ROOM SPACE	SEATING POSITION	FRONT SP.	CENTER SP.	SURROUND SP.	SUB-WOOFER	
Set the size of the room and the listening position.		MEDIUM 4.2m x 4.2m (14 ft x 14 ft)	BACK	SMALL 2.7m (9 ft)	SMALL 2.4m (8 ft)	SMALL 2.1m (7 ft)	YES 2.7m (9 ft)	
SYSTEM SETUP	SPEAKER CONFIGURATION	Input the combination of speakers in your system and their corresponding sizes (SMALL for regular speakers, LARGE for full-size, full-range) to automatically set the composition of the signals output from the speakers and the frequency response.	FRONT SP.	CENTER SP.	SURROUND SP.	SUB WOOFER		
	DELAY TIME	This parameter is for optimizing the timing with which the audio signals are produced from the speakers and subwoofer according to the listening position.	SMALL	SMALL	SMALL	YES		
	CHANNEL LEVEL	At the listening position, listen to the test tones output from the different speakers and set so that the playback level from the different speakers is equal.	SW FREQ. = 120 Hz / SW MODE = NONE					
	DVD AUTO POWER OFF	The power automatically switches to standby if no operation is performed for 30 minutes while in the stop mode with the function set to DVD.	FRONT & SW	CENTER	SURROUND			
DVD SETUP	DISC SETUP	Set the audio language, subtitle language and disc menu language for when playing discs.	2.7m (9 ft)	2.4m (8 ft)	2.1m (7 ft)			
	OSD SETUP	Set the wallpaper for the setup and operation screens.	FRONT L	CENTER	FRONT R	SURROUND L	SURROUND R	SUB WOOFER
	VIDEO SETUP	Set the screen size and video system for the TV being used.	0 dB	0 dB	0 dB	0 dB	0 dB	0 dB
	AUDIO SETUP	Set the digital audio signal format and the linear PCM sampling frequency and bit conversion.	NO (power does not turn off automatically)					
	RATINGS	Make the playback restriction setting for DVDs with restricted viewing and set the password required for changing the setting.	DIALOG	SUBTITLE		DISC MENU		
	OTHER SETUP	Make the closed caption setting for DVDs. (A commercially available decoder is required to display the closed captions.)	ENGLISH	ENGLISH		ENGLISH		
		WALL PAPER: BLUE						
		TV ASPECT			TV TYPE			
		4 : 3 PS			MULTI			
		DIGITAL OUT			LPCM SELECT			
		NORMAL			OFF			
		RATING LEVEL			PASS WORD CHANGE			
		NO LIMIT			0000 (Default)			
		CLOSED CAPTION : OFF						

Speaker system layout (basic system layout)

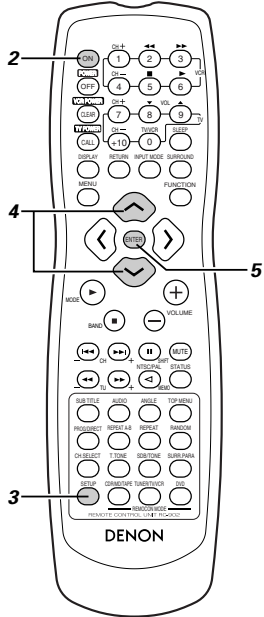
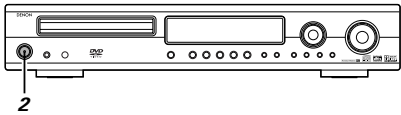
- The following shows a basic example of layout for a system consisting of six speaker systems and a TV.



- Place the front and center speakers with their fronts as flush as possible with the TV or screen. Place the center speaker between the left and right front speakers and no further away from the listening position than the front speakers.
- There are no particular limitations to where the super woofer can be placed, but ideally it's front should be flush with the screen.
- When placing the center speaker on top of the TV or when suspending the surround speakers from the walls, secure them in place so they do not fall during earthquakes.
- If it is not possible to arrange the speakers as described above due to space restrictions in the room, etc., and the distance between the different speakers and the listening position differs greatly, refer to "Delay time (distance settings)" on page 16 to adjust the sound produced from the different speakers according to their distance to the listening position so as to achieve the optimal surround effect.

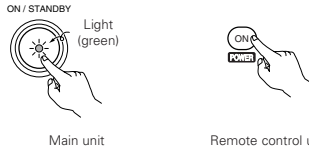
(2) Before setting up the system

- This section describes surround-related setup operations. For DVD-related setup operations, see page 40.
- The setup operations cannot be performed while discs are playing. Set the stop mode first.



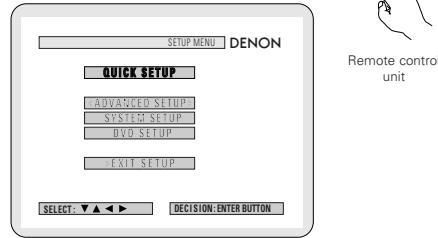
1 Refer to "CONNECTIONS" (pages 6 to 9) and check that all connections are correct.

2 Turn on the power. Press the POWER switch (button).



When pressed, the power turns on and the display lights. The sound is muted for several seconds, after which the unit operates normally. When pressed again, the power turns off, the standby mode is set and the display turns off. Whenever the ON/STANDBY button is in the STANDBY state, the apparatus is still connected on AC line voltage. Please be sure to unplug the cord when you leave home for, say, a vacation.

3 Press the SETUP button.



4 Use the \wedge and \vee cursor buttons on the remote control unit to select the setting menu.

- There are three types of setup menus.



- **QUICK SETUP:** Select "ROOM SPACE" and "SEATING POSITION".
- **SYSTEM SETUP:** Detailed settings of the AV system function
- **DVD SETUP:** Detailed settings of the DVD function

5 Press the ENTER button to display the setting screen of the respective menu.

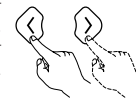


(3) Quick system settings (to switch between the 2- and 5.1-channel modes)

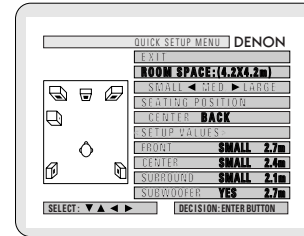
- The ADV-1000 is preset with Quick System settings for a 5.1-channel surround system using five small speakers.
- See "(4) System setting changes" (pages 15 to 17 when using speaker systems other than the ones described below or if you wish to change the settings).

1 At the setup screen, select "QUICK SETUP", then press the ENTER button. (See page 13.)

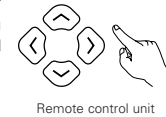
2 Use the \wedge and \vee cursor buttons to select "Room Space", then use the \leftarrow and \rightarrow cursor buttons to set the size of the room.



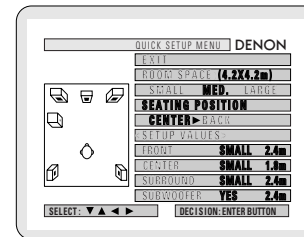
- The set size is displayed in yellow.



3 Use the \wedge and \vee cursor buttons to select "Seating Position", then use the \leftarrow and \rightarrow cursor buttons to set the size of the position.



- The set position is displayed in yellow.



4 Press the ENTER button to enter the setting.

- The setup screen reappears.



5 Press the SETUP button to quit the setup mode.

- You can also quit the setup mode by using the \vee cursor button at the setup screen to display "Quit setup" in yellow then pressing the ENTER button.



- To change the settings At the setup screen, select "SYSTEM SETUP" from "<ADVANCED SETUP>".

About the quick system settings

ROOM SPACE: Set the size of the room in which you are using the product.

SMALL: 3.0 m x 3.0 m (10 ft x 10 ft)
 MED.: 4.2 m x 4.2 m (14 ft x 14 ft)
 LARGE: 6.0 m x 6.0 m (20 ft x 20 ft)

SEATING POSITION: Set whether the seating position is near the center of the room or towards the back.

CENTER
 BACK

Settings: When "ROOM SPACE" or "SEATING POSITION" is selected, the distance from the listening position to the different speakers is displayed automatically. If the relative distance is very different from the actual distance (for example if a shorter distance is displayed for the front speakers than for the center speaker but actually the opposite is true), set the distance as described in "ADVANCED SETUP" (page 15).



(4) System setting changes

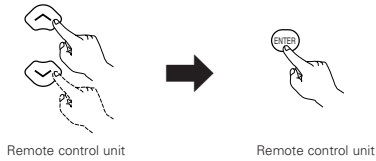
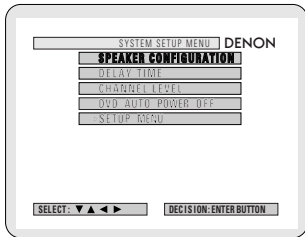
- The quick system settings and factory default settings are changed at the system setting change menu.
- The settings are stored in the memory until they are next changed, even when the power is turned off.

[1] Setting the type of speakers

- The composition of the signals output from the different channels and the frequency response are adjusted automatically according to the combination of speakers actually being used.

1 At the SETUP MENU, select "SYSTEM SETUP" and press the ENTER button.

2 At the SYSTEM SETUP MENU screen, use the  and  cursor buttons to select the speaker system you are using. "SPEAKER CONFIGURATION" and press the ENTER button.



4 Enter the setting.
 • The SYSTEM SETUP MENU reappears.



Remote control unit

NOTE:

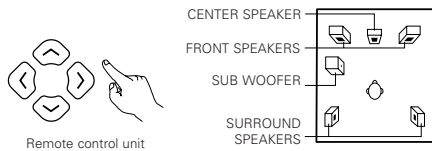
- Select "LARGE" or "SMALL" not according to the actual size of the speaker but according to the speaker's capacity for playing low frequency (approximately 100 Hz and below) signals. If you do not know, try comparing the sound at both settings (setting the volume to a level low enough so as not to damage the speakers) to determine the proper setting.

Parameters

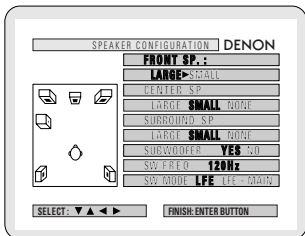
- LARGE..... Select this when using speakers that can fully reproduce low sounds of below 100 Hz.
- SMALL..... Select this when using speakers that do not provide sufficient volume for playing low frequencies of 100 Hz and less. When this setting is made, frequencies below the frequency set at the subwoofer frequency setting are assigned to the subwoofer.
- NONE..... Select this when no speakers are installed.
- YES/NO..... Select "Yes" when a subwoofer is installed, "No" when a subwoofer is not installed.

- ※ If the subwoofer has sufficient low frequency playback capacity, good sound can be achieved even when "Small" is set for the front, center and surround speakers.
- ※ For the majority of speaker system configurations, using the SMALL setting for all five main speakers and Subwoofer On with a connected subwoofer will yield the best results.

3 Set whether or not speakers are connected and, if so, their size parameters.



- The item to be set is displayed in yellow, and the values of the other items are displayed in green.



Subwoofer frequency (SW FREQ.)

- For the subwoofer frequency at the speaker setting screen, set the bass crossover frequency for playback from the subwoofer.
- Select "80 Hz", "120 Hz", "150 Hz" or "180 Hz" (-6 dB for each). Bass sound below these frequencies is played from the subwoofer. (This is set to "120 Hz" by factory default.)

Assignment of low frequencies

- In the Dolby Digital, Dolby Pro Logic II, DTS, and virtual surround modes, the low frequency signals for channels whose speaker settings are set to "Small" are assigned to the subwoofer. The low frequencies of channels set to "Large" are played from those channels. (If set to "120 Hz", channels set to "Small" play sounds of 120 Hz and greater, while bass frequencies of under 120 Hz are played from the subwoofer.)
- In surround modes other than the ones listed above, low frequencies below the frequency set at the subwoofer frequency setting are played from the subwoofer regardless of whether the speakers are set to "Large" or "Small".
- Set the subwoofer frequency according to the low frequency playback abilities of your speakers and subwoofer.

Subwoofer mode (SW MODE)

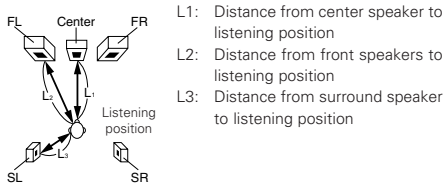
- The subwoofer mode setting is only valid when "LARGE" is set for the front speakers and "YES" is set for the subwoofer in the "SPEAKER CONFIGURATION" settings.
- When the "LFE+MAIN" playback mode is selected, the low frequency signal range of channels set to "LARGE" are produced simultaneously from those channels and the subwoofer channel. In this playback mode, the low frequency range expand more uniformly through the room, but depending on the size and shape of the room, interference may result in a decrease of the actual volume of the low frequency range.
- Selection of the "LFE" play mode will play the low frequency signal range of the channel selected with "LARGE" from that channel only. Therefore, the low frequency signal range that are played from the subwoofer channel are only the low frequency signal range of LFE (only during Dolby Digital or DTS signal playback) and the channel specified as "SMALL" in the setup menu.
- Select the play mode that provides bass reproduction with body.
- When the subwoofer is set to "YES", bass sound is output from the subwoofer regardless of the subwoofer mode setting in surround modes other than Dolby/DTS.

[2] Setting the speaker distance

- Input the distances from the listening position to the speakers and set the surround delay time.
- The default settings below are set upon shipment from the factory.

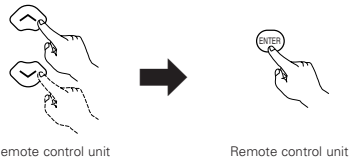
Preparations:

Measure the distances from the listening position to the speakers (L1 to L3 on the diagram at the right).



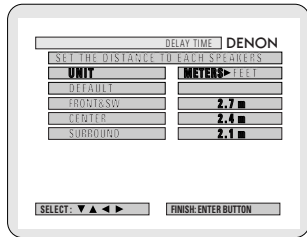
1 To perform these operations from places other than the system setting change menu, see page 15.

2 At the SYSTEM SETUP MENU select "DELAY TIME".



Remote control unit Remote control unit

- Switch to the DELAY TIME screen.



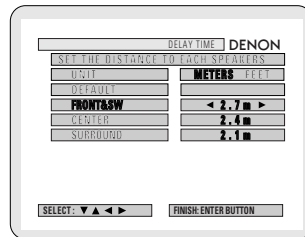
- Use the < and > cursor buttons to select the distance unit, "METERS" or "FEET".
Press the ✓ cursor button to proceed to the next step if you do not wish to change this.

3 When "YES" is selected for "DEFAULT", the delay times for the various speakers are set to the default values.

- © YES: FRONT & SW → 2.7 m
CENTER → 2.4 m
SURROUND → 2.1 m
- © NO: The current settings are used.

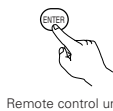
4 Select the speaker to be set using the ^ and v cursor buttons, then setting the distance between the speakers and the listening position using the < and > cursor buttons.

- Set the distance between the center speaker and listening position.
The distance changes in units of 0.1 meters (1 foot) each time the button is pressed. Select the value closest to the measured distance.



- * The difference of the distances set for the different speakers must be no greater than 3.0 m (10 ft.).
If an inapplicable distance is set, "CAUTION: INVALID DISTANCE" is displayed. Change the speaker position and reset.

5 Enter the setting.
• The SYSTEM SETUP MENU reappears.

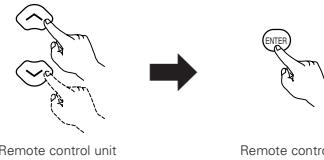


[3] Setting the channel level

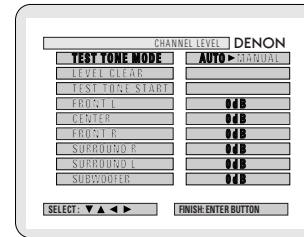
- Use this setting to adjust so that the playback level between the different channels is equal.
- When the listening position, listen to the test tones produced from the speakers to adjust the level.
- The level can also be adjusted directly from the remote control unit. (For details, see page 23.)

1 To perform these operations from places other than the system setting change menu, see page 15.

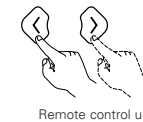
2 At the SYSTEM SETUP MENU select "CHANNEL LEVEL".



- Switch to the CHANNEL LEVEL screen.



3 Select "TEST TONE MODE".
• Select the mode.



Select "AUTO" or "MANUAL".

- AUTO: Adjust the level while listening to the test tones produced automatically from the different speakers.
- MANUAL: Select the speaker from which you want to produce the test tone to adjust the level.

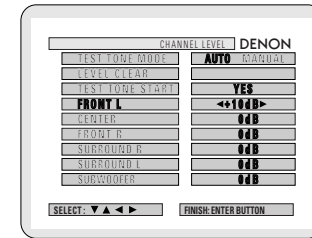
4 If "YES" is selected at "LEVEL CLEAR", the level settings for all the speakers are set to 0 dB.

- © "YES" : The levels of the different speakers are all set to 0dB.
- © "NO" : The speakers stay at their currently set levels.

5 Adjusting the channel levels in the "test tone" mode

- Set the "TEST TONE START" mode using the ^ and v cursor buttons, then select "YES" with the < cursor button to output test tones.

6 ① When "AUTO" is selected in the "TEST TONE MODE"

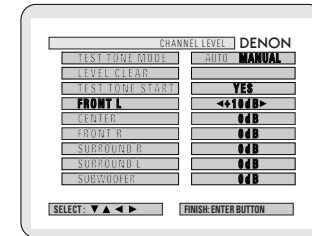


- Test tones are automatically emitted from the different speakers.
- The test tones are emitted from the different speakers in the following order, at 4-second intervals the first time and second time around, 2-second intervals the third time around and on:



- Use the CURSOR buttons to adjust all the speakers to the same volume.
- The volume can be adjusted between -12 dB and +12 dB in units of 1 dB.

② When the "MANUAL" mode is selected



- Use the CURSOR ^ and v to select the speaker for which you want to output test tones, then use the CURSOR < and > to adjust so that the volume of the test tones from the various speakers is the same.

7 After the above settings are completed, press the ENTER button.

- The "SYSTEM SETUP MENU" screen reappears.

- * To cancel the setting after adjusting
Display the channel level adjustment screen, then use the ^, v, < and > cursor buttons to select "LEVEL CLEAR" and "YES". The level settings for all the speakers are set to 0 dB.

NOTES:

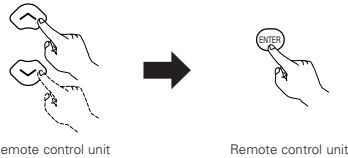
- When you adjust the channel levels while in the SYSTEM SETUP CHANNEL LEVEL mode, the channel level adjustments made will affect ALL surround modes. Consider this mode a Master Channel Level adjustment mode.
- After you have completed the SYSTEM SETUP CHANNEL LEVEL adjustments, you can then activate the individual surround modes and adjust channel levels that will be remembered for each of those modes. Then, whenever you activate a particular surround sound mode, your preferred channel level adjustments for just that mode will be recalled. Check the instructions for adjusting channel levels within each surround mode on page 23.

[4] Setting the DVD auto power off

- The ADV-1000 is equipped with a function that automatically switches the power to standby if no operation is performed for 30 minutes while in the stop mode with the function set to DVD. Here, set whether to turn this function on or off.
- The factory default setting is "NO".

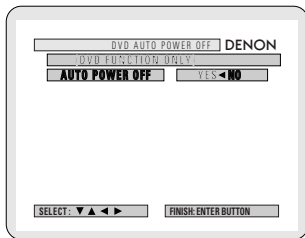
1 To perform these operations from places other than the system setting change menu, see page 15.

2 At the "SYSTEM SETUP MENU" screen, select "DVD AUTO POWER OFF" and press the ENTER button.



Remote control unit

- Switch to the "DVD AUTO POWER OFF" screen.



3 Select "YES" or "NO".

- YES: The auto power off function is active when the function is set to DVD.
- NO: The auto power off function does not work.

4 Enter the setting.

- The SYSTEM SETUP MENU reappears.



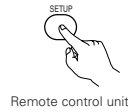
Remote control unit

[5] After completing system setup

- Once the speaker settings, delay time setting and channel level adjustments are made, there is no need to reset them unless the AV components or speakers are changed or the speakers are moved to different positions.
- Change the DVD auto power off settings as necessary.

1 At the SYSTEM SETUP MENU, press the SETUP button.

- The changed settings are entered and the on-screen display turns off.



Remote control unit

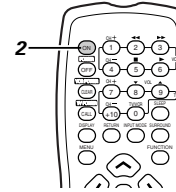
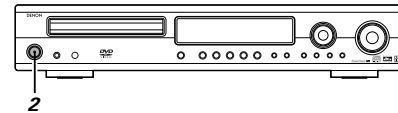
* This button can be pressed at any time during the system setup process to complete the process.

NOTE:

- If the quick system settings are selected after setting up the system using the system setting change menu, the speaker and delay time settings are changed to the values preset for the quick system settings.

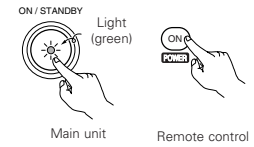
11 PLAYBACK

(1) Before Operating



1 Refer to "CONNECTIONS" (pages 6 to 9) and check that all connections are correct.

2 Turn on the power. Press the POWER button.



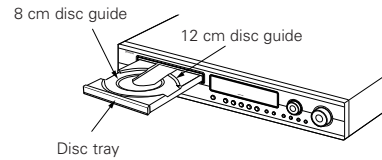
Main unit Remote control unit

When pressed, the power turns on and the display lights. The sound is muted for several seconds, after which the unit operates normally. When pressed again, the power turns off, the standby mode is set and the display turns off.

Whenever the ON/STANDBY button is in the STANDBY state, the apparatus is still connected on AC line voltage. Please be sure to unplug the cord when you leave home for, say, a vacation.

(2) Loading Disc

- Set discs in the disc tray with the labeled (printed) side facing up.



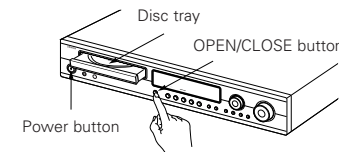
Disc tray

NOTE:

- Do not move the this unit while a disc is playing. Doing so may scratch the disc.

(1) Opening and Closing the Disc Tray

- Turn on the power.
- Press the OPEN/CLOSE button.



Power button

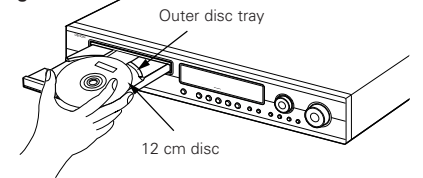
NOTES:

- Even when the power is in the standby mode, when the OPEN/CLOSE button is pressed, the ADV-1000's power turns on and the disc tray operates. (Auto power on function)
- Even if the function is set to something other than DVD, when the OPEN/CLOSE button is pressed, the function switches to DVD and the disc tray operates. (Auto function select function)
- Do not strike on the button with a pencil, etc.

(2) Loading Discs

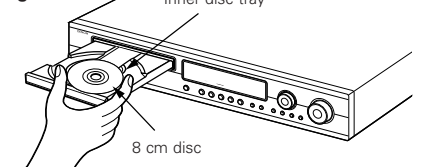
- Pick up the disc carefully so as not to touch the signal surface and hold it with the labeled side facing up.
- With the disc tray fully open, set the disc in the disc tray.
- Set 12 cm discs in the outer tray guide (Figure 1), 8 cm discs in the inner tray guide (Figure 2).
- Press the OPEN/CLOSE button. The disc is automatically loaded.
- The disc tray can also be closed automatically to load the disc by pressing the PLAY button.

Figure 1



12 cm disc

Figure 2



8 cm disc

NOTES:

- If a foreign object is caught in the disc tray during closing, simply press the OPEN/CLOSE button again and the tray will open.
- Do not press the disc tray in by hand when the power is off. Doing so will damage it.
- Do not place foreign objects in the disc tray. Doing so will damage it.

(3) Playback

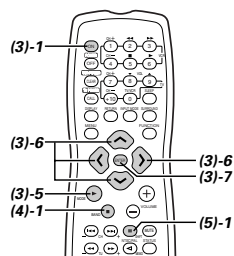
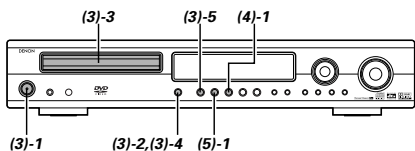
IMPORTANT SETUP INFORMATION

This set has the following presettings: "DISC SETUP", "OSD SETUP", "VIDEO SETUP", "AUDIO SETUP", "RATINGS", and "OTHER SETUP".

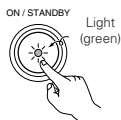
These presettings have been preset upon shipment from the factory. If you wish to change them to suit your specific purposes, refer to pages 40 to 45.

Before operating the remote control unit!

- Be sure to set the DVD mode using the remote control mode selector buttons.



- 1** Turn on the power.
- Press the power button, the power indicator lights and the power turns on.



Main unit



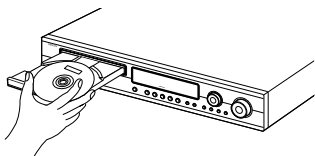
Remote control unit

- 2** Press the OPEN/CLOSE button to open the disc tray.



Main unit

- 3** Set the disc in the disc tray.



- 4** Press the OPEN/CLOSE button.



Main unit

- 5** Press the PLAY button.
- For many interactive DVDs and video CDs with playback control, a menu screen appears. In this case use the procedure in step 6 to select the desired item.



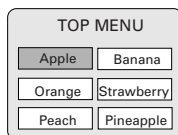
Main unit



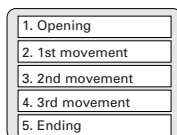
Remote control unit

* Interactive DVDs are DVDs including multiple angles, stories, etc.

Example: For DVDs with menu screens



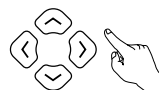
Example: For video CDs with playback control



- 6** Use the cursor buttons (↑, ↓, ← and →) to select the desired item.

- For some discs there is a second menu screen. If so, press the ►► button to display the next menu screen. (See the disc's jacket.)

* The cursor buttons (↑, ↓, ← and →) do not work for video CDs. Use the number buttons to select the desired item.



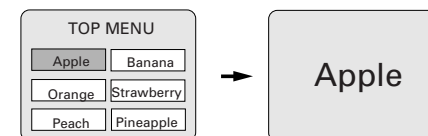
Remote control unit

- 7** Press the ENTER button.
- The desired item is selected and playback starts.
 - You can return to the menu screen by pressing the TOP MENU button while the DVD is playing, though this depends on the disc.
 - Press the RETURN button during playback of a video CD to return to the menu screen.



Remote control unit

Example: When "Apple" is selected



NOTES:

- If a hand icon appears on the TV screen while buttons are being operated, that operation is not possible on the ADV-1000 or with that disc.
- Set the disc in the disc guide.
- Only set one disc in the tray.
- The disc keeps turning while the menu screen is displayed on the TV screen.

(4) Stopping Playback

- 1** During playback, press the STOP button on the main unit or the remote control unit, playback stops and wall paper is displayed.

<Resume play memory function (DVD only)>

- With the ADV-1000, when the STOP button is pressed, that position is stored in the memory. At this time, "▶" flashes on the display. When the PLAY button is pressed after pressing the STOP button, playback resumes from the position at which it was stopped. The resume play memory function is cancelled if the disc tray is opened or the STOP button is pressed a second time.



Main unit



Remote control unit

* The resume play memory function only works for discs for which the elapsed time is shown on the display during playback.

Auto power off function.

- The ADV-1000 is equipped with a function that automatically switches the power to standby if no operation is performed for 30 minutes while in the stop mode with the function set to DVD.
- This function is set to off upon shipment from the factory. If you wish to turn it on, set the "DVD auto power off setting" to "YES" as described on page 17.

(5) Playing Still Pictures (Pausing)

- 1** During playback, press the PAUSE button on the main unit or the remote control unit.

- Press the PLAY button to resume normal playback.



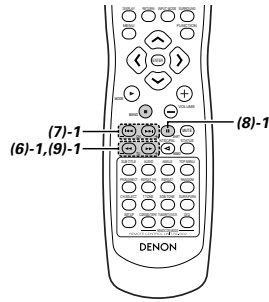
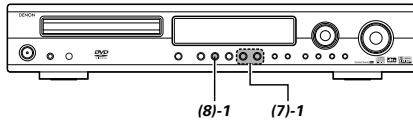
Main unit



Remote control unit

Before operating the remote control unit!

- Be sure to set the DVD mode using the remote control mode selector buttons.

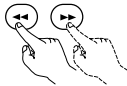


(6) Forward / Reverse Searching

1 During playback, press one of the ◀◀/▶▶ buttons on the remote control unit.

- ◀◀ : Reverse direction
- ▶▶ : Forward direction

- When pressed again, the search speed increases (in four steps).
- Press the PLAY button to resume normal playback.



Remote control unit

NOTE:

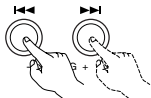
- In some cases the menu screen may reappear when one of the ◀◀ / ▶▶ buttons is pressed during menu playback on a video CD.

(7) Skipping to the Beginning of Chapters or Tracks

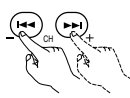
1 During playback, press one of the skip buttons on the main unit or the remote control unit.

- ◀◀ : Reverse direction (PREVIOUS)
- ▶▶ : Forward direction (NEXT)

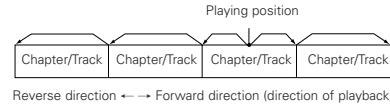
- A number of chapters or tracks equal to the number of times the button is pressed is skipped.
- When the skip back button is pressed once, the pickup returns to the beginning of the currently playing chapter or track.



Main unit



Remote control unit



NOTE:

- In some cases the menu screen may reappear when one of the ◀◀ / ▶▶ buttons is pressed during menu playback on a video CD.

(8) Playing Frame by Frame (for DVDs and video CDs only) Tracks

1 During playback, press the || button on the main unit or the remote control unit.

- The picture moves forward one frame each time the button is pressed.
- Press the PLAY button to resume normal playback.



Main unit



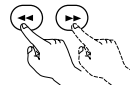
Remote control unit

(9) Slow Playback (for DVDs and video CDs only)

1 In the still mode, press one of the ◀◀/▶▶ buttons on the remote control unit.

- ◀◀ : Reverse direction
- ▶▶ : Forward direction

- When pressed again, the slow play speed increases. (Four steps) (Three steps on video CDs)
- Press the PLAY button to resume normal playback.

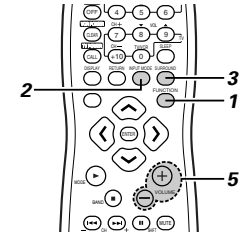
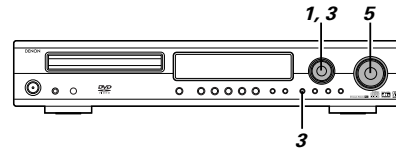


Remote control unit

NOTE:

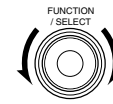
- Reverse slow play is not possible on video CDs.

12 OPERATION



Input mode setting

1 Either turn the FUNCTION/SELECT dial on the main unit or press the FUNCTION button on the remote control unit to select the input function to played.

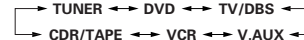


Main unit



Remote control unit

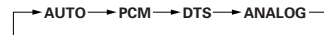
- The function switches as shown below.
- The function only changes in the "→" direction when operated from the remote control unit.



2 When DVD, TV/DBS or V.AUX was selected as the input function, press the remote control unit's INPUT MODE button to select the input mode.



Remote control unit



- "ANALOG" cannot be selected when "DVD" was selected as the input function.

Input mode selection function

- The input mode can be selected when the input function is set to DVD, TV/DBS or V.AUX.
- Different input modes can be selected for each input function. The selected input mode is stored in the memory for the individual input functions.
- When the input function is set to something other than the above, "ANALOG ONLY" is displayed and the input mode cannot be selected.

① AUTO (auto mode)

In this mode, the type of signal being input to the digital and analog input terminals is detected and the program in the set's surround decoder is switched automatically to play the signals for the selected input function.

The presence or absence of digital signals is detected, the signals input to the digital input are identified and decoding and playback are performed automatically in DTS, Dolby Digital or PCM (2 channel stereo) format.

If no digital signal (TV/DBS and V.AUX) is being input, the analog input jacks are selected.

- ② PCM (exclusive PCM signal playback mode) Decoding and playback are only performed when PCM signals are being input.
- ③ DTS (exclusive DTS signal playback mode) Decoding and playback are only performed when DTS signals are being input.
- ④ ANALOG (exclusive analog audio signal playback mode)

The signals input to the analog input jacks are played.

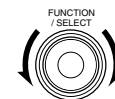
(This cannot be selected in the DVD mode.)

* The input mode automatically switches to "AUTO" if you switch the input function to DVD from anything other than DVD.

3 Either press the SURROUND MODE button on the main unit then turn the FUNCTION/SELECT dial or press the SURROUND button on the remote control unit to select the surround mode.



Main unit

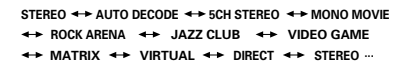


Main unit



Remote control unit

- The function switches as shown below.
- The function only changes in the "→" direction when operated from the remote control unit.

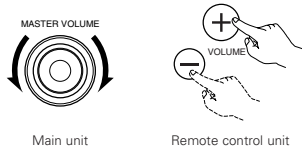


- The "AUTO DECODE" mode can be selected when the AUTO DECODE button on the main unit, the "5CH STEREO" mode with the 5CH STEREO button on the main unit.

- 4** Start playback on the selected component.
- For operating instructions, refer to the component's manual.

- 5** Either turn the MASTER VOLUME dial on the main unit or use the VOLUME buttons on the remote control unit to adjust the volume.

M. VOLUME -20 The volume level is displayed on the display.



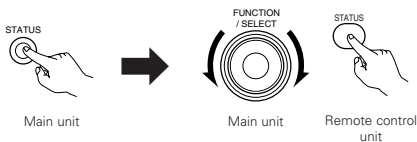
- The volume can be adjusted within the range of -60 to 0 to +18 dB. Note that depending on the input signal, surround mode, speaker settings and channel level setting, it may not be possible to adjust the volume up to +18 dB.

Input mode when playing DTS sources

- If DTS-compatible CDs are played in the "PCM" mode, noise is output because DTS playback is not possible. To play a DTS-compatible source, be sure to set the input mode to "AUTO" or "DTS".
- Noise may be generated at the beginning of playback and while searching during DTS playback in the AUTO mode. If so, play in the DTS mode.

To check the currently playing program source, etc.

Press the STATUS button.

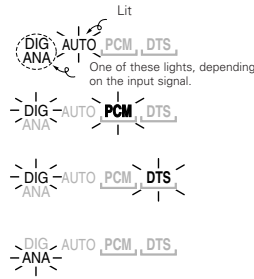


* To perform this operation on the main unit, press the STATUS button, then turn the FUNCTION/SELECT knob.

The current program source and surround settings are shown on the display each time the button is pressed. (When the function is set to DVD, the information is also displayed on the TV screen.)

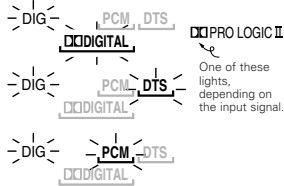
Input mode display

- In the AUTO mode
- In the DIGITAL PCM mode
- In the DIGITAL DTS mode
- In the ANALOG mode



Input signal display

- DOLBY DIGITAL
- DTS
- PCM



- "DIG" lights when digital signals are input properly. If "DIG" is flashing, check whether the connections are proper and whether the input component's power is on.

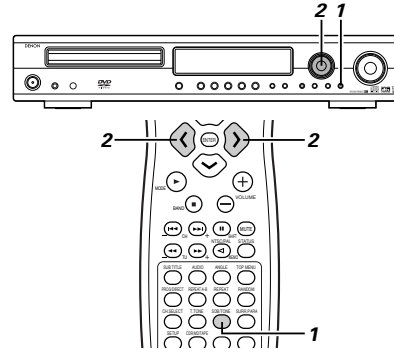
Input mode when playing DTS sources

- When playing CDs containing recordings of live concerts, etc., in the "AUTO" mode, the sound may be slightly broken at the beginning. If this happens, switch to the "PCM" mode.

After starting playback

[1] Adjusting the sound quality (SDB / TONE)

The SDB/TONE function will not work in the direct mode.

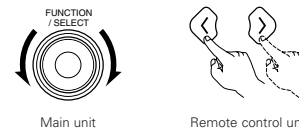


- 1** Press the SDB/TONE button.
- The tone switches as follows each time the SDB/TONE button is pressed.



DEFEAT → SDB → BASS → TREBLE (ON/OFF)

- 2** With the name of the volume to be adjusted selected, turn the FUNCTION/SELECT knob or cursor button (< , >) to adjust the level.



DEFEAT

- The signals do not pass through the SDB, bass and treble adjustment circuits, providing higher quality sound.

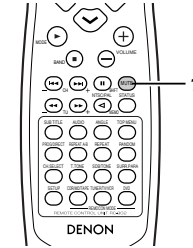
SDB

- Either turn the FUNCTION / SELECT dial or use the (< , >) cursor buttons to select "ON" or "OFF".

BASS, TREBLE

- To increase the bass or treble: Turn the control clockwise or press the cursor button. (The bass or treble sound can be increased to up to +10 dB in steps of 2 dB.)
- To decrease the bass or treble: Turn the control clockwise or press the cursor button. (The bass or treble sound can be decreased to up to -10 dB in steps of 2 dB.)
- * If no operation is performed within 4 seconds, the display switches back to what was previously displayed.

[2] Turning the sound off temporarily (MUTING)



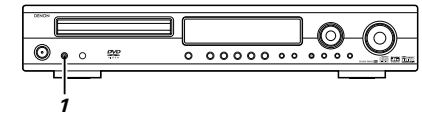
- 1** Use this to turn off the audio output temporarily. Press the MUTE button.
- * Cancelling MUTE mode. Press the MUTE button again.



NOTE:

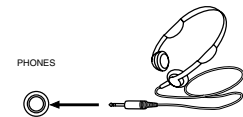
- The setting is cancelled if the set's power is turned off.

[3] Listening over head phones



- 1** Connect the headphones to the PHONES jack of the front panel.

* The output to the speaker automatically is turned off and no sound is produced from the speakers.



13 DOLBY / DTS SURROUND

Surround

This unit is equipped with a digital signal processing circuit that lets you play program sources in the surround mode to achieve the same sense of presence as in a movie theater.

Dolby Surround

(1) Dolby Digital (Dolby Surround AC-3)

Dolby Digital is the multi-channel digital signal format developed by Dolby Laboratories.


Dolby Digital consists of up to "5.1" channels - front left, front right, center, surround left, surround right, and an additional channel exclusively reserved for additional deep bass sound effects (the Low Frequency Effects - LFE - channel, also called the ".1" channel, containing bass frequencies of up to 120 Hz).

Unlike the analog Dolby Pro Logic format, Dolby Digital's main channels can all contain full range sound information, from the lowest bass, up to the highest frequencies - 22 kHz. The signals within each channel are distinct from the others, allowing pinpoint sound imaging, and Dolby Digital offers tremendous dynamic range from the most powerful sound effects to the quietest, softest sounds, free from noise and distortion.

■ Dolby Digital and Dolby Pro Logic

Comparison of home surround systems	Dolby Digital	Dolby Pro Logic
No. recorded channels (elements)	5.1 ch	2 ch
No. playback channels	5.1 ch	4 ch
Playback channels (max.)	L, R, C, SL, SR, SW	L, R, C, S (SW - recommended)
Audio processing	Digital discrete processing Dolby Digital (AC-3) encoding/decoding	Analog matrix processing Dolby Surround
High frequency playback limit of surround channel	20 kHz	7 kHz

■ Dolby Digital compatible media and playback methods

Marks indicating Dolby Digital compatibility:  and .

The following are general examples. Also refer to the player's operating instructions.

Media	Dolby Digital output jacks	Playback method (reference page)
LD (VDP)	Coaxial Dolby Digital RF output jack ※ 1	Set the input mode to "AUTO". (Pages 19, 20)
DVD	Optical or coaxial digital output (same as for PCM) ※ 2	Set the input mode to "AUTO". (Pages 19, 20)
Others (satellite broadcasts, CATV, etc.)	Optical or coaxial digital output (same as for PCM)	Set the input mode to "AUTO". (Pages 19, 20)

- ※ 1 Use a commercially available adapter to connect Dolby Digital RF (AC-3RF) output signals to the digital input terminals. (Refer to the adapter's operating instructions.)
Please refer to the instruction manual of the adapter when making connection.
- ※ 2 To play in Dolby Digital Surround on the ADV-1000, set "DVD setting change" - "Audio setting" - "Digital output" to "Normal" in the setup. (The factory default is "Normal".)

(2) Dolby Pro Logic II

- Dolby Pro Logic II is a new multi-channel playback format developed by Dolby Laboratories using feedback logic steering technology and offering improvements over conventional Dolby Pro Logic circuits.
- Dolby Pro Logic II can be used to decode not only sources recorded in Dolby Surround (※) but also regular stereo sources into five channels (front left, front right, center, surround left and surround right) to achieve surround sound.
- Whereas with conventional Dolby Pro Logic the surround channel playback frequency band was limited, Dolby Pro Logic II offers a wider band range (20 Hz to 20 kHz or greater). In addition, the surround channels were monaural (the surround left and right channels were the same) with previous Dolby Pro Logic, but Dolby Pro Logic II they are played as stereo signals.
- Various parameters can be set according to the type of source and the contents, so it is possible to achieve optimum decoding (see pages 23, 24).

※ Sources recorded in Dolby Surround

These are sources in which three or more channels of surround have been recorded as two channels of signals using Dolby Surround encoding technology.

Dolby Surround is used for the sound tracks of movies recorded on DVDs, LDs and video cassettes to be played on stereo VCRs, as well as for the stereo broadcast signals of FM radio, TV, satellite broadcasts and cable TV.

Decoding these signals with Dolby Pro Logic makes it possible to achieve multi-channel surround playback. The signals can also be played on ordinary stereo equipment, in which case they provide normal stereo sound.

There are two types of DVD Dolby surround recording signals.

- ① 2-channel PCM stereo signals
- ② 2-channel Dolby Digital signals

Regardless of the signal being played, when the 2-channel decode mode is set to the "Pro Logic II" mode in the "AUTO DECODE" mode, the surround mode is automatically set to "Dolby Pro Logic II".

■ Sources recorded in Dolby Surround are indicated with the logo mark shown below.

Dolby Surround support mark: 

Manufactured under license from Dolby Laboratories.
"Dolby", "Pro Logic" and the double-D symbol are trademarks of Dolby Laboratories.

DTS Digital Surround

Digital Theater Surround (also called simply DTS) is a multi-channel digital signal format developed by Digital Theater Systems. DTS offers the same "5.1" playback channels as Dolby Digital (front left, front right and center, surround left and surround right) as well as the stereo 2-channel mode. The signals for the different channels are fully independent, eliminating the risk of deterioration of sound quality due to interference between signals, crosstalk, etc. DTS features a relatively higher bit rate as compared to Dolby Digital (1234 kbps for CDs and LDs, 1536 kbps for DVDs) so it operates with a relatively low compression rate. Because of this the amount of data is great, and when DTS playback is used in movie theaters, a separate CD-ROM synchronized with the film is played. With LDs and DVDs, there is of course no need for an extra disc; the pictures and sound can be recorded simultaneously on the same disc, so the discs can be handled in the same way as discs with other formats. Other media include CDs recorded in DTS. These are the same discs as conventional CDs (recorded in 2 channels) but include 5.1 channel surround signals. They do not include images, but they do permit surround playback on the ADV-1000 and on CD players. DTS surround track playback offers the same intricate, grand sound as in a movie theater, right in your own listening room.

DTS compatible media and playback methods

Marks indicating DTS compatibility:  and .

The following are general examples. Also refer to the player's operating instructions.

Media	DTS Digital output jacks	Playback method (reference page)
CD	Optical or coaxial digital output (same as for PCM) ※ 2	Set the input mode to "AUTO" or "DTS" (pages 19, 20). Never set the mode to "ANALOG" or "PCM". ※ 1
LD (VDP)	Optical or coaxial digital output (same as for PCM) ※ 2	Set the input mode to "AUTO" or "DTS" (pages 19, 20). Never set the mode to "ANALOG" or "PCM". ※ 1
DVD	Optical or coaxial digital output (same as for PCM) ※ 3	Set the input mode to "AUTO" or "DTS" (pages 19, 20).

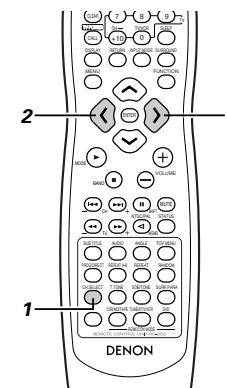
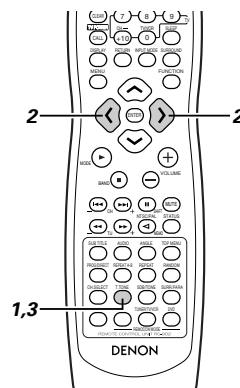
- ※ 1 DTS signals are recorded in the same way on CDs and LDs as PCM signals. Because of this, the un-decoded DTS signals are output as random "hissy" noise from the CD or LD player's analog outputs. If this noise is played with the amplifier set at a very high volume, it may possibly cause damage to the speakers. To avoid this, be sure to switch the input mode to "AUTO" or "DTS" before playing CDs or LDs recorded in DTS. Also, never switch the input mode to "ANALOG" or "PCM" during playback. The same is true when playing CDs and LDs recorded in DTS on the ADV-1000 or on LD/DVD compatible players. With DVDs, the DTS signals are recorded with a special recording method so there is no problem. For DVDs, the DTS signals are recorded in a special way so this problem does not occur.
- ※ 2 The signals provided at the digital outputs of a CD or LD player may undergo some sort of internal signal processing (output level adjustment, sampling frequency conversion, etc.). In this case the DTS-encoded signals may be processed erroneously, in which case they cannot be decoded by this unit, or may only produce noise. Before playing DTS signals for the first time, turn down the master volume to a low level, start playing the DTS disc, then check whether the DTS indicator on this unit (see pages 19, 20) lights before turning up the master volume.
- ※ 3 To play in DTS Digital Surround on the ADV-1000, set "DVD setting change" — "Audio setting" — "Digital output" to "Normal" in the setup. (The factory default is "Normal".)

"DTS" and "DTS Digital Surround" are registered trademarks of Digital Theater Systems, Inc.

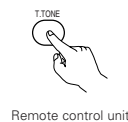
14 SURROUND PLAYBACK

(1) Before playing with the surround function

- Adjustments using the test tones can only be performed in the "Auto" mode and are only valid for the Auto decode Surround modes. The adjusted levels are automatically stored in the memory.
- Even after adjusting using the test tones, the various channels can be adjusted using the procedure described below to suit the program source and your preferences.



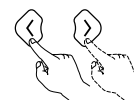
1 Press the TEST TONE button.



Remote control unit

2 Test tones are output from the different speakers. Use the channel volume adjust buttons to adjust so that the volume of the test tones is the same for all the speakers.

- The channel to be adjusted can be changed using the CH.SELECT button and the (◀ and ▶) cursor buttons on the remote control unit during the adjustments using the test tones.



Remote control unit

3 After adjusting using the test tones, adjust the channel levels either according to the playback sources or to suit your tastes, as described below.



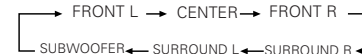
Remote control unit

1 Select the speaker whose level you want to adjust.

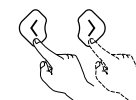
- The channel switches as shown below each time the button is pressed.



Remote control unit



2 Adjust the volume level of the selected speaker while the channel level is displayed.

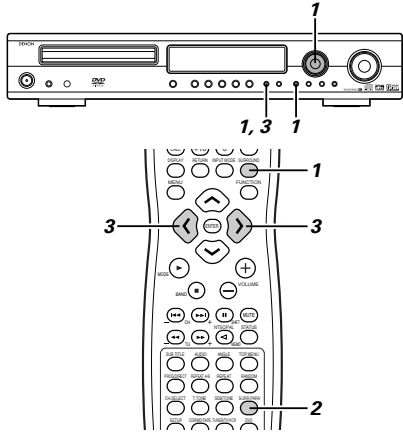


Remote control unit

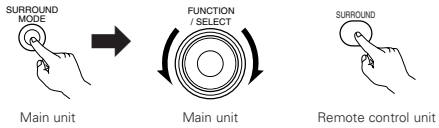
[1] 2-channel mode settings

- In the auto decode mode, it is possible to automatically conduct multi-channel playback in the Dolby Digital or DTS surround mode or play in the stereo 2-channel mode (AUTO STEREO mode: factory default setting). For 2-channel input signals, one of four play modes can be set with the 2-channel mode setting (Auto Stereo, Dolby Pro-Logic II Cinema, Dolby Pro-Logic II Music and Dolby Pro-Logic).

※ When the function is set to VCR, CDR/TAPE or TUNER, the "Auto Stereo" 2-channel mode cannot be selected. To play in stereo, set the surround mode to "STEREO" (page 19).

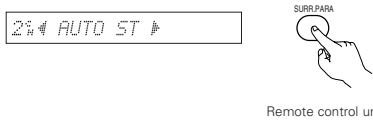


- 1** Set the surround mode to "AUTO DECODE".
- "AUTO DECODE" is displayed, then the normal display reappears.



※ If the mode is set to anything other than AUTO DECODE, the AUTO DECODE mode can be set using the AUTO DECODE/2CH MODE button on the main unit.

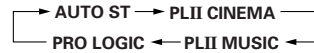
- 2** Press the SURR.PARA button on the remote control unit and select the 2-channel decode mode.



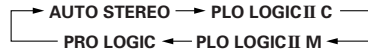
※ This can be selected when the digital input consists of no signal, PCM signals, Dolby Digital 2-channel signals, as well as when the analog input is selected.

- 3** Select the desired 2-channel decode mode using the (< and >) cursor buttons on the remote control unit.

- The mode switches as follows each time one of the buttons is pressed:



※ If the AUTO DECODE/2CH MODE button on the main unit is pressed when the mode is already set to AUTO DECODE, the mode switches to the 2-channel mode. The mode switches as follows each time the button is pressed.



※ The Auto Stereo mode can be selected when the function is set to DVD, TV/DBS or V.AUX.

※ Once the surround parameters have been set, stop operating buttons. After several seconds the display returns to normal and the settings are automatically validated.

NOTES:

- The 2-channel decode mode cannot be set when Dolby Digital 5.1-channel signals or DTS signals are being input.
- The 2-channel decode mode is stored separately for the DVD, TV/DBS and V.AUX modes.

Surround parameters (1) (2-channel mode)

AUTO-ST (auto stereo) mode

2-channel sources are played in 2-channel stereo.

When this mode is selected in the auto decode mode, multi-channel sources (DVD, BS digital, etc.) are played in the multi-channel mode, while 2-channel sources (CDs, etc.) are automatically played in stereo.

PLII CINEMA / PLII MUSIC / PRO LOGIC mode

Even 2-channel sources undergo Dolby Pro Logic II processing and are played in the multi-channel mode.

Dolby Digital Pro-Logic II processing is applied to 2-channel sources as well to play them in the multi-channel mode.

When this mode is selected in the auto decode mode, multi-channel sources (DVD, BS digital, etc.) are played in the multi-channel mode, and 2-channel sources (CDs, etc.) are also automatically processed with Dolby Digital Pro-Logic II and played in the multi-channel mode.

• **PLII CINEMA (Dolby Pro Logic II CINEMA) mode**

This mode is suited for playing movies recorded in Dolby Surround as well as regular sources recorded in stereo. A high precision decoder decodes the signals into 5 channels, resulting in uniform 360 degree surround sound even with 2-channel sources.

The MUSIC mode may be more effective for sources containing a high ratio of stereo music. Try both and choose the most effective mode.

• **PLII MUSIC (Dolby Pro Logic II MUSIC) mode**

This mode is suited for surround playback of stereo music signals. The inverted phase signals (the reverberation component of the music signals contains a high ratio of these) are played from the surround channel, and at the same time the frequency response of the surround channel is optimized to achieve a natural sound with a sense of expansion. With music signals, the sound field expansion differs greatly according to the type of music, the recording conditions (live, etc.) and the contents of the signal source. Because of this, the MUSIC mode includes optional parameters for further adjusting the sound field.

• **PANORAMA**

The front stereo sound field image is extended to the surround channel.

This is effective if under normal conditions the stereo image is narrow and the surround effect seems weak.

• **DIMENSION**

This shifts the center of the sound field image to the front or surround side.

The playback balance of the different channels can be adjusted regardless of the amount of reverberation component in the source. If the sound field image is biased towards the front or surround side, this optional parameter can be used to correct it.

• **CENTER WIDTH**

This adjusts the method of playback of the center signal component from the center channel only to the front channel only.

When the center channel is played in a way prioritizing separation, the position of the front channel sound field is clearer but the overall sound field image concentrates at the center and the relationship between the different channels seems weaker. This parameter can be adjusted to improve the sense of stability of the sound field image and achieve natural horizontal expansion.

• **PRO LOGIC (Dolby Pro Logic) mode**

This is the conventional Dolby Pro Logic compatible mode. In this mode sources recorded in Dolby Surround are decoded with a playback image faithful to the original recording.

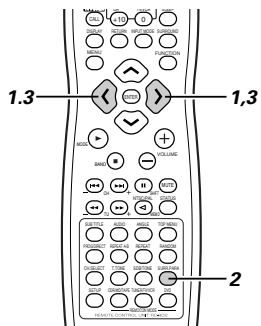
[2] Setting the parameters in the PLII CINEMA, PLII MUSIC and PRO LOGIC modes

- When PLII CINEMA, PLII MUSIC or PRO LOGIC is selected in the 2-channel mode, more detailed parameters can also be set for the different modes.

PLII MUSIC mode: Use the procedure described below to make the settings.
 PLII CINEMA and PRO LOGIC modes: Refer to step 6 on pages 24 and 25.

- Program sources marked in parentheses **XX** (DOLBY SURROUND) and 2-channel sources (CDs, etc.) are decoded using Dolby Pro-Logic II processing and played in the multi-channel mode.

- Cinema (PLII CINEMA) mode: This mode is suited for movies and other Dolby Surround programs.
- Music (PLII MUSIC) mode: This mode is suited for stereo music programs.
- Pro-Logic (PRO LOGIC) compatible mode: This is the conventional Dolby Surround Pro-Logic mode.



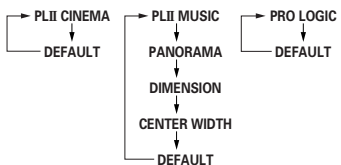
1 At the 2-channel setting (page 23), select PLII C, PLII M or PRO LOGIC.

Remote control unit

2 Set the surround parameters according to the selected mode.

- The parameters switch as shown below each time the button is pressed.

Remote control unit



3 Set the various surround parameters.

- PANORAMA setting

* The selected setting ("ON" or "OFF") flashes.

- DIMENSION setting

- CENTER WIDTH setting

- DEFAULT setting

* If "YES" is selected, the settings are reset to the factory defaults.

- Once the surround parameters have been set, stop operating buttons. After several seconds the display returns to normal and the settings are automatically validated.
- This completes the setting of the parameters

NOTES:

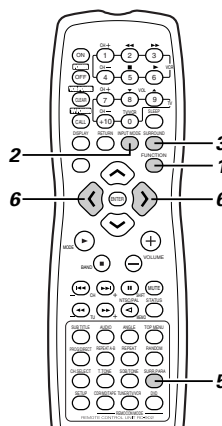
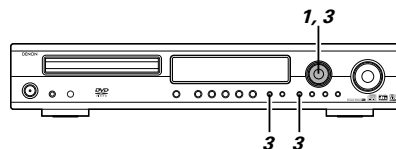
- The 2-channel mode setting is stored in the memory for the individual functions.
- It is not possible to play DTS digital input sources in the Dolby mode.

(2) Playing in the AUTO DECODE mode

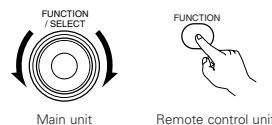
- In the auto decode mode it is possible to play in the Dolby Digital or DTS Surround mode, depending on the format of the input signal.
- It is also possible to play in the Auto Stereo, Dolby Pro-Logic II Cinema/Music or Dolby Pro-Logic mode, according to the 2-channel mode setting.

[1] Dolby Digital and DTS surround playback (digital inputs only)

- Applicable sources
- Digital inputs (TV/DBS and V.AUX functions, including DVD playback discs)
- Dolby Digital multi-channel sources
- DTS sources

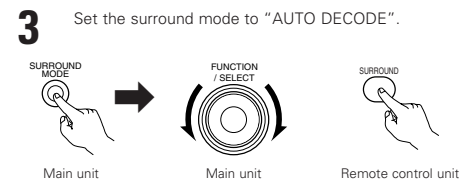


1 Select the digital input function. (DVD or TV/DBS or V.AUX digital input)



2 Set the input mode to "AUTO".

- DTS sources can also be played in the input mode "DTS".



3 Set the surround mode to "AUTO DECODE".

* If the mode is set to anything other than AUTO DECODE, the AUTO DECODE mode can be set using the AUTO DECODE/2CH MODE button on the main unit.

4 Play a program source containing the **DD DOLBY DIGITAL** or **dts** mark.

- The Dolby Digital indicator lights when playing a Dolby Digital source.
- The DTS indicator lights when playing a DTS source.

* The mode is selected automatically according to the format of the source being played.

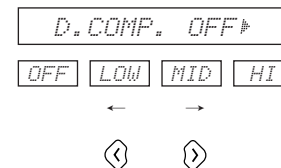
5 Display the surround parameters for the source.

- The surround parameters are also displayed on the screen when the function is set to DVD.

6 Select the various surround parameters and set them.

- The display returns to normal if no operation is performed for 4 seconds while the parameters are displayed.

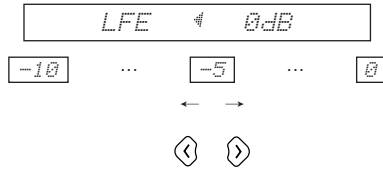
- D.COMP. setting



* This parameter is not displayed when playing DTS source.

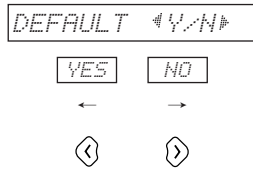
6

- LFE level setting



※ The LFE level can be adjusted between -10 dB and 0 dB in steps of 1 dB.

- DEFAULT setting



※ When "YES" is selected, the settings are reset to their factory default values.

※ Stop operating buttons once the surround parameter settings have been completed. After several seconds the normal display reappears and the settings are automatically set.

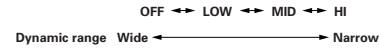
NOTES:

- When "DEFAULT" is selected and the < cursor button is pressed ("YES"), "D.COMP." is automatically set to "OFF" and "LFE" is reset to the default value. ("D.COMP." is not valid for DTS source.)
- Signals encoded in Dolby Digital can only be played in the Auto decode (Dolby Digital, Dolby Pro Logic II or Auto stereo), Direct, stereo or virtual modes. Other modes do not work when playing Dolby Digital signals.
- DTS signals can only be played in the Auto decode (DTS), Direct or stereo modes. Other modes do not work when playing DTS signals.
- DTS signals can also be played in the "DTS" input mode. (See page 19.) In this case, decoding and playback are only performed when DTS signals are input.

Surround parameters (2)

D.COMP. (Dynamic Range Compression):

- This parameter adjusts the dynamic range of the Dolby Digital sound. When listening with the volume turned relatively low, at night for example, set this to the "HI" side to lower the peak of the sound and amplify the quieter sounds, narrowing the dynamic range and making the sound easier to listen to. Set to "OFF" to turn this function off.



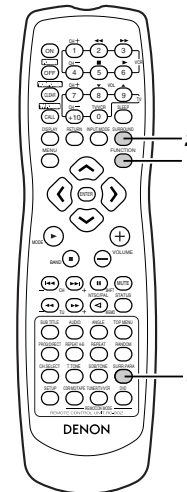
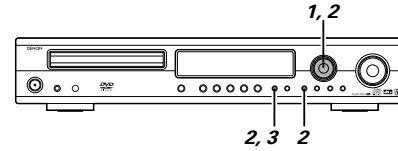
LFE (Low Frequency Effect):

- Program source and adjustment range
 1. Dolby Digital: -10 dB to 0 dB
 2. DTS Surround: -10 dB to 0 dB
- When Dolby Digital encoded software is played, it is recommended that the LFE LEVEL be set to 0 dB for correct Dolby Digital playback.
- When DTS encoded movie software is played, it is recommended that the LFE LEVEL be set to 0 dB for correct DTS playback.
- When DTS encoded music software is played, it is recommended that the LFE LEVEL be set to -10 dB for correct DTS playback.

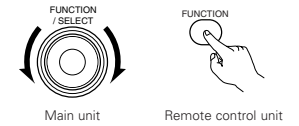
[2] Playing in the Dolby Pro-Logic II mode(All function)

- Playback is performed according to the 2-channel mode and PLII CINEMA, PLII MUSIC and PRO LOGIC mode parameter settings.

- Applicable sources
 - Digital inputs (TV/DBS and V.AUX functions, including DVD playback discs)
 - Dolby Digital 2-channel sources
 - PCM 2-channel sources (except 96 kHz PCM)
 - 2-channel analog input sources (all functions)

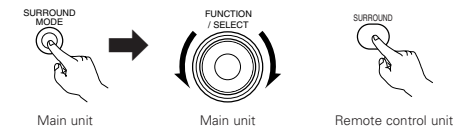


1 Select the input function.



※ Dolby Pro Logic II playback is not possible in the digital input function (DVD, TV/DBS or V.AUX) "DTS" input mode.

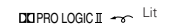
2 Set the AUTO DECODE Surround mode.



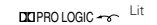
※ If the mode is set to anything other than AUTO DECODE, the AUTO DECODE mode can be set using the AUTO DECODE/2CH MODE button on the main unit.

3 Play a program source with the mark or a 2-channel source.

- The source is played according to the Dolby Pro Logic II mode setting.
- The Dolby Pro-Logic II indicator lights when in the CINEMA and MUSIC modes.



- In the Dolby Pro-Logic mode, the Dolby Pro-Logic indicator lights.



※ The mode can be changed during playback by changing the 2-channel mode (surround parameter) or by pressing the AUTO DECODE/2CH MODE button.

4 Set the surround parameters according to the selected mode.

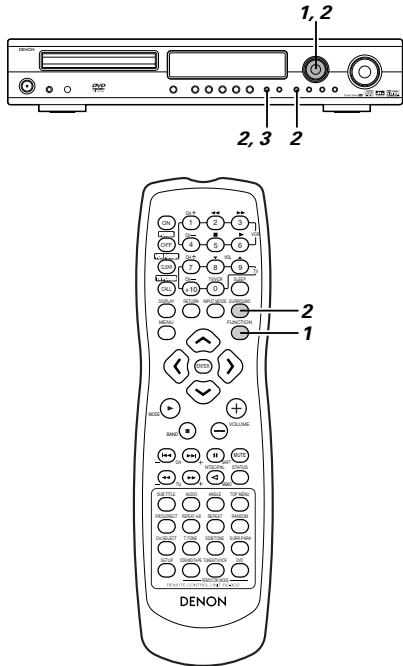
- Refer to steps 1 to 3 at "Setting the parameters in the PLII CINEMA, PLII MUSIC and PRO LOGIC modes" (page 24).



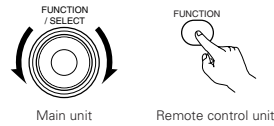
Remote control unit

[3] Playing in the auto stereo mode (DVD, TV/DBS and V.AUX function only)

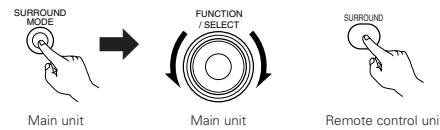
- For the DVD, TV/DBS and V.AUX functions, when the 2-channel mode is set to the auto stereo mode, 2-channel sources are played in 2-channel stereo.
- Applicable sources
 - Digital inputs (TV/DBS and V.AUX functions, including DVD playback discs)
 - Dolby Digital 2-channel sources
 - PCM 2-channel sources (include 96 kHz PCM)
 - 2-channel analog input sources (TV/DBS and V.AUX functions)



1 Select the input function. (DVD, TV/DBS or V.AUX)

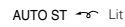


2 Set the AUTO DECODE Surround mode.



※ If the mode is set to anything other than AUTO DECODE, the AUTO DECODE mode can be set using the AUTO DECODE/2CH MODE button on the main unit.

3 Play a 2-channel source.
• The AUTO ST indicator lights.



※ The mode can be changed to the Dolby Pro Logic II mode during playback by changing the 2-channel mode (surround parameter) or by pressing the AUTO DECODE/2CH MODE button.

NOTE:

- DTS 2-channel sources are played in two channels in the DTS mode, not in the auto stereo mode.

15 DSP SURROUND SIMULATION

(1) Surround modes and their features

- This unit is equipped with a high performance DSP (Digital Signal Processor) which uses digital signal processing to synthetically recreate the sound field. One of 7 preset surround modes can be selected according to the program source and the parameters can be adjusted according to the conditions in the listening room to achieve a more realistic, powerful sound. These surround modes can also be used for program sources not recorded in Dolby Surround Pro Logic or Dolby Digital.

1	5CH STEREO	In this mode, the signals of the front left channel are output from the left surround channel, the signals of the front right channel are output from the right surround channel, and the same (in-phase) component of the left and right channels is output from the center channel. This mode provides all speaker surround sound, but without directional steering effects, and works with any stereo program source.
2	MONO MOVIE (NOTE 1)	Select this when watching monaural movies for a greater sense of expansion.
3	ROCK ARENA	Use this mode to achieve the feeling of a live concert in an arena with reflected sounds coming from all directions.
4	JAZZ CLUB	This mode creates the sound field of a live house with a low ceiling and hard walls. This mode gives jazz a very vivid realism.
5	VIDEO GAME	Use this to enjoy video game sources.
6	MATRIX	Select this to emphasize the sense of expansion for music sources recorded in stereo. Signals consisting of the difference component of the input signals (the component that provides the sense of expansion) processed for delay are output from the surround channel.
7	VIRTUAL	Select this mode to enjoy a virtual sound field, produced from the front 2-channel speakers.

※ Depending on the program source being played, the effect may not be very noticeable.
In this case, try other surround modes, without worrying about their names, to create a sound field suited to your tastes.

NOTE 1: When playing sources recorded in monaural, the sound will be one-sided if signals are only input to one channel (left or right), so input signals to both channels. If you have a source component with only one audio output (monophonic camcorder, etc.) obtain a "Y" adaptor cable to split the mono output to two outputs, and connect to the L and R inputs.

NOTES:

- Only the AUTO DECODE (Auto stereo), DIRECT and STEREO modes can be used when playing PCM signals with a sampling frequency of 96 kHz (such as from DVD-Video discs that contain 24 bit, 96 kHz audio). If such signals are input during playback in one of the other surround modes, the mode automatically switches to AUTO DECODE (Auto stereo).
- When DTS signals are input while playing in the virtual surround mode, the surround mode is automatically set to "STEREO".

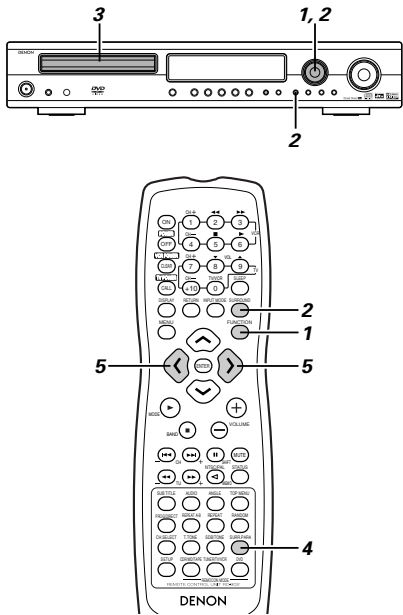
Personal Memory Plus

This set is equipped with a personal memorize function that automatically memorizes the surround modes and input modes selected for the input different sources. When the input source is switched, the modes set for that source last time it was used are automatically recalled.

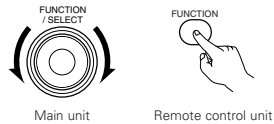
- Settings automatically stored in the memory for the individual input functions using the Personal Memory Plus function:
 - ① Surround mode (including 2-channel decode mode and Dolby Pro Logic II mode settings)
 - ② Input mode selection function

※ The surround parameters, SDB/tone control settings and playback level balance for the different output channels are memorized for each surround mode.

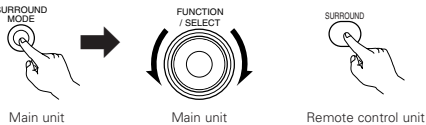
(2) DSP Surround simulation



1 Select the input source.



2 Select the surround mode for the input channel.



The surround mode switches in the following order each time the SURROUND MODE button is pressed:

STEREO ↔ AUTO DECODE ↔ 5CH STEREO ↔ MONO MOVIE
 ↔ ROCK ARENA ↔ JAZZ CLUB ↔ VIDEO GAME
 ↔ MATRIX ↔ VIRTUAL ↔ DIRECT ↔ STEREO ...

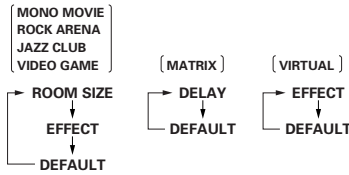
3 Play a program source.
 Refer to instruction manual for handling.

4 To enter the surround parameter setting mode, press the SURROUND mode.

- The surround parameter switches in the following order each time the SURROUND button is pressed for the different surround modes.

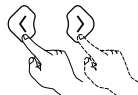


Remote control unit

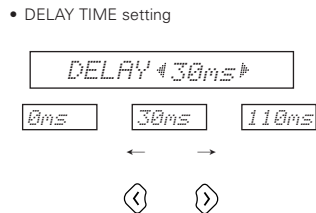
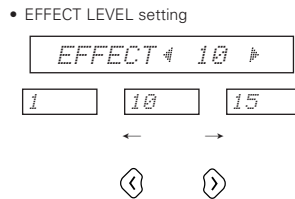
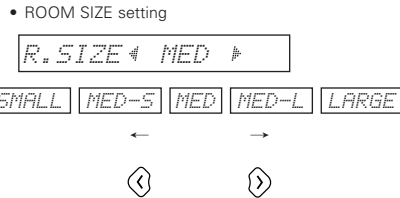


- There is no 5-channel stereo mode.
- Refer to page 28 for the parameters of the "AUTO DECODE" mode.

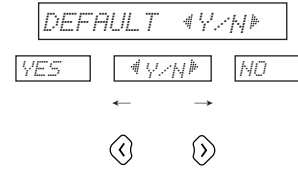
5 Display the parameter you want to adjust.
 Use the cursor buttons (◀, ▶) to select the surround parameter.



Remote control unit



5 • DEFAULT setting



- When "YES" is selected, the settings are reset to their factory default values.

- Stop operating buttons once the surround parameter settings have been completed. After several seconds the normal display reappears and the settings are automatically set.

NOTE:

- When playing PCM digital signals or analog signals in the 5CH STEREO, ROCK ARENA, JAZZ CLUB, VIDEO GAME, MONO MOVIE or MATRIX surround modes and the input signal switches to a digital signal encoded in Dolby Digital, the Dolby surround mode switches automatically. When the input signal switches to a DTS signal, the mode automatically switches to DTS surround.

Surround parameters (3)

ROOM SIZE:

- This sets the size of the sound field. There are five settings: "small", "med.s" (medium-small), "medium", "med.l" (medium-large) and "large". "small" recreates a small sound field, "large" a large sound field.

EFFECT LEVEL:

- This sets the strength of the surround effect. The level can be set in 15 steps from 1 to 15. When the surround mode is set to "VIRTUAL", the effect level can be set in steps from 1 to 10. Lower the level if the sound seems distorted.

DELAY TIME:

- In the matrix mode only, the delay time can be set within the range of 0 to 110 ms.

■ Surround modes and parameters

Mode		Signals and adjustability in the different modes									
		Channel output				Input function playing signals and Surround mode					
						TV/DBS V.AUX DVD		TV/DBS V.AUX	VCR CDR/TAPE TUNER		
		FRONT L/R	CENTER	SURROUND L/R	SUB-WOOFER	When playing Dolby Digital signals		When playing DTS signals	When playing PCM signals	When playing Analog signals	When playing Analog signals
				2ch	Multi ch	2ch	Multi ch	2ch	2ch	2ch	
STEREO		○	×	×	⊗	○	○	○	○	○	○
AUTO DECODE	DOLBY DIGITAL	○	⊗	⊗	⊗	×	○	×	×	×	×
	DTS SURROUND	○	⊗	⊗	⊗	×	×	○	○	×	×
	DOLBY PL II	○	⊗	⊗	⊗	●	×	×	×	●	○
	AUTO STEREO	○	×	×	⊗	●	×	×	×	●	×
5CH STEREO		○	⊗	⊗	⊗	×	×	×	×	○	○
MONO MOVIE		○	⊗	⊗	⊗	×	×	×	×	○	○
ROCK ARENA		○	⊗	⊗	⊗	×	×	×	×	○	○
JAZZ CLUB		○	⊗	⊗	⊗	×	×	×	×	○	○
VIDEO GAME		○	⊗	⊗	⊗	×	×	×	×	○	○
MATRIX		○	⊗	⊗	⊗	×	×	×	×	○	○
VIRTUAL		○	×	×	⊗	○	○	×	×	○	○
DIRECT		○	×	×	⊗	○	○	○	○	○	○

○ : Signal/adjustable
 × : No signal/not adjustable
 ⊗ : Turned on or off by speaker configuration setting
 ● : Turned on or off by 2CH DECODE mode setting (Default: AUTO STEREO mode)

16 LISTENING TO THE RADIO

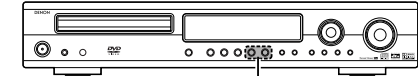
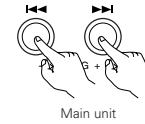
(1) Auto tuner presets

Use this to automatically search for FM broadcasts and store up to 40 stations at preset channels 1 to 40.

NOTE:

- If an FM station cannot be preset automatically due to poor reception, use the "Manual tuning" operation to tune in the station, then preset it using the manual "Preset memory" operation.

1 Using the TUNER function, press and hold the TUNING + and TUNING - buttons of the main unit for 2 seconds or longer.

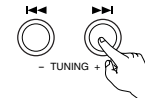


1,2

- "AUTO PRESET?" and "-: NO/+ : START" will alternately appear on the display of the main unit.

- Press the TUNING - button to cancel.

2 Use the TUNING + button to select "START".



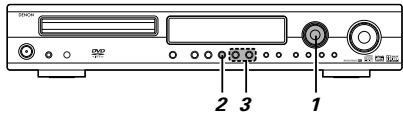
Main unit

- "SEARCH" flashes on the display and searching begins.
- "COMPLETED" appears once searching is completed.

Mode		Signals and adjustability in the different modes													
		SDB	TONE CONTROL	Parameter (default values are shown in parentheses)											
				2ch DECODE MODE	PLII MODE	Pro Logic II (MUSIC mode only)			ROOM SIZE	EFFECT LEVEL	DELAY TIME	Dolby Digital signal		DTS signal	
						PANORAMA	DIMENSION	CENTER WIDTH				D. COMP	LFE		
STEREO		○ (OFF)	○ (OFF)	×	×	×	×	×	×	×	×	○ (OFF)	○ (0dB)	○ (0dB)	
AUTO DECODE	DOLBY DIGITAL	○ (OFF)	○ (OFF)	○*1 (AUTO STEREO)	○*2 (CINEMA)	×	×	×	×	×	×	○ (OFF)	○ (0dB)	×	
	DTS SURROUND	○ (OFF)	○ (OFF)			×	×	×	×	×	×	×	×	×	○ (0dB)
	DOLBY PL II	○ (OFF)	○ (OFF)			○ (OFF)	○ (3)	○ (3)	×	×	×	×	○ (OFF)	○ (0dB)	×
	AUTO STEREO	○ (OFF)	○ (OFF)			×	×	×	×	×	×	×	○ (OFF)	○ (0dB)	×
5CH STEREO		○ (OFF)	○ (OFF)	×	×	×	×	×	×	×	×	×	×	×	
MONO MOVIE		○ (OFF)	○ (OFF)	×	×	×	×	×	○ (Medium)	○ (10)	×	×	×	×	
ROCK ARENA		○ (OFF)	○ (OFF)	×	×	×	×	×	○ (Medium)	○ (10)	×	×	×	×	
JAZZ CLUB		○ (OFF)	○ (OFF)	×	×	×	×	×	○ (Medium)	○ (10)	×	×	×	×	
VIDEO GAME		○ (OFF)	○ (OFF)	×	×	×	×	×	○ (Medium)	○ (10)	×	×	×	×	
MATRIX		○ (OFF)	○ (OFF)	×	×	×	×	×	×	○ (30msec)	×	×	×	×	
VIRTUAL		○ (OFF)	○ (OFF)	×	×	×	×	×	○ (10)	×	×	○ (OFF)	○ (0dB)	×	
DIRECT		×	×	×	×	×	×	×	×	×	×	○ (OFF)	○ (0dB)	○ (0dB)	

○ : Signal/adjustable
 × : No signal/not adjustable
 *1 : Can be selected for AUTO STEREO mode and DOLBY PLII mode
 *2 : Can be selected for CINEMA mode, MUSIC mode and DOLBY PL mode

(2) Tuning



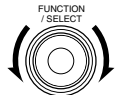
Example: Tuning in FM/AM stations

Before operating the remote control unit!

Be sure to press the proper remote control mode selector button to set the remote control unit to the AV mode.



- 1 Turn the FUNCTION/SELECT knob of the main unit or press the FUNCTION button of the remote control and select "TUNER".



Main unit



Remote control unit

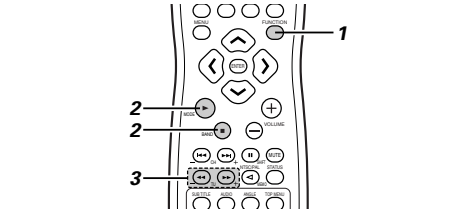
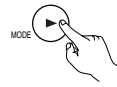
- 2 Select "FM" or "AM".
 - The selected "FM AUTO", "FM MONO" or "AM" is displayed.
 - When using the remote control, the mode button is used to select FM AUTO and MONO.



Main unit



Remote control unit



- 3 Adjust the receiving frequency.
 - When a station is received, the "TUNED" indication will light.



Main unit

Remote control unit

NOTE:
A humming sound may be heard when using a TV nearby while receiving AM programs. If this happens, move the system as far from the TV as possible.

Auto tuning

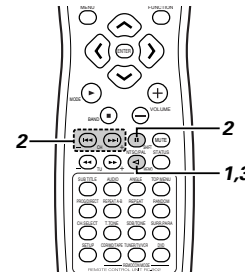
- When one of the Tuning +/- button is pressed, the frequency changes in steps of 50 kHz in the FM band, 9 kHz in the AM band.
- If one of the Tuning +/- button is held for over 1 second, the frequency continues to change when the button is released (auto tuning) and stops when a station is tuned in. Tuning will not stop at stations whose reception is poor.
- To stop the auto tuning function, press the Tuning +/- button once.

FM Stereo Reception

- When a program being broadcast in "FM AUTO" is received, the "ST" indicator lights and the program is received in stereo.
- If reception is poor and there is much noise in the stereo signals, press the BAND or MODE button to set the FM MONO mode.

(3) Presetting FM and AM stations

Example: Presetting FM station (currently tuned in) at preset number P03



Before operating the remote control unit!

Be sure to press the proper remote control mode selector button to set the remote control unit to the AV mode.



- 1 Tune in the broadcast station that is to be preset and press the Memory button.
 - A "P0-" ("P1-", "P2-" or "P3-") indication flashes for 10 seconds.



Remote control unit

- 2 While the "P0-" ("P1-", "P2-" or "P3-") indication is flashing, use the shift button and the channel (CH) buttons (-, +) to display the preset number "P03".

※ Each press of the shift button adds 10 to the current preset number in the range of P01 to P40.

Example:

Starting with a P13 setting, each press of the shift button results in the changes P13 → P23 → P33 → P03 → P13 →...



Remote control unit

Example:

Starting with a P0- setting, each press of the shift button results in the changes P0- → P10 → P20 → P30 → P40 → P10 →...

- 3 Press the MEMORY button while the "P03" display is flashing.
 - The "P03" display will light and presetting will be completed.



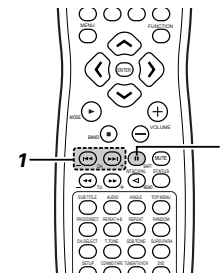
Remote control unit

Presetting

- Up to 40 AM or FM stations can be preset using this procedure.
- In addition to the reception frequency, the reception mode (monaural or auto) is also preset, so check the display when presetting stations.
- If a station is preset at a number where a station is already preset, the previous station is replaced with the new station.
- The preset memory is not cleared when the power cord is unplugged.

(4) Listening to preset stations

Example: Listening to the station preset at number P03 (This operation is only possible from the remote control unit.)



Before operating the remote control unit!

Be sure to press the proper remote control mode selector button to set the remote control unit to the AV mode.



- 1 Press the remote control shift button and the channel (CH) button (-, +) and select preset number "P03".



Remote control unit

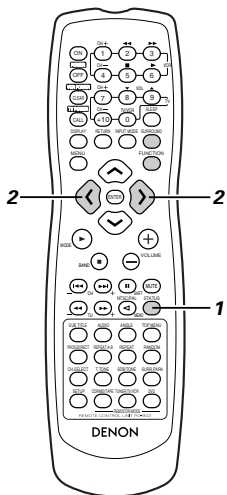
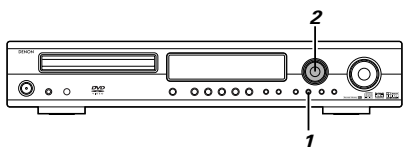
17 ON-SCREEN DISPLAY

The ADV-1000 is equipped with an on-screen display ("OSD") function that displays various types of information on the surround functions and the disc on the screen when the function is set to DVD.

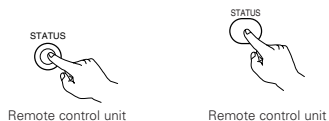
- ① Setup screen
 - This is used to select the speaker system being used (quick system setting) and to change the function of the ADV-1000 and various settings when playing discs (system setting change and DVD setting change).
 - The setup screen can be used regardless of the currently set function, but it cannot be operated while a disc is playing. Set the stop mode first.
- ② Display of disc information
 - When the function is set to DVD, the OSD displays information on the disc and appears when various playback functions are operated.
- ③ Display of surround function
 - When the function is set to DVD, information on the surround amplifier is also displayed and can be operated.

The OSD for the surround function (AV OSD) can be turned on and off.
(The OSD for the setup screen and DVD disc information cannot be set to "OFF".)

※ Set to "ON" upon shipment from the factory.

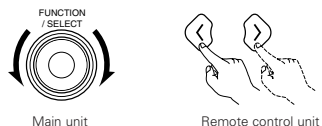


- 1 With the function set to DVD, press the STATUS button for at least 2 seconds.
 - "AV OSD ON ◀▶ OFF" is displayed.



※ The current setting is displayed in green.

- 2 Turn the AV OSD on or off.



⊙ or ◀ :ON

⊙ or ▶ :OFF

※ After several seconds, the display turns off and the setting is made.

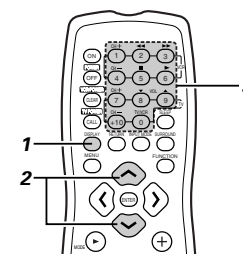
NOTES:

- Depending on the disc being played, the picture may be disturbed when the OSD turns on. This is not a malfunction. If this should happen, set the AV OSD to "OFF".
- The OSD is also output to the VCR video output terminals. Do not perform setup or OSD operations while recording with a video deck.

18 USING THE ON-SCREEN DISPLAY

(1) Operating using the disc information OSD

- Use this function to display and change information on the disc (titles, chapters, time, etc.)



Before operating the remote control unit!

- Be sure to set the DVD mode using the remote control mode selector buttons.

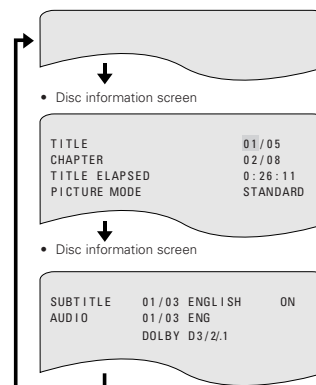


- 1 In the play mode, press the DISPLAY button.

- The On-Screen Display appears.
- The picture on the TV screen switches each time the button is pressed.
- The items displayed differ from disc to disc.

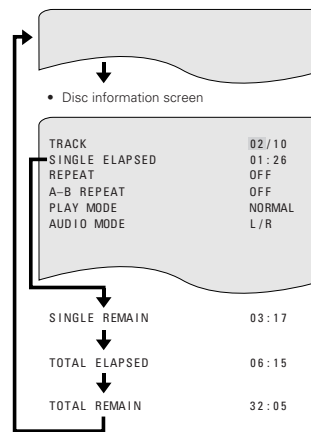
Example: For DVDs

- Normal playback screen



Example: For video and music CDs

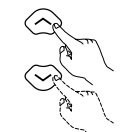
- Normal playback screen



- For the on-screen display for video CDs and music CDs, only the disc time changes.

- 2 Use the and ^, v cursor buttons to select the item you wish to change.

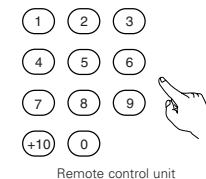
- The selected item is displayed with a yellow frame.
- ① For DVDs
"TITLE", "CHAPTER", "TITLE ELAPSED" can be selected.
- ② For video and music CDs
"TRACK" can be selected.



Remote control unit

- 3 ① Changing the elapsed time
Input using the number buttons, then press the ENTER button.
Example: For 1 minute 26 seconds → "00126"

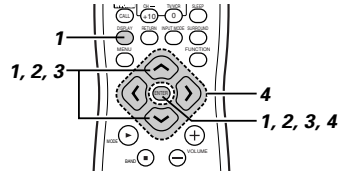
- ② Changing the title, track or chapter
 - For DVDs
Input using the number buttons, then press the ENTER button. (For some discs it is not possible to change the title or chapter).
 - For video and music CDs
Input using the number buttons. Playback starts from that track.



Remote control unit

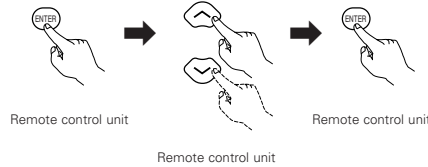
(2) Adjusting the picture quality

■ The quality of the picture when playing discs can be adjusted.



1 When playing a disc with the function set to DVD, press the DISPLAY button to turn on the on-screen display, use the \wedge and \vee cursor buttons to select "PICTURE MODE", then press the ENTER button.

- The picture quality adjustment screen appears.
- The on-screen display also turns on when the DISPLAY button is pressed in the stop mode.



2 Use the \wedge and \vee cursor buttons to select the item, then press the ENTER button.

STANDARD:

The picture quality and functions are all reset to the standard values set upon shipment from the factory.

SHARP:

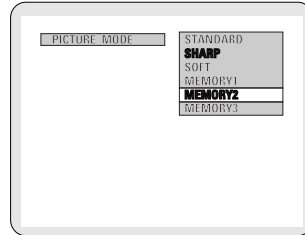
The picture is sharper.

SOFT:

The picture is softer with less noise.

MEMORY 1 to 3:

You can make three image quality adjustments and store them at memory places 1 to 3. (Set in step 3.)



3 Use the \wedge and \vee cursor buttons to select the item, then press the ENTER button.

- If memory 1 to 3 was selected in step 2, the selected memory settings are displayed.
- The contrast, brightness, sharpness and hue can be adjusted and the settings stored in the memory.

CONTRAST (-6 to +6):

Adjusts the contrast between bright and dark parts of the picture.

BRIGHTNESS (0 to +12):

Adjusts the picture's brightness.

SHARPNESS (-6 to +6):

Adjusts the picture's contours.

HUE (-6 to +6):

Adjusts the balance between green and red.

BLACK LEVEL (factory default: "Dark"):

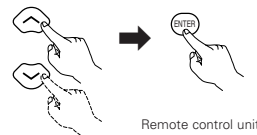
Select "LIGHTER" or "DARKER" for the picture's black level.

LIGHTER:

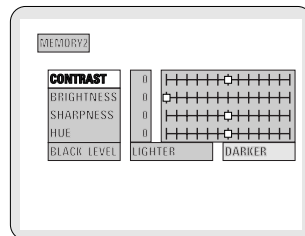
Increases the standard level of the black level. Set this to make the picture bright overall.

DARKER (factory default):

This is the standard level. Normally set this.



Remote control unit

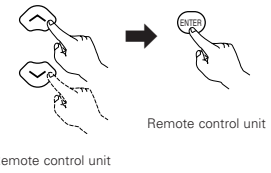


4 Use the \wedge and \vee cursor buttons to adjust, then press the ENTER button.

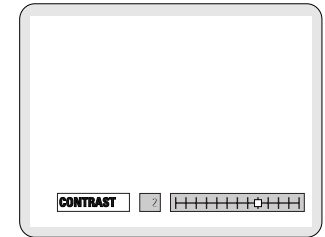
- The item selected at step 3 is displayed and can be adjusted.
- The adjusted settings are all stored in the memory.

*** Quit the picture quality adjustment mode**

Press the DISPLAY button. (Press the RETURN button to return to previous steps, one step at a time.)



Remote control unit

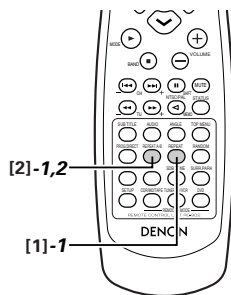


NOTE:

- Depending on the disc being played, the picture or sound may be disturbed when the on-screen display is displayed. This is not a malfunction.

(3) Playing Repeatedly

- Use this function to play your favourite audio or video sections repeatedly.



Before operating the remote control unit!

- Be sure to set the DVD mode using the remote control mode selector buttons.



[1] Playing Repeatedly (Repeat Playback)

- In the play mode, press the REPEAT button.
 - The display on the TV screen switches each time the button is pressed, and the corresponding repeat play or stop mode is set.



Remote control unit

① For DVDs

- Normal playback



- Chapter repeated



- Title repeated



- Repeat playback canceled



② For video and music CDs

- Normal playback



- Track repeated



- Entire disc repeated



- Repeat playback canceled



- To return to normal playback: Return to normal playback by pressing the REPEAT A-B button until "REPEAT OFF" appears on the TV screen.

[2] Playing a Certain Section Repeatedly (A-B Repeat Playback)

- During playback, press the A-B REPEAT button.
 - This sets start point A.



Remote control unit



- Press the A-B REPEAT button again.
 - This sets end point B, and repeat playback of the A-B section starts.



Remote control unit



- To return to normal playback: Press the A-B REPEAT button until "A TO B CANCELED" appears on the TV screen.

NOTES:

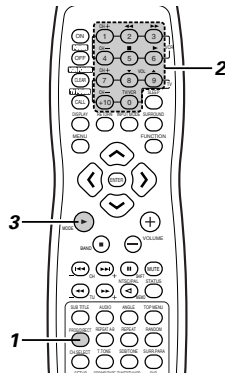
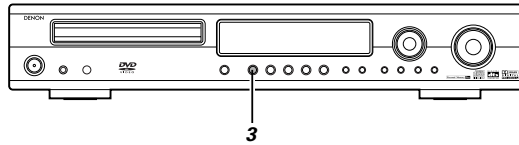
- Repeat playback may not work for some DVDs.
- The repeat playback and A-B repeat playback functions will not work for DVDs and video CDs for which the elapsed time is not shown on the display during playback.
- In some cases, subtitles may not be displayed near the A and B points during A-B repeat playback.

(4) Playing Tracks in the Desired Order

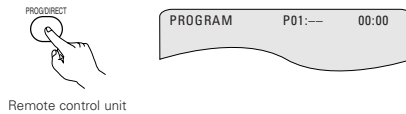
- Use this function with video and music CDs to play the tracks in the desired order.
- This function does not affect with DVD.

Before operating the remote control unit!

- Be sure to set the DVD mode using the remote control mode selector buttons.

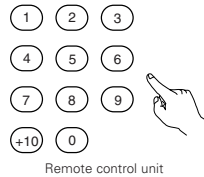
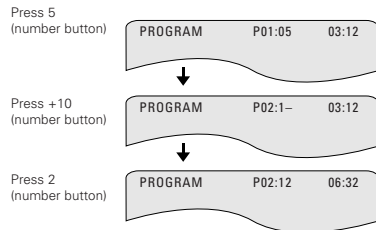


- 1** In the stop mode, press the PROG/DIRECT button once.
- The program selection screen appears.

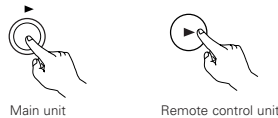


- 2** Use the number buttons to select the track number you want to program.

EX: To program track 5 and track 12:



- 3** Press the PLAY button.
- Playback of the tracks in the programmed order begins.

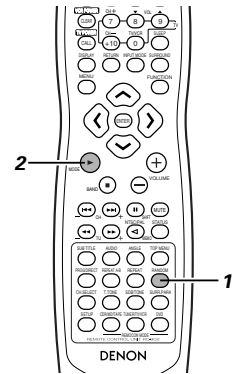
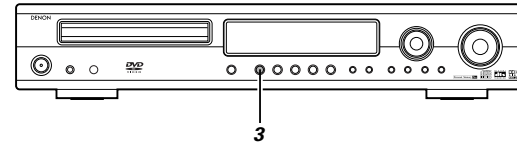


(5) Playing Tracks in the Random Order

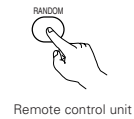
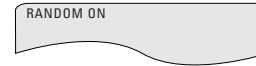
- Use this function with video and music CDs to play the tracks in random order.
- This function does not affect with DVD.

Before operating the remote control unit!

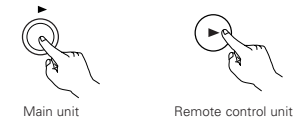
- Be sure to set the DVD mode using the remote control mode selector buttons.



- 1** In the stop mode, press the RANDOM button.
- The random play screen appears.



- 2** Press the PLAY button.
- The tracks start playing in random order.



- Random playback is not possible for some discs.
- ※ To return to normal playback: Press the STOP button to stop random playback, then press the RANDOM button once.

- ※ To return to normal playback: Press the STOP button to stop programmed playback, then press the PROG/DIRECT button. Now press the PLAY button to start normal playback from the beginning of the disc.
- ※ To clear tracks from the program: Press the STOP button. The program play screen appears. Press the CLEAR button to clear the last track in the program.
- ※ To clear the entire program: The entire program is cleared when the power is turned off, the function is changed or the disc is ejected. Also, when the STOP button is pressed to stop programmed playback and the PROG/DIRECT button is pressed, the entire program is cleared.
- ※ To check the programmed contents, press the CALL button. The programmed contents are displayed step by step.
- ※ Up to 30 tracks can be programmed.

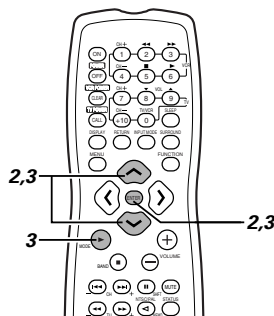
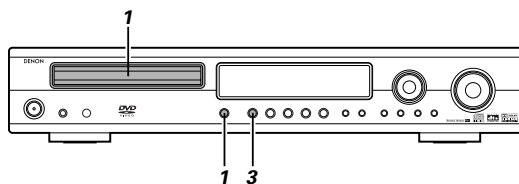
(6) MP3 Playback

■ There are many music distribution sites on the internet from which music files in MP3 format can be downloaded. Music downloaded as instructed on the site and written onto a CD-R/RW disc can be played on the ADV-1000. If music recorded on commercially available music CDs is converted on a computer into MP3 files using an MP3 encoder (conversion software), the data on a 12 cm CD is reduced into about 1/10 the amount of the original data. Thus, when written in MP3 format, the data of about 10 music CDs can fit onto a single CD-R/RW disc. A single CD-R/RW disc can contain over 100 tracks.

※ Values when 5-minute tracks are converted with a standard bit rate of 128 kbps into MP3 files and using a CD-R/RW disc with a capacity of 650 MB.

Before operating the remote control unit!

- Be sure to set the DVD mode using the remote control mode selector buttons.

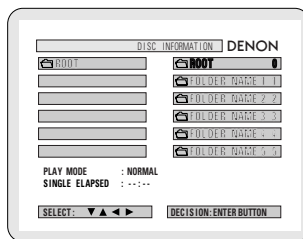


1 Load the CD-R/W disc on which the MP3 format music files have been written into this unit. (See page 17.)

- When the disc is loaded in the ADV-1000, the disc information screen appears.

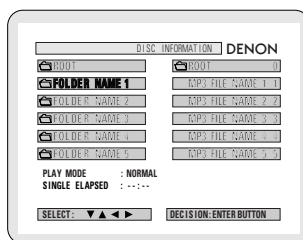
- If there are multiple folders, proceed to step 2.
- If there are no folders on the disc (if the disc only contains MP3 files), proceed to step 3.

※ All the folders recorded on the disc are displayed. (The folders are not displayed by layer.)



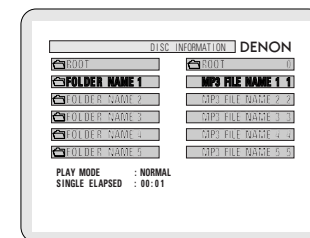
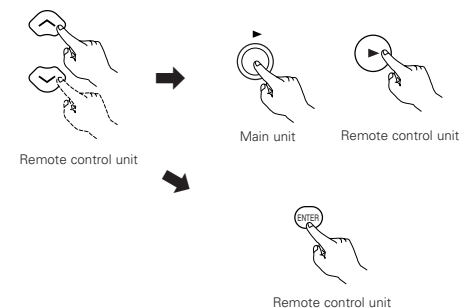
2 Use the \wedge and \vee cursor buttons to select the folder containing the file(s) you want to play, then press the ENTER button.

- ※ **To change the folder**
Use the \wedge cursor button to select "ROOT" at the upper right of the screen, then press the ENTER button. The screen in step 1 reappears. Select the desired folder.



3 Use the \wedge and \vee cursor buttons to select the MP3 file you want to play, then press the PLAY (▶) button or ENTER button.

- Playback starts.
- ※ The display can be switched between the single elapsed time and the single remaining time by pressing the DISPLAY button.
- ※ Programmed playback is not possible with MP3 discs.
- ※ **To change the MP3 file**
Press the STOP button, then use the \wedge and \vee cursor buttons to reselect the desired MP3 file.
- ※ **To set the random play mode**
In the stop mode, press the RANDOM button. Then press the PLAY (▶) button or ENTER button.
- ※ **To set the repeat mode**
The repeat mode changes each time the REPEAT button is pressed.
NORMAL → TRACK REPEAT → FOLDER REPEAT
- ※ **To return to the initial disc information screen**
Press the STOP (■) button, use the \wedge cursor button to select "ROOT" at the upper right of the screen, then press the ENTER button. The screen in step 1 reappears.



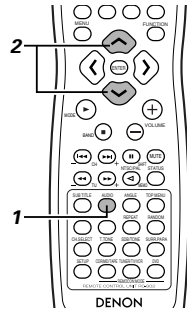
NOTES:

- The ADV-1000 is compatible with the "MPEG-1 Audio Layer 3" standards (sampling frequency of 32, 44.1 or 48 kHz). It is not compatible with such other standards as "MPEG-2 Audio Layer 3", "MPEG-2.5 Audio Layer 3", MP1, MP2, etc.
- It may not be possible to play some CD-R/RW discs due to disc properties, dirt, warping, etc.
- The digital signals output when playing MP3 files are MP3 signals converted into PCM, regardless of whether the audio output presenting is set to "normal" or "PCM conversion". The signals are output with the same sampling frequency as that of the music source.
- In general, the higher an MP3 file's bit rate, the better the sound quality. On the ADV-1000, we recommend using MP3 files recorded with bit rates of 128 kbps or greater.
- MP3 files may not be played in the expected order, since the writing software may change the position of the folders and the order of the files when writing them on the CD-R/RW.
- Manual search and programmed playback are not possible with MP3 discs.
- When writing MP3 files on CD-R/RW discs, select "ISO9660 level 1" as the writing software format. This may not be possible with some types of writing software. For details, refer to the writing software's usage instructions.
- With the ADV-1000 it is possible to display folder names and file names on the screen like titles. The ADV-1000 can display up to 11 characters, consisting of numbers, capital letters, and the "_" (underscore) mark.
- If recorded in a format other than "ISO9660 level 1", normal display and playback may not be possible. In addition, folder and file names including other symbols will not be displayed properly.
- Be sure to add the extension ".MP3" to MP3 files. Files cannot be played if they have any extension other than ".MP3" or if they have no extension. (with Macintosh computers, MP3 files can be played by adding the extension ".MP3" after the file name consisting of up to 8 capital or numbers and recording the files on the CD-R/RW.)
- Do not apply stickers, tape, etc., to either the label side or the signal side of CD-R/RW discs. If adhesive gets on the surface of a disc, the disc may get stuck inside the ADV-1000 and be impossible to eject.
- The ADV-1000 is not compatible with packet write software.
- The ADV-1000 is not compatible with ID3-Tag.
- The ADV-1000 is not compatible with play lists.

(7) Using the Multiple Audio, Subtitle and Angle Functions

[1] Switching the Audio Language (Multiple Audio Function)

- With DVDs containing multiple audio language signals, the audio language can be switched during playback.



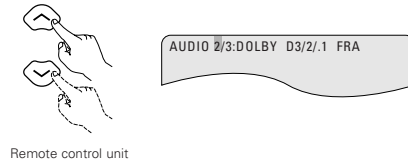
Before operating the remote control unit!

- Be sure to set the DVD mode using the remote control mode selector buttons.

- 1** During playback, press the AUDIO button.
- The current audio language number is displayed.



- 2** Use the ^ and v cursor buttons to select the desired language.
- The display turns off when the AUDIO button is pressed.

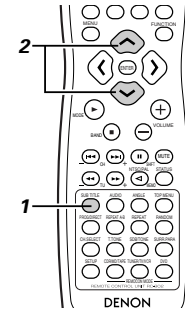


NOTES:

- With some discs it is not possible to change the audio language during playback. In such cases, select from the DVD menu. (See page 37.)
- If the desired language is not set after pressing the ^ and v cursor buttons several times, the disc does not include that language.
- The language selected in the default settings is set when the power is turned on and when the disc is replaced.

[2] Switching the Subtitle Language (Multiple Subtitle Function)

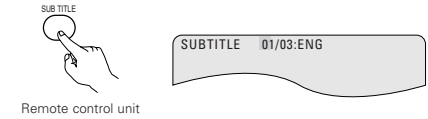
- With DVDs containing multiple subtitle language signals, the subtitle language can be switched during playback.



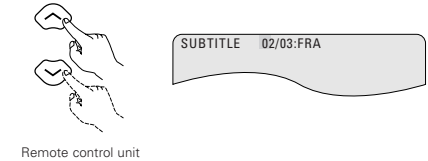
Before operating the remote control unit!

- Be sure to set the DVD mode using the remote control mode selector buttons.

- 1** During playback, press the SUBTITLE button.
- The current subtitle language number is displayed.



- 2** Use the ^ and v cursor buttons to select the desired language.
- The display turns off when the SUBTITLE button is pressed.

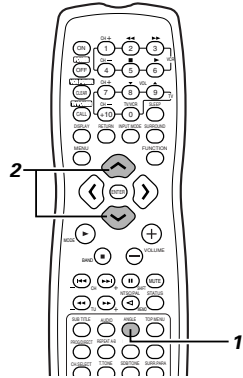


NOTES:

- If the desired language is not set after pressing the ^ and v cursor buttons several times, the disc does not include that language.
- The subtitle language set with the default settings is set when the power is turned on and when the disc is replaced. If that language is not included on the disc, the disc's default language is set.
- When the subtitle language is changed, several seconds may be required for the new language to appear.
- When a disc supporting the closed caption is played, the subtitle and the closed caption may overlap each other on the TV monitor. In this case, turn the subtitle off.

[3] Switching the Angle (Multiple Angle Function)

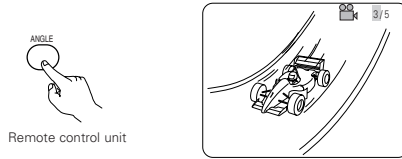
- With DVDs containing multiple angle signals, the angle can be switched during playback.



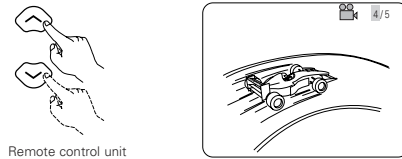
Before operating the remote control unit!

- Be sure to set the DVD mode using the remote control mode selector buttons.

- 1** During playback, press the ANGLE button.
- The current angle number is displayed.



- 2** Use the ^ and v cursor buttons to select the desired angle.
- The display turns off when the ANGLE button is pressed.



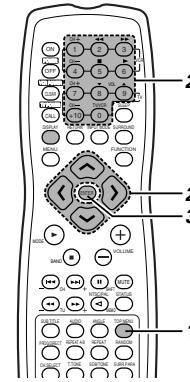
NOTES:

- The multiple angle function only works with discs on which multiple angles are recorded.
- At scenes where multiple angles are recorded, the angle can be switched.

[8] Using the Menus

[1] Using the Top Menu

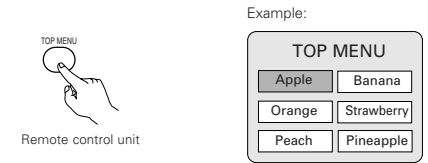
- For DVDs containing multiple titles, the desired title can be selected and played from the top menu.



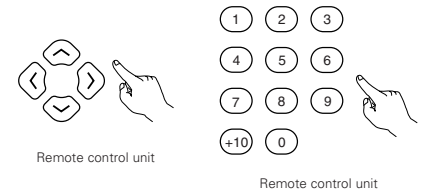
Before operating the remote control unit!

- Be sure to set the DVD mode using the remote control mode selector buttons.

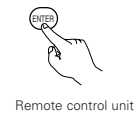
- 1** During playback, press the TOP MENU button.
- The top menu appears.



- 2** Use the cursor or number buttons to select the desired title.
- If you select the title number using the number buttons, skip step 3 below.

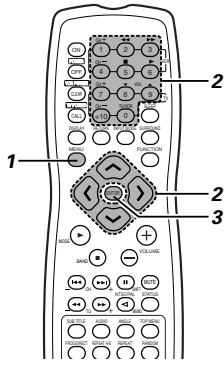


- 3** Press the ENTER button.
- Playback starts.
 - Playback also starts if the PLAY (▶) button is pressed.



[2] Using the DVD Menu

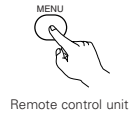
- Some DVDs include special menus called DVD menus. For example, DVDs with complex contents may contain guide menus, and DVDs with multiple languages may contain audio and subtitle language menus. These menus are called "DVD menus". Here we describe the general procedure for using DVD menus.



Before operating the remote control unit!

- Be sure to set the DVD mode using the remote control mode selector buttons.

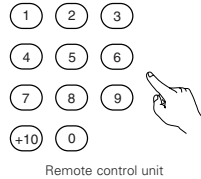
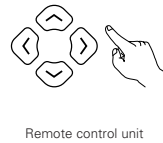
- 1** During playback, press the MENU button.
- The DVD menu appears.



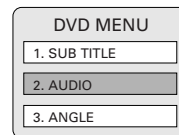
Example:



- 2** Use the cursor or number buttons to select the desired item.
- If you select the item using the number buttons, skip step 3 below.



Example:
"AUDIO" is selected



- 3** Press the ENTER button.
- The selected item is set.
 - If more menus appear, repeat steps 2 and 3.

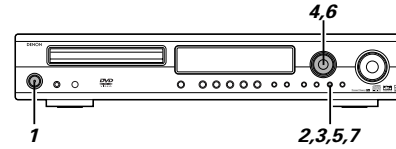


Remote control unit

[19] USING THE TIMER

(1) Setting the current time (24-hour display)

Example: To set the current time to "19:30"

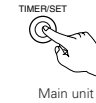
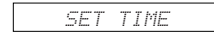


- 1** Turn on the power.



Main unit

- 2** Press the TIMER/SET button and hold it in for at least 2 seconds.
- "SET TIME" is displayed.



Main unit

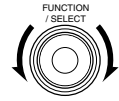
* If the time is already set, "EVERYDAY" is displayed. Turn the FUNCTION/SELECT dial to display "SET TIME", then continue on to step 3.

- 3** Press the TIMER/SET button.
- "Adj" is displayed and the hours' place in the time display flashes.



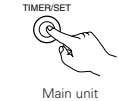
Main unit

- 4** Turn FUNCTION/SELECT dial to set the hours' place to "19".
- The "19" flashes in the hours' place.



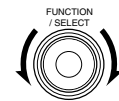
Main unit

- 5** Press the TIMER/SET button.
- The "19" in the hours' place stops flashing, remaining lit, and the minutes' place starts flashing.



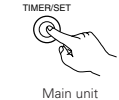
Main unit

- 6** Turn the FUNCTION/SELECT dial and set the minutes' place to "30".
- The "30" flashes in the minutes' place.



Main unit

- 7** Press the TIMER/SET button to start the clock running.
- The time is set and the clock starts counting the time.



Main unit

- * To check the current time when something else is displayed, press the TIMER/SET button once. The current time appears and remains displayed until another operation is performed.
- * When the TIMER/SET button is pressed again while the time is displayed, after which the normal display reappears.
- * The time can be displayed by pressing the TIMER/SET button while the power is in the standby mode. (The power is now no longer in the energy-saving standby mode.) When the TIMER/SET button is pressed again while the time is displayed, after which the display turns off and the power is set back to the energy-saving standby mode.

(2) Everyday timer

Description of timer

- The timer can be used to switch the power between the ON and STANDBY (OFF) modes once every day at the same time. (Everyday timer)
- The timer can be used to play DVDs, CDs or TUNER.

Before setting the timer

- Set the current time.
- Be careful to set the right time.

Checking the timer settings

- Use the same procedure as when setting the timer to check the timer settings.
 - Press the TIMER/SET button for at least 2 seconds to set the timer setting mode.
 - Now press the TIMER/SET button again repeatedly to display the timer start function, the start time and end times.
 - After the end time (minutes) is displayed, the timer standby setting is displayed, and when the TIMER/SET button is pressed again the display returns to as it was before the timer was set.

Changing the timer settings

- Reset the timer using the new settings.
- The previous settings are cleared when they are replaced with the new settings.

Clearing the timer settings

- With "Step 4 to 12" displayed, press the TIMER/SET button for at least 2 seconds. All the timer settings are cleared.
- Press the TIMER/SET button again for a least 2 seconds, the display returns to as it was before the timer was set.

Turning the timer off

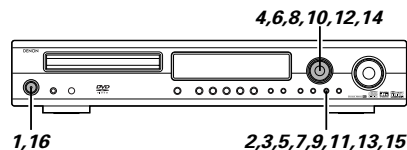
- Press the TIMER/SET button, and when "T.Stdby" is displayed, turn the FUNCTION/SELECT dial to select "OFF". (The display's ☺ mark turns off.)

If there is a power failure

- If there is a power failure or if the power cord has been unplugged, the clock display flashes once the power comes back on, the clock resumes counting, and if the timer was set the timer operates according to the clock. Be sure to correct the current time setting.

(3) Setting the Everyday timer

Example: To listen to a CD from 12:35 to 12:56.



- Perform this operation after setting the current time (steps 1 to 7 on page 37).

1 Turn on the power

- Load a CD into the main unit for the purpose of timer play.

ON / STANDBY Green
Main unit

2 Press the TIMER/SET button for at least 2 seconds.

- If the time is set, "EVERYDAY" is displayed.

TIMER/SET
Main unit

* "SET TIME" is displayed when the time setting has not been made. Perform operations 3 to 7 of Page 37, then perform the timer setting again

3 Press the TIMER/SET button.

- "Timer FUNC" is displayed.

TIMER/SET
Main unit

4 Setting the timer start function. Set the function to "DVD".

FUNCTION / SELECT
Main unit

5 Press the TIMER/SET button.

- The timer setting mode is set and the timer start time setting can be made.

TIMER/SET
Main unit

6 Setting the timer start time Set the hours' place to "12".

FUNCTION / SELECT
Main unit

7 Press the TIMER/SET button.

- The "12" in the hours' place is stored in the memory.

TIMER/SET
Main unit

8 Set the minutes' place to "35".

FUNCTION / SELECT
Main unit

9 Press the TIMER/SET button.

- The start time is stored in the memory, and the end time can now be set.

TIMER/SET
Main unit

10 Setting the timer end time Set the hours' place to "12".

FUNCTION / SELECT
Main unit

11 Press the TIMER/SET button.

- The "12" in the hours' place is stored in the memory.

TIMER/SET
Main unit

12 Set the minutes' place to "56".

FUNCTION / SELECT
Main unit

13 Press the TIMER/SET button.

- The end time is stored in the memory
- "T.Stdby" is displayed and the timer can now be turned on or off.

TIMER/SET
Main unit

14 Set the timer standby mode to on or off.

- "ON" or "OFF" (the one that has been selected) flashes. Select "ON" if you want the timer to operate. (When set to "ON", the ☺ mark appears on the display.)

FUNCTION / SELECT
Main unit

* Select ON/OFF. If an operation is not performed within 4 seconds, the setting will be made automatically and there will be a return to the normal display. (Operation 15 is not necessary.)

15 Press the TIMER/SET button.

- This completes the setting of the timer.

TIMER/SET
Main unit

16 Turn off the main unit's power.

- The power is set to the standby mode.
- If the timer standby mode is set to "ON", the power LED is lit orange.
- The disc starts playing when the timer start time is reached.

ON / STANDBY Orange
Main unit

- * When the display's ☺ mark is lit or the power LED is lit orange when the power is in the standby mode, the timer will operate at the same times every day. (Everyday timer)
- * If you do not want the timer to operate, press the TIMER/SET button to display "T.Stdby" and set to "OFF". (The display's ☺ mark turns off.)
- * If you make a mistake when setting the timer, with steps 5 to 12 press the TIMER/SET button and hold it in for at least 2 seconds to return to step 3, and start over from there.

NOTES:

- If the current time is not set, the timer standby setting cannot be set to "ON". Be sure to set the current time before turning on the timer.
- The timer will operate as long as it is turned on, even if the time setting is off due to a power failure. If you want the timer to operate correctly, be sure the current time is properly set.
- If the timer start time is reached while the power is turned on, the set operates as set for the timer. (The timer settings are given priority.)
- Be sure to set the power to the standby mode to operate the timer.

■ To Listen to the TUNER with the Everyday Timer

- Set "Timer TUNER" in Step 4, then press the TIMER/SET button.
- "FM M" will be displayed. Use the FUNCTION/SELECT dial to select the preset channel on which you would like to receive with the timer, then press the TIMER/SET button.
- Hereafter, the same procedure is performed from Step 6.

(4) Setting the sleep timer (remote control unit only)

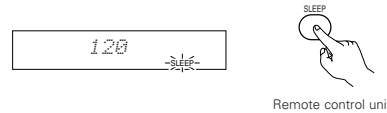
- The included remote control unit can be used to turn the power to the standby mode after a maximum of 120 minutes. (Sleep timer)
- Use this function to automatically switch the power to the standby mode after a specific amount of time (minutes).

Example: To set the power to the standby mode in 50 minutes according to the clock. Be sure to correct the current time setting.

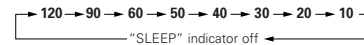
1 Select and play the desired function.

2 Press the SLEEP button.

- "120" is displayed and the "SLEEP" indicator flashes.



- * The display switches as follows each time the SLEEP button is pressed:



3 When the "SLEEP" indicator is flashing, press the SLEEP button again until "50" is displayed.

- "50" is displayed and the "SLEEP" indicator flashes.



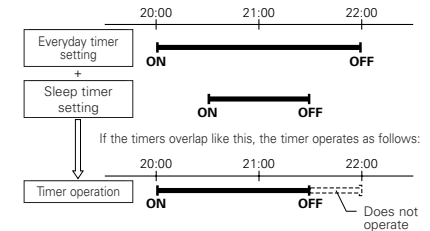
- After 4 seconds, the display returns to as it was before the sleep timer was set, and the "SLEEP" indicator stops flashing, remaining lit. (This completes the sleep timer setting.)

4 The power is set to the standby mode 50 minutes later.

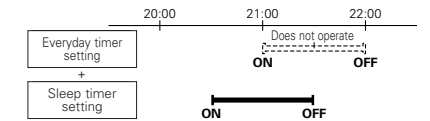
- * To turn the sleep timer off, press the SLEEP button repeatedly until the "SLEEP" indicator turns off. The sleep timer can also be turned off by press the power button on the main unit or the remote control unit to turn the entire system's power to the standby mode.

NOTES:

- If the SLEEP button is pressed while the sleep timer is operating, the setting returns to 120 minutes. Make the setting over.
- If the sleep timer and everyday timer settings overlap, the sleep timer has priority.



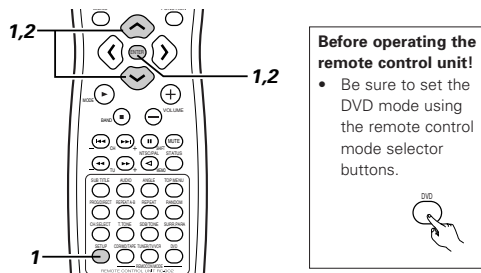
- Also, the everyday timer will not operate if its start time is set within the time during which the sleep timer is operating.



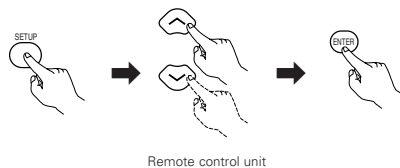
- The remaining time of the sleep timer can be checked with the STATUS button.

20 CHANGING THE DEFAULT SETTINGS (DVD)

- The initial setting that was set prior to shipping from the factory can be changed. The setting contents are maintained until they are next changed even when the power is switched off.



- In the stop mode, press the SETUP button. At the Setup Menu, use the \blacktriangleleft and \blacktriangleright cursor buttons to select "DVD SETUP" and press the ENTER button.



- The setup (default settings) screen "DVD SETUP MENU" appears.

- DISC SETUP**

Use this to set the language to be used when playing the disc. If the set language is not offered on that disc, the disc's default language is set.

- OSD SETUP**

Use this to set the wall paper color.

- VIDEO SETUP**

Use this to set this unit screen mode. (TV aspect and TV type.)

- AUDIO SETUP**

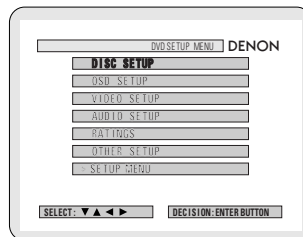
Use this to set this unit audio output mode. (Digital and LPCM output settings.)

- RATINGS**

Use this to disable playback of adult DVDs so that children cannot watch them. Note that playback of adult DVDs cannot be disabled if the rating level is not recorded on the DVD, but that it is possible to disable playback of all DVDs.

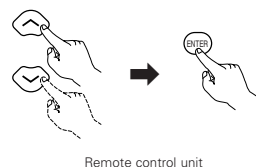
- OTHER SETUP**

These include special settings CAPTIONS.



Use the \blacktriangleleft and \blacktriangleright cursor buttons to select the desired setting item, then press the ENTER button.

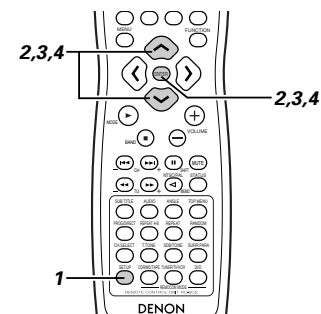
- DISC SETUP. (See page 40.)
- OSD SETUP. (See page 41.)
- VIDEO SETUP. (See page 42.)
- AUDIO SETUP. (See page 43.)
- RATINGS. (See page 44.)



※ **To exit the DVD setup mode**

At the setup screen in step 1 on page 40, use the \blacktriangleleft and \blacktriangleright cursor buttons to select "EXIT SETUP", then press the ENTER button. It is also possible to quit by pressing the SETUP button on the remote control unit.

(1) "DISC SETUP" is selected



- Read page 40.
-

- Use the \blacktriangleleft and \blacktriangleright cursor buttons to select the desired setting, then press the ENTER button.

- DIALOG**

Use this to set the language of the sound output from the speakers.

- SUBTITLE**

Use this to set the language of the subtitles displayed on the TV.

- DISC MENUS**

Use this to set the language of the menus recorded on the disc (top menu, etc.).

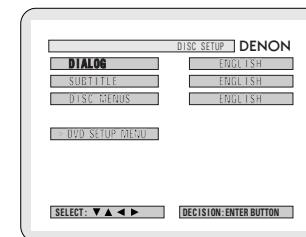
※ **To exit the disc setup mode**

Use the \blacktriangleleft and \blacktriangleright cursor buttons to select "DVD SETUP MENU", then press the ENTER button.

- The screen returns to as it was in step 2.



Remote control unit



Remote control unit

- Use the \blacktriangleleft and \blacktriangleright cursor buttons to select the desired setting, then press the ENTER button.

■ **When "DIALOG" is selected:**

- ENGLISH (Factory default)**

Select this when you want to play the DVD with the sound in English.

- FRENCH**

Select this when you want to play the DVD with the sound in French.

- SPANISH**

Select this when you want to play the DVD with the sound in Spanish.

- GERMAN**

Select this when you want to play the DVD with the sound in German.

- CHINESE**

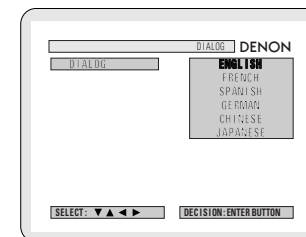
Select this when you want to play the DVD with the sound in Chinese.

- JAPANESE**

Select this when you want to play the DVD with the sound in Japanese.



Remote control unit



Remote control unit

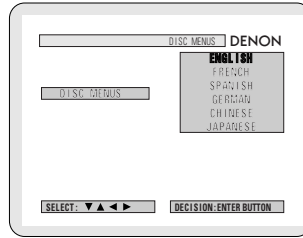
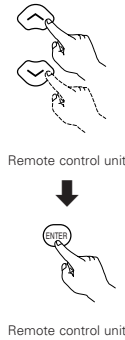
4

*** To exit the dialog mode**

Press the ENTER button, you can go back to the previous screen.

■ When "SUBTITLE" is selected:

- **ENGLISH (Factory default)**
Select this when you want to play the DVD with the subtitles in English.
- **FRENCH**
Select this when you want to play the DVD with the subtitles in French.
- **SPANISH**
Select this when you want to play the DVD with the subtitles in Spanish.
- **GERMAN**
Select this when you want to play the DVD with the subtitles in German.
- **CHINESE**
Select this when you want to play the DVD with the subtitles in Chinese.
- **JAPANESE**
Select this when you want to play the DVD with the subtitles in Japanese.
- **OFF**
Select this if you do not want to display the subtitles. (For some discs it is not possible to turn off the subtitle display.)

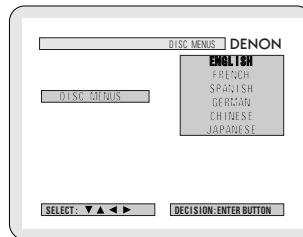
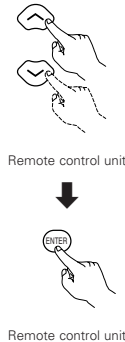


*** To exit the subtitle mode**

Press the ENTER button, you can go back to the previous screen.

■ When "DISC MENUS" is selected:

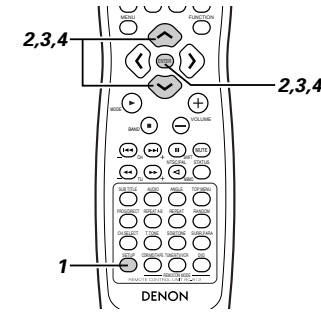
- **ENGLISH (Factory default)**
Select this when you want to display the menus in English.
- **FRENCH**
Select this when you want to display the menus in French.
- **SPANISH**
Select this when you want to display the menus in Spanish.
- **GERMAN**
Select this when you want to display the menus in German.
- **CHINESE**
Select this when you want to display the menus in Chinese.
- **JAPANESE**
Select this when you want to display the menus in Japanese.



*** To exit the disc menu mode**

Press the ENTER button, you can go back to the previous screen.

(2) "OSD SETUP" is selected



1
2

Read page 40.

3

Use the ^ and v cursor buttons to select the desired setting, then press the ENTER button.

• **WALL PAPER**

Use this to select the image to be shown on the screen in the stop mode and CD play mode.

*** To exit the osd setup mode**

Use the ^ and v cursor buttons to select "DVD SETUP MENU", then press the ENTER button.

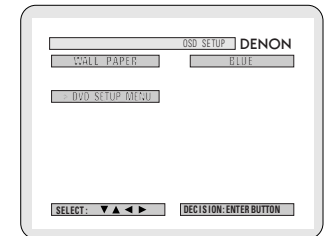
- The screen returns to as it was in step 2.



Remote control unit



Remote control unit



4

Use the ^ and v cursor buttons to select the desired setting, then press the ENTER button.

■ When "WALL PAPER" is selected:

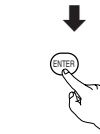
- **BLUE (Factory default)**
Select this to display a blue background on the TV display.
- **PICTURE**
Select this to display the picture on the TV display.

*** To exit the wall paper mode**

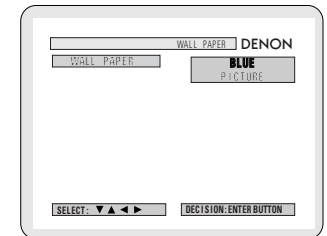
Press the ENTER button, you can go back to the previous screen.



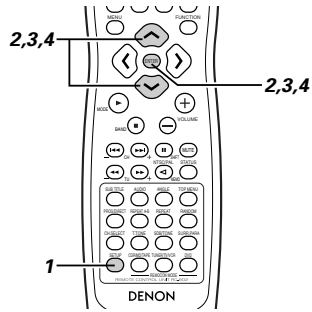
Remote control unit



Remote control unit



(3) "VIDEO SETUP" is selected

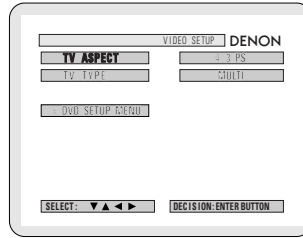
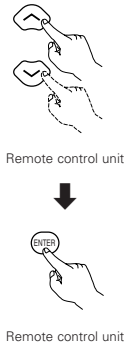


- 1 Read page 40.
- 2

3 Use the and cursor buttons to select the desired setting, then press the ENTER button.

- **TV ASPECT**
Use this to set the shape of your TV's screen.
- **TV TYPE**
Use this to set your TV's video format (NTSC, PAL or MULTI).

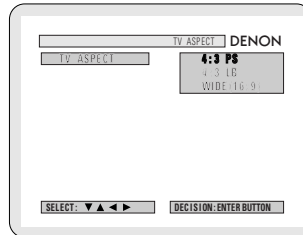
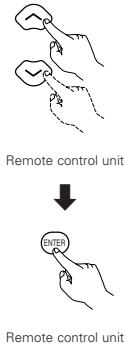
- **To exit the video setup mode**
Use the and cursor buttons to select "DVD SETUP MENU", then press the ENTER button.
 - The screen returns to as it was in step 2.



4 Use the and cursor buttons to select the desired setting, then press the ENTER button.

- **When "TV ASPECT" is selected:**
 - **4:3 PS (Factory default)**
Select this to play wide DVDs in the pan & scan mode (with the sides of the picture cut off). Discs for which pan & scan is not specified are played in the letter box mode.
 - **4:3 LB**
Select this to play wide DVDs in the letter box mode (with black strips at the top and bottom).
 - **WIDE (16:9)**
Select this to play wide DVDs in the full-screen mode.

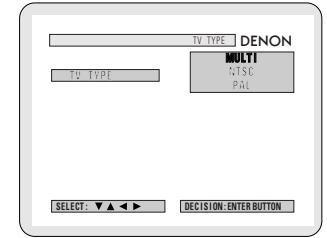
- ※ **To exit the TV aspect mode**
Press the ENTER button, you can go back to the previous screen.



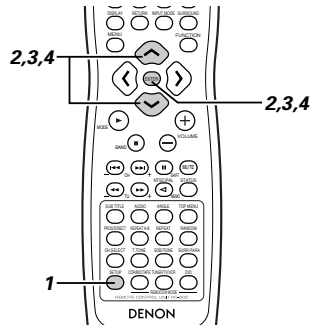
4 ■ **When "TV TYPE" is selected:**

- **MULTI (Factory default)**
Select this when your TV is compatible with both the NTSC and PAL formats. NTSC signals are output from the video output jacks when discs recorded in NTSC format are played, and PAL signals are output from the video output jacks when discs recorded in PAL format are played.
- **NTSC**
Select this when your TV's video format is NTSC. If NTSC is selected, output format is fixed to NTSC.
- **PAL**
Select this when your TV's video format is PAL. If PAL is selected, output format is fixed to PAL.

- ※ **To exit the TV type mode**
Press the ENTER button, you can go back to the previous screen.



(4) "AUDIO SETUP" is selected



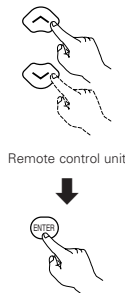
1 See page 40.

2

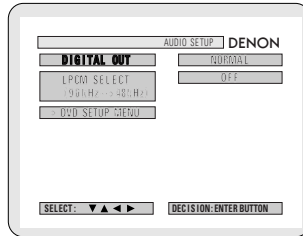
3 Use the \wedge and \vee cursor buttons to select the desired setting, then press the ENTER button.

- **DIGITAL OUT**
Use this to select the digital output's signal format.
- **LPCM SELECT (96 kHz \rightarrow 48 kHz)**
Use this to set the digital audio output when playing DVDs recorded in linear PCM audio.

- ※ **To exit the audio setup mode**
Use the \wedge and \vee cursor buttons to select "DVD SETUP MENU", then press the ENTER button.
 - The screen returns to as it was in step 2.



Remote control unit

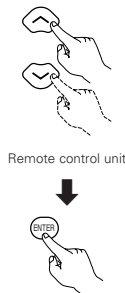


4 Use the \wedge and \vee cursor buttons to select the desired setting, then press the ENTER button.

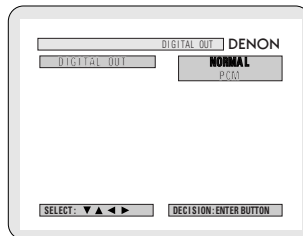
- **When "DIGITAL OUT" is selected.**
- **NORMAL (Factory default)**
Make the selection when playing back in surround playback a DVD that has been recorded with Dolby Digital or DTS on this unit. The Dolby Digital or DTS digital signal is also output from the digital output jacks.

- **PCM**
DVDs that were recorded in Dolby Digital are converted to linear PCM 48 kHz/16 bit (2 channels). Make the selection when making a digital recording. DVDs recorded with DTS are not converted and digital recording is not possible.

- ※ **To exit the digital out mode**
Press the ENTER button, you can go back to the previous screen.



Remote control unit

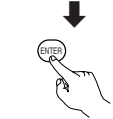


■ "LPCM SELECT (96 kHz \rightarrow 48 kHz)" is selected.

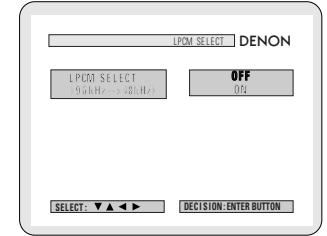
- **OFF (Factory default)**
Make the selection when playing back to a decoder DVDs that were recorded with this unit using linear PCM 48 kHz/20/24 bit and 96 kHz modes. Note that DVDs with Copyright Protection are converted to 48 kHz/16 bits and played back. The same signal is output from the digital output jacks.
- **ON (96 kHz \rightarrow 48 kHz)**
DVDs that were recorded with linear PCM 48 kHz/20/24 bit and 96 kHz modes are all converted to 48 kHz/16 bits. Make this selection at the time of digital recording.



Remote control unit

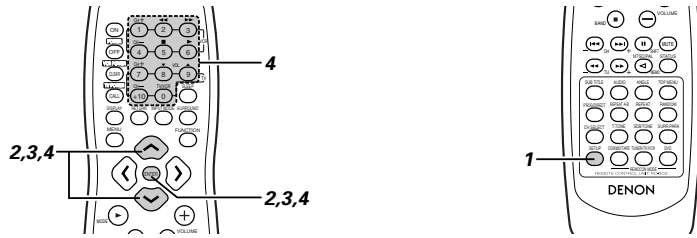


Remote control unit



- ※ **To exit the LPCM select mode**
Press the ENTER button, you can go back to the previous screen.

(5) "RATINGS" is selected



1
2

See page 40.

3 Use the \wedge and \vee cursor buttons to select the desired setting, then press the ENTER button.

• **RATING LEVEL**

Use this to restrict playback of adult DVDs you do not want children to view. Note that even with adult DVDs, viewing cannot be restricted unless the restriction level is recorded on the disc. It is however possible to disable playback of all DVDs.

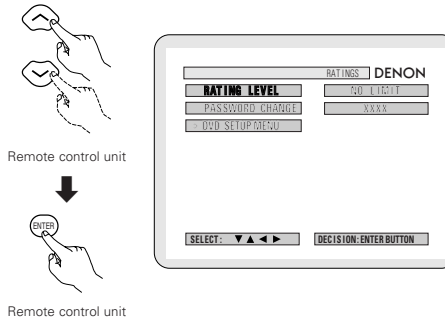
• **PASSWORD CHANGE**

Use this to change the password. The set's password is set to "0000" by default.

※ **To exit the rating setup mode**

Use the \wedge and \vee cursor buttons to select "DVD SETUP MENU", then press the ENTER button.

- The screen returns to as it was in step 2.



4 Use the \wedge and \vee cursor buttons to select the desired setting, then press the ENTER button.

■ **When "RATING LEVEL" is selected.**

• **Level 0 (LOCK ALL)**

Select this to disable playback of all DVDs. Use this for example to disable playback of adult DVDs on which the rating level is not recorded.

• **Level 1**

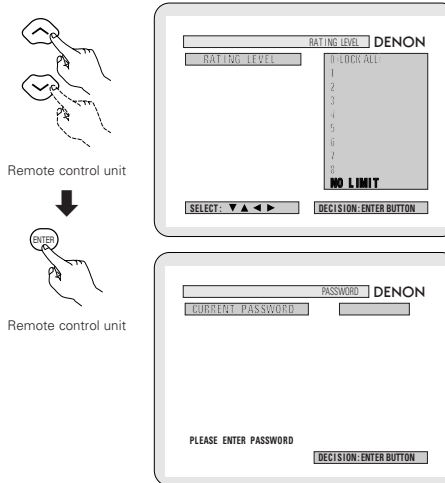
Select this to play only DVDs for children. (Adult and general audience DVDs cannot be played.)

• **Level 2 to Level 8**

Select this to play DVDs for general audiences and children. Adult DVDs cannot be played.

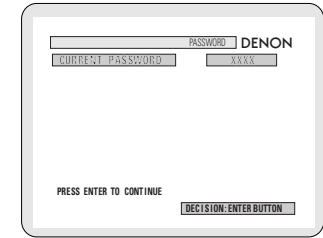
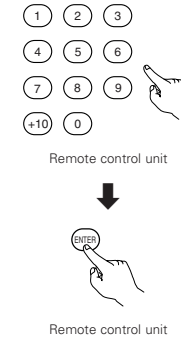
• **NO LIMIT (Factory default)**

Select this to play all DVDs.



4 Use the number buttons to input a 4-digit password, then press the ENTER button.

- ※ Be sure to set the DVD mode using the remote control mode selector buttons.
- ※ The set's password is set to "0000" by default.
- ※ Do not forget the password.
- ※ The setting cannot be changed without inputting the correct password.

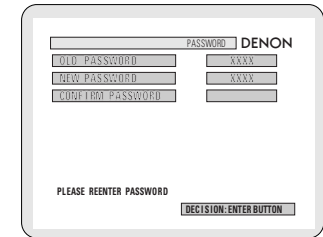
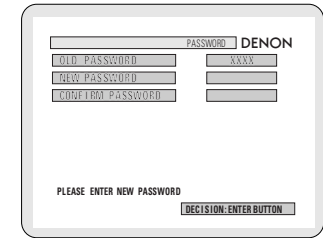
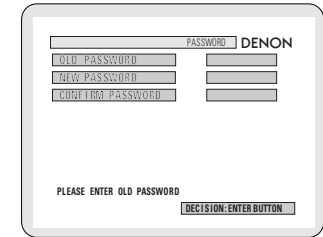
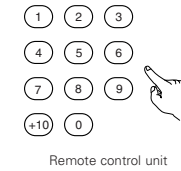


- ※ When the password has been forgotten or when a RATING LEVEL setting change is suspended, press the ENTER button several times and terminate the rating

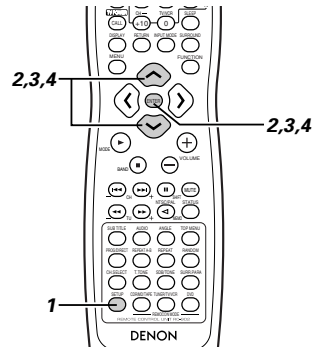
■ **When "PASSWORD CHANGE" is selected.**

Use the number buttons to input a 4-digit password, then press the ENTER button.

- ※ Be sure to set the DVD mode using the remote control mode selector buttons.
- ※ Do not forget the password.
- ※ The setting cannot be changed without inputting the correct password.
- ※ The set's password is set to "0000" by default.



(6) "OTHER SETUP" is selected



NOTES:

- An English caption decoder is required to display English captions.
 - DVDs with caption signals are indicated by the , , mark.
- English captions cannot be displayed when playing DVDs which do not contain caption signals.
- The characters in which the captions are displayed (capital letters, small letters, italics, etc.) depend on the DVD and cannot be selected with this unit.

1
2

See page 40.

3

Use the and cursor buttons to select the desired setting, then press the ENTER button.

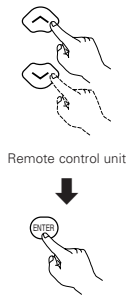
• CAPTIONS

Use this to set whether or not to display the closed captions recorded on DVDs.

※ To exit the other setup mode

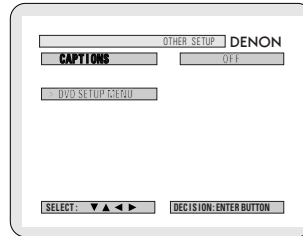
Use the and cursor buttons to select "DVD SETUP MENU", then press the ENTER button.

- The screen returns to as it was in step 2.



Remote control unit

Remote control unit



4

Use the and cursor buttons to select the desired setting, then press the ENTER button.

■ When "CAPTIONS" is selected:

• OFF (Factory default)

Select this when you do not want to display the captions on the screen when playing DVDs containing English captions.

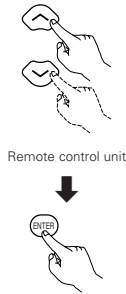
• ON

Select this to display the captions on the screen when playing DVDs containing English captions.

※ To exit the captions mode

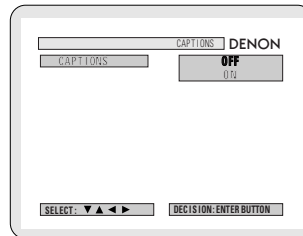
Press the ENTER button, you can go back to the previous screen.

- The screen returns to as it was in step 2.



Remote control unit

Remote control unit



21 LAST FUNCTION MEMORY

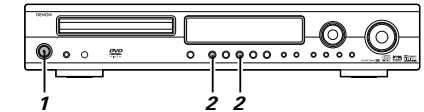
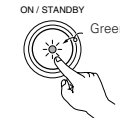
- This unit is equipped with a last function memory which stores the input and output setting conditions as they were immediately before the power is switched off.
- This function eliminates the need to perform complicated resettings when the power is switched on.
- The unit is also equipped with a back-up memory. This function provides memory storage when the power switch is off and with the power cord disconnected.

22 INITIALIZATION OF THE MICROPROCESSOR

When the indication of the display is not normal or when the operation of the unit does not shows the reasonable result, the initialization of the microprocessor is required by the following procedure.

1

Press the power button to set the standby mode, then unplug the set's power cord from the wall power outlet.



2

Hold the following PLAY button and STOP button, and plug the AC cord into the outlet.

3

Check that the entire display is flashing with an interval of about 1 second, and release your fingers from the 2 buttons and the microprocessor will be initialized.

NOTES:

- If step 3 does not work, start over from step 1.
- If the microprocessor is reset, all the buttons and the setup settings are reset to the factory default values.

23 TROUBLESHOOTING

Check again before assuming the player is malfunctioning

- Are all the connections correct ?
- Are you following the instructions in the manual ?
- Are the speakers and other components operating properly ?

If this unit does not seem to be functioning properly, check the table below. If this does not solve the problem, this unit may be damaged. Turn off the power, unplug the power cord from the power outlet, and contact your store of purchase or nearest Denon sales office.

	Symptom	Cause	Measures	Page	
Common problems when listening to the discs, tapes and FM broadcasts, etc.	DISPLAY not lit and sound not produced when power switch set to on.	<ul style="list-style-type: none"> Power cord not plugged in securely. 	<ul style="list-style-type: none"> Check the insertion of the power cord plug. 	7	
	DISPLAY lit but sound not produced.	<ul style="list-style-type: none"> Speaker cords not securely connected. Improper position of the audio function button. Volume control set to minimum. MUTING is on. Digital signals not input Digital input selected. 	<ul style="list-style-type: none"> Connect securely. Set to a suitable position. Turn volume up to suitable level. Switch off MUTING. Input digital signals or select input jacks to which digital signals are being input. 	6 19 20 20 20	
	Monitor doesn't display an image.	<ul style="list-style-type: none"> Connections between the video output jack of this unit and the input connector of the monitor are incomplete. The input setting of the monitor TV is different. The video signals of the various devices are not uniform. 	<ul style="list-style-type: none"> Check whether the connections are correct. Set the input switching of the TV to the jack to which the video input is connected. Make settings uniform for either composite video or S-video connectors. 	7-9 — 7-9	
	The program cannot be copied from DVD to the VCR.	<ul style="list-style-type: none"> Almost all movie software contains a copy prevention signal. 	<ul style="list-style-type: none"> A copy cannot be made. 	—	
	The subwoofer does not produce sound.	<ul style="list-style-type: none"> Power is not being supplied to the subwoofer. The subwoofer setting is made to 'No' in the setup. The output of the subwoofer has not been connected. 	<ul style="list-style-type: none"> Switch on the power of the subwoofer. Change the setting to "Subwoofer" in the setup. Make the proper connections. 	— 15 6	
	The test tone is not output.	<ul style="list-style-type: none"> The surround mode is set to a mode other than auto decode. 	<ul style="list-style-type: none"> Set to auto decode. 	22	
	Remote control unit	This unit does not operate properly when remote control unit is used.	<ul style="list-style-type: none"> Batteries dead. 	<ul style="list-style-type: none"> Replace with new batteries. 	11
			<ul style="list-style-type: none"> Remote control unit too far from this unit. 	<ul style="list-style-type: none"> Move closer. 	11
			<ul style="list-style-type: none"> Obstacle between this unit and remote control unit. 	<ul style="list-style-type: none"> Remove obstacle. 	11
<ul style="list-style-type: none"> Different button is being pressed. ⊕ and ⊖ ends of battery inserted in reverse. 			<ul style="list-style-type: none"> Press the proper button. Insert batteries properly. 	11 11	
<ul style="list-style-type: none"> The mode selection of the remote control is not properly selected. The DVD mode, AV mode, or audio mode is not properly selected. 			<ul style="list-style-type: none"> Press the remote control mode selection button for the item you wish to operate. To operate this unit, use with the DVD mode. 	10	

	Symptom	Check	Page
DVD operation	Playback does not start when PLAY button is pressed. Playback stops immediately.	<ul style="list-style-type: none"> Is there condensation on the disc or player ? (Let stand for 1 or 2 hours.) Discs other than DVDs, video CDs and music CDs cannot be played. Disc is dirty. Wipe off the dirt. 	— 4, 5 5, 6
	Menu playback of video CD's is not possible.	<ul style="list-style-type: none"> Menu playback is not possible with anything but video CDs with playback control. 	—
	Picture is disturbed during the search operation.	<ul style="list-style-type: none"> Some disturbance is normal. 	—
	Buttons do not operate.	<ul style="list-style-type: none"> Some operations are disabled for some discs. 	18, 19
	No subtitles are displayed.	<ul style="list-style-type: none"> Subtitles are not displayed for DVDs not containing subtitles. Subtitles are turned off. Turn the subtitles setting on. 	— 40, 41
	Audio (or subtitle) language does not switch.	<ul style="list-style-type: none"> The audio (or subtitle) language does not switch for discs which do not include multiple audio (or subtitle) languages. For some discs the audio (or subtitle) language cannot be switched when the operation to switch it is performed, but can be switched on the menu screens. 	35 37
	Angle does not switch.	<ul style="list-style-type: none"> The angle cannot be switched for DVDs which do not contain multiple angles. In some cases multiple angles are only recorded for specific scenes. 	36
	Playback does not start when the title is selected.	<ul style="list-style-type: none"> Check the "RATINGS SETUP" setting. 	44
	The password for rating level has been forgotten. Reset all the DVD setting to Factory Preset.	<ul style="list-style-type: none"> While the player is in the stop mode, hold the player's SKIP (I◀◀) button and the PAUSE () button down simultaneously for longer than 3 seconds (until "INITIALIZE" disappears from the TV monitor). The lock will be released and the DVD all default settings and picture settings will return to the default values. 	44
	The disc is not played with the audio or subtitle language set as the default setting.	<ul style="list-style-type: none"> The disc does not play with the selected audio or subtitle language if that audio or subtitle language is not included on that DVD. 	35
	Picture is not displayed in 4:3 (or 16:9).	<ul style="list-style-type: none"> Set the "TV ASPECT" default setting to the proper setting for the connected TV. 	42
	Menu screen messages for the desired language do not display.	<ul style="list-style-type: none"> Check the default setting for the disc language's menu language. 	40, 41

24 SPECIFICATIONS

(1) DVD Surround Receiver Unit

Audio section	
<ul style="list-style-type: none"> • Power amplifier 	Output power: Front: 55 W + 55 W (6 Ω/ohms, 1 kHz with 10% T.H.D.) Center: 55 W (6 Ω/ohms, 1 kHz with 10% T.H.D.) Surround: 55 W + 55 W (6 Ω/ohms, 1 kHz with 10% T.H.D.) Subwoofer: 55 W (6 Ω/ohms, 60 Hz with 10% T.H.D.) Front, Center, Subwoofer, Surround: 6 ~ 16 Ω/ohms
Output terminals:	
<ul style="list-style-type: none"> • Analog 	Input sensitivity / input impedance: 200 mV / 47 kΩ/kohms Frequency response: 10 Hz ~ 60 kHz: +1.5, -3 dB (DIRECT mode) S/N: 94 dB (DIRECT mode) Rated output: 1.2 V (Subwoofer preout, 20 Hz)
<ul style="list-style-type: none"> • Digital 	Digital input / output: Format — Digital audio interface
Video section	
<ul style="list-style-type: none"> • Standard video jacks 	Input / output level and impedance: 1 Vp-p, 75 Ω/ohms
<ul style="list-style-type: none"> • S-video jacks 	Input / output level and impedance: Y (brightness) signal — 1 Vp-p, 75 Ω/ohms C (color) signal — NTSC: 0.286 Vp-p, 75 Ω/ohms / PAL: 0.3 Vp-p, 75 Ω/ohms
<ul style="list-style-type: none"> • Color component video jacks (DVD output) 	Input / output level and impedance: Y (brightness) signal — 1 Vp-p, 75 Ω/ohms Cb (blue) signal — 0.648 Vp-p, 75 Ω/ohms Cr (red) signal — 0.648 Vp-p, 75 Ω/ohms
Tuner section	
Receiving Range: 87.50 MHz ~ 108.00 MHz	[FM] (note: μV at 75 Ω/ohms, 0 dBf=1 × 10 ⁻¹⁵ W) [AM] 522 kHz ~ 1611 kHz
Usable Sensitivity: 1.5 μV (14.8 dBf)	20 μV
DVD section	
Signal system: NTSC/PAL	
Applicable discs:	(1) DVD-Video discs 1-layer 12 cm single-sided discs, 2-layer 12 cm single-sided discs, 2-layer 12 cm double-sided discs (1 layer per side) 1-layer 8 cm single-sided discs, 2-layer 8 cm single-sided discs, 2-layer 8 cm double-sided discs (1 layer per side) (2) Compact discs (CD-DA, Video CD) 12 cm discs, 8 cm discs
Audio output: Fixed output level: 2 Vrms, (CDR/TAPE, VCR OUT)	
Clock, Timer section	
Clock system: Power source synchronous system	
Timer functions: Everyday timer (DVD or Tuner) : 1 setting Sleep timer: maximum 120 min.	
General	
Power supply: AC 230 V, 50 Hz	
Power consumption: 70 W (Standby 1 W)	
Maximum external	
Dimensions: 434 (width) x 80 (height) x 368 (depth) mm	
Mass: 6.0 kg	
Remote control unit: RC-902	
Type: Infrared pulse	
Power supply: DC 3 V, 2 "R6P/AA" batteries	

(2) Speaker units


USC-A1000	2-way, 2-speakers, sealed bookshelf type speakers, Low-leakage-flux 80 Hz to 80 kHz Frequency range: 80 Hz to 80 kHz Input impedance: 6 Ω/ohms Max. input: 40W (EIAJ), 100W (peak) Sensitivity: 89 dB (1W, 1m) Speakers: Woofer (8 cm cone type x 1), super tweeter (2 cm dome type x 1) Dimensions: 105 (width) x 170 (height) x 126 (depth) mm (including saran net and DENON mark) 1.1 kg (per unit)
USC-C1000	2-way, 3-speakers, bass reflex type center speaker, Low-leakage-flux 80 Hz to 80 kHz Frequency range: 80 Hz to 80 kHz Input impedance: 6 Ω/ohms Max. input: 40W (EIAJ), 100W (peak) Sensitivity: 89 dB (1W, 1m) Speakers: Woofer (5.7 cm cone type x 2), super tweeter (2 cm dome type x 1) Dimensions: 231 (width) x 67 (height) x 149 (depth) mm (including saran net and DENON mark) 1.1 kg (per unit)
USW-1000	1-way, 1-speaker, bass reflex type speaker, Low-leakage-flux 25 Hz to 240 Hz Frequency range: 25 Hz to 240 Hz Max. input: 80W (EIAJ), 120W (peak) Input impedance: 6 Ω/ohms Speaker: 16 cm cone type x 1 Dimensions: 270 (width) x 312 (height) x 288 (depth) mm (including DENON mark) 5.9 kg (per unit)

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