DENON

DIGITAL SURROUND DECODER
DECODEUR NUMERIQUE D'AMBIANCE

AVD-2000

OPERATING INSTRUCTIONS
MODE D'EMPLOI
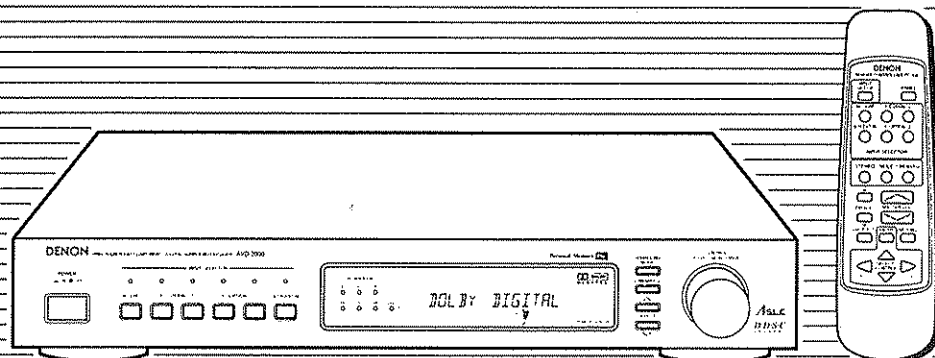
■ We greatly appreciate your purchase of the AVD-2000.
■ To be sure you take maximum advantage of all the features the AVD-2000 has to offer, read these instructions carefully and use the set properly. Be sure to keep this manual for future reference should any questions or problems arise.

■ Nous vous remercions de l'achat de l'AVD-2000.
■ Pour être sûr de profiter au maximum de toutes les caractéristiques qu'a à offrir l'AVD-2000, lire avec soin ces instructions et bien utiliser l'appareil. Toujours conserver ce mode d'emploi pour s'y référer ultérieurement en cas de question ou de problème.
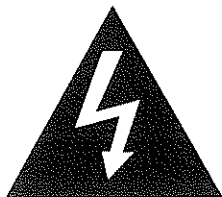
"SERIAL NO. _____
PLEASE RECORD UNIT SERIAL NUMBER ATTACHED TO THE REAR OF THE CABINET
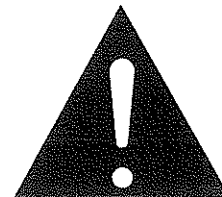FOR FUTURE REFERENCE"

"NO. DE SERIE _____
PRIERE DE NOTER LE NUMERO DE SERIE DE L'APPAREIL INSCRIT A L'ARRIERE DU
COFFRET DE FAÇON A POUVOIR LE CONSULTER EN CAS DE PROBLEME."

CAUTION

RISK OF ELECTRIC SHOCK
DO NOT OPEN

CAUTION: TO REDUCE THE RISK OF ELECTRIC SHOCK, DO NOT REMOVE COVER (OR BACK). NO USER SERVICEABLE PARTS INSIDE. REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.

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

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

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

CAUTION
TO PREVENT ELECTRIC SHOCK DO NOT USE THIS (POLARIZED) PLUG WITH AN EXTENSION CORD, RECEPTACLE OR OTHER OUTLET UNLESS THE BLADES CAN BE FULLY INSERTED TO PREVENT BLADE EXPOSURE.

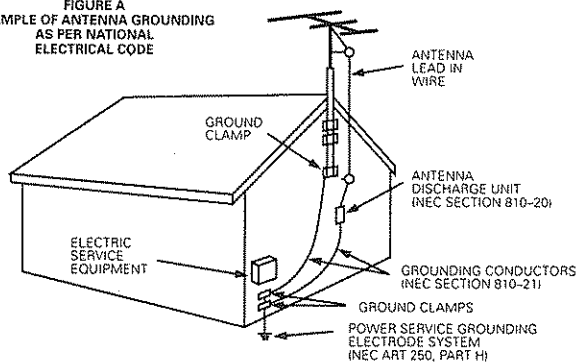| ATTENTION |
| --- |
| POUR PREVENIR LES CHOCS ELECTRIQUES NE PAS UTILISER CETTE FICHE POLARISEE AVEC UN PROLONGATEUR UNE PRISE DE COURANT OU UNE AUTRE SORTIE DE COURANT, SAUF SI LES LAMES PEUVENT ETRE INSEREES A FOND SANS EN LAISSER AUCUNE PARTIE A DECOUVERT. |

SAFETY INSTRUCTIONS

1. Read Instructions – All the safety and operating instructions should be read before the appliance is operated.

2. Retain Instructions – The safety and operating instructions should be retained for future reference.

3. Heed Warnings – All warnings on the appliance and in the operating instructions should be adhered to.

4. Follow Instructions – All operating and use instructions should be followed.

5. Water and Moisture – The appliance should not be used near water – for example, near a bathtub, washbowl, kitchen sink, laundry tub, in a wet basement, or near a swimming pool, and the like.

6. Carts and Stands – The appliance should be used only with a cart or stand that is recommended by the manufacturer.

6A. An appliance and cart combination should be moved with care. Quick stops, excessive force, and uneven surfaces may cause the appliance and cart combination to overturn.

7. Wall or Ceiling Mounting – The appliance should be mounted to a wall or ceiling only as recommended by the manufacturer.

8. Ventilation – The appliance should be situated so that its location or position does not interfere with its proper ventilation. For example, the appliance should not be situated on a bed, sofa, rug, or similar surface that may block the ventilation openings; or, placed in a built-in installation, such as a bookcase or cabinet that may impede the flow of air through the ventilation openings.

9. Heat – The appliance should be situated away from heat sources such as radiators, heat registers, stoves, or other appliances (including amplifiers) that produce heat.

10. Power Sources – The appliance should be connected to a power supply only of the type described in the operating instructions or as marked on the appliance.

11. Grounding or Polarization – Precautions should be taken so that the grounding or polarization means of an appliance is not defeated.

12. Power-Cord Protection – Power-supply cords should be routed so that they are not likely to be walked on or pinched by items placed upon or against them, paying particular attention to cords at plugs, convenience receptacles, and the point where they exit from the appliance.

14. Cleaning – The appliance should be cleaned only as recommended by the manufacturer.

15. Power Lines – An outdoor antenna should be located away from power lines.

16. Outdoor Antenna Grounding – If an outside antenna is connected to the receiver, be sure the antenna system is grounded so as to provide some protection against voltage surges and built-up static charges. Article 810 of the National Electrical Code, ANSI/NFPA 70, provides information with regard to proper grounding of the mast and supporting structure, grounding of the lead-in wire to an antenna-discharge unit, size of grounding conductors, location of antenna-discharge unit, connection to grounding electrodes, and requirements for the grounding electrode. See Figure A.

17. Nonuse Periods – The power cord of the appliance should be unplugged from the outlet when left unused for a long period of time.

18. Object and Liquid Entry – Care should be taken so that objects do not fall and liquids are not spilled into the enclosure through openings.

19. Damage Requiring Service – The appliance should be serviced by qualified service personnel when:

   A. The power-supply cord or the plug has been damaged; or

   B. Objects have fallen, or liquid has been spilled into the appliance; or

   C. The appliance has been exposed to rain; or

   D. The appliance does not appear to operate normally or exhibits a marked change in performance; or

   E. The appliance has been dropped, or the enclosure damaged.

20. Servicing – The user should not attempt to service the appliance beyond that described in the operating instructions. All other servicing should be referred to qualified service personnel.

FIGURE A
EXAMPLE OF ANTENNA GROUNDING
AS PER NATIONAL
ELECTRICAL CODE

ANTENNA LEAD IN WIRE
GROUND CLAMP
ANTENNA DISCHARGE UNIT (NEC SECTION 810-20)
ELECTRIC SERVICE EQUIPMENT
GROUNDING CONDUCTORS (NEC SECTION 810-21)
GROUND CLAMPS
POWER SERVICE GROUNDING ELECTRODE SYSTEM (NEC ART 250, PART H)
NEC – NATIONAL ELECTRICAL CODE

TABLE OF CONTENTS

● ACCESSORIES

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

① Operating instructions .... 1 ② Warranty (for North American model only) .... 1 ③ Service station list 1
④ Remote control unit ⑤ R6P/AA batteries .... 2 ⑥ Power cord .... 1 ⑦ Connector cord 3
  (RC-838) 1

④   ⑤   ⑥   ⑦

1 NOTE ON USE
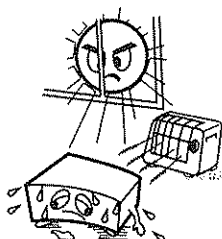
● Avoid high temperatures
Allow for sufficient heat dispersion
when installed on a rack.
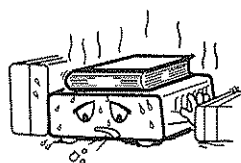
● Keep the set free from moisture,
water, and dust.

● Do not let foreign objects in the set.

● Handle the power cord carefully.
Hold the plug when unplugging the
cord.
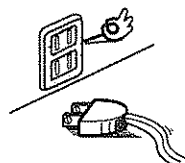
● Unplug the power cord when not
using the set for long periods of
time.
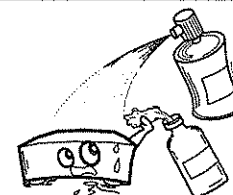
● Do not let insecticides, benzene, and
thinner come in contact with the set.

*(For sets with ventilation holes)

● Do not obstruct the ventilation
holes.
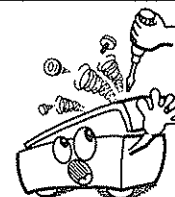
● Never disassemble or modify the set
in any way.

4

2 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 operation 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. Also fill in the items on the back page for your convenience.

● **Note that the illustrations in this instructions may differ from the actual set for explanation purposes.**

3 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.
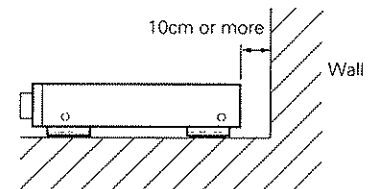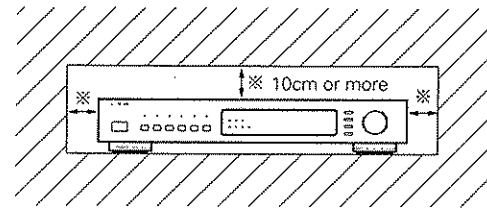
4 CAUTIONS ON HANDLING

● **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.

● **Output level upon shipment from factory**
The MASTER VOLUME is set at "0" (rated output level) by default upon shipment from the factory. Because of this, an extremely loud sound may be produced if the AVD–2000 is connected directly to a power amplifier, etc., not equipped with a level adjustment function. When connecting the AVD–2000 to such a power amplifier, etc., be sure to turn on the AVD–2000's power and set the MASTER VOLUME to the minimum position (– – –) before turning on the power of the power amplifier.

● **Muting of output jacks**
The output jacks 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.
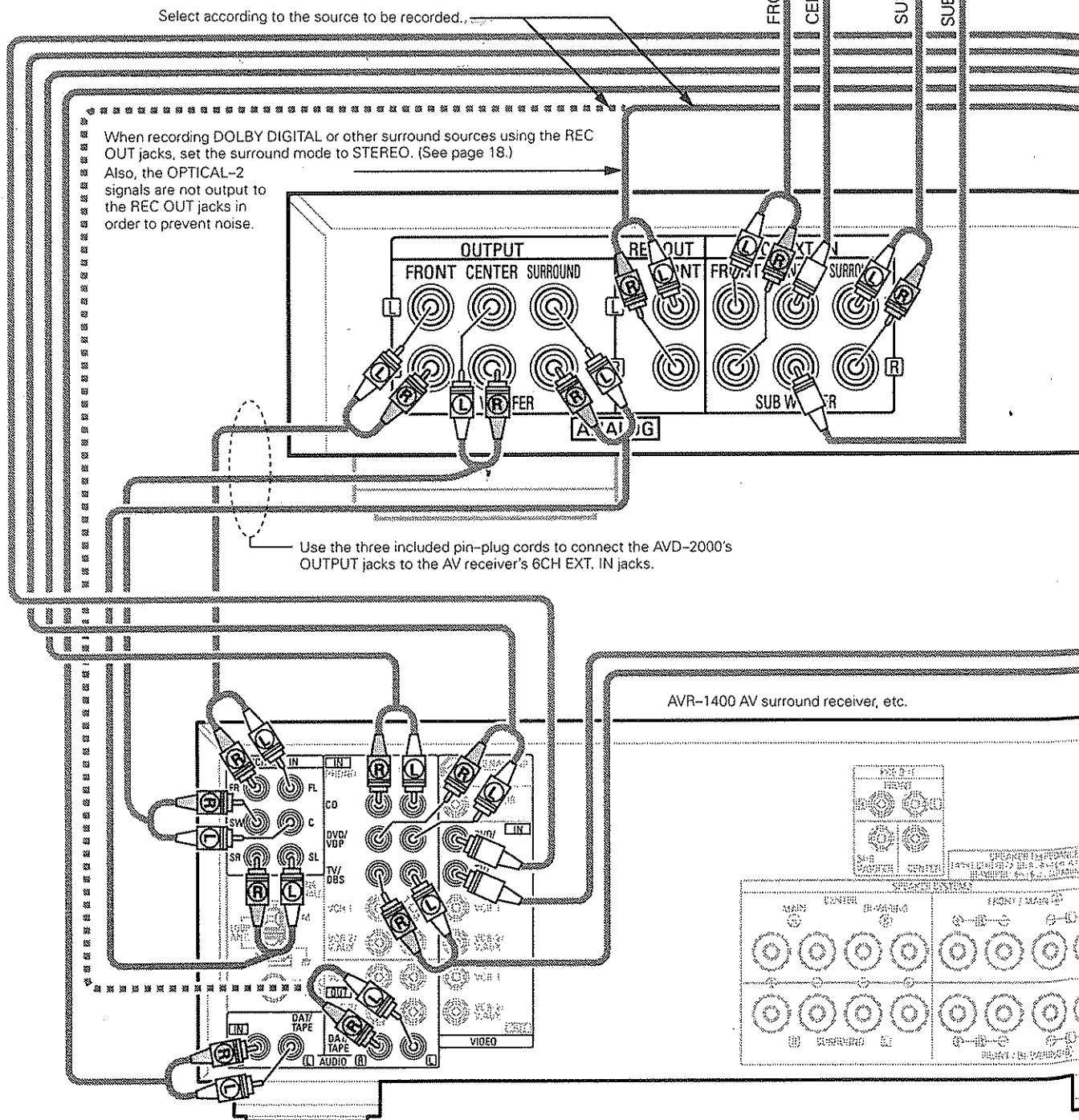
5

5 CONNECTIONS

- Do not plug in the power 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.
- **Use the AC OUTLETS for audio equipment only. Do not use them for hair driers, etc.**

- Note that binding pin plug cords together with power 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.

Connecting the audio components

When using the AVD–2000 with an AV receiver, etc., connect the digital audio input to the AVD–2000 and the analog audio output to the AV receiver. Also refer to the AV receiver's operating instructions.

Use these to connect an external decoder other than the AVD–2000 and AV receiver (MPEG decoder, DTS decoder, etc.).

Decoders with 6-channel analog outputs, etc.

Select according to the source to be recorded.

When recording DOLBY DIGITAL or other surround sources using the REC OUT jacks, set the surround mode to STEREO. (See page 18.)
Also, the OPTICAL–2 signals are not output to the REC OUT jacks in order to prevent noise.

Use the three included pin–plug cords to connect the AVD–2000's OUTPUT jacks to the AV receiver's 6CH EXT. IN jacks.

AVR–1400 AV surround receiver, etc.

If the types of digital output jacks (COAXIAL OUT and OPTICAL OUT) are not the same as in the examples shown below, the position for connection to the AVD–2000's input jacks can be changed. In this case, to use the AVD–2000 with a DENON AV receiver, change the digital input setting (see page 14) according to the connected component.

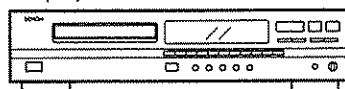NOTE: However, that MD, DAT and other recording devices should always be connected to the OPTICAL–2 jacks.
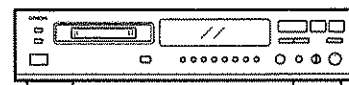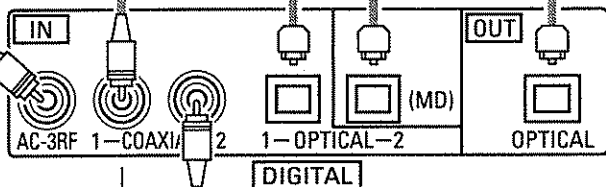
LD player (VDP)

DVD player
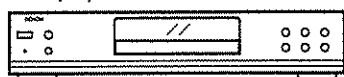
CD player

MD recorder or DAT recorder

VIDEO OUT
ANALOG OUT R L
AC-3 RF OUT
OPTICAL OUT

The AC–3 RF jacks are exclusively for Dolby Digital compatible LD players. Only use them to connect an LD player equipped with an AC–3 RF output jack.

ANALOG OUT R L
COAXIAL OUT

ANALOG OUT R L
ANALOG IN R L
OPTLCAL OUT
OPTICAL IN

IN
AC-3RF   1—COAXIA/   2   1—OPTICAL—2   OUT   OPTICAL
DIGITAL

(MD)

AC OUTLET
120V ~ 60Hz
SWITCHED
120W(1A.)MAX

AC IN

● Use 75 Ω/ohms cable pin cords (sold separately) for coaxial connections.
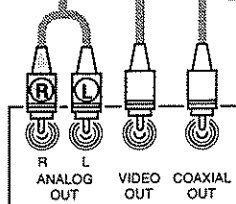● Use optical cables (sold separately) for optical connections, removing the cap before connecting.
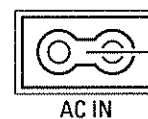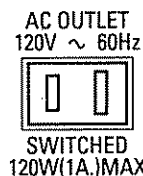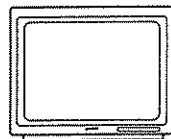
Connecting the AC OUTLETS

AC OUTLETS
● SWITCHED (total capacity – 120 W (1 A,))
The power to these outlets is turned on and off in conjunction with the POWER switch on the main unit. Never connect equipment whose total capacity is above 120 W (1 A,).
NOTE:
Only use the AC OUTLETS for audio equipment. Never use them for hair driers, TVs or other electrical appliances.
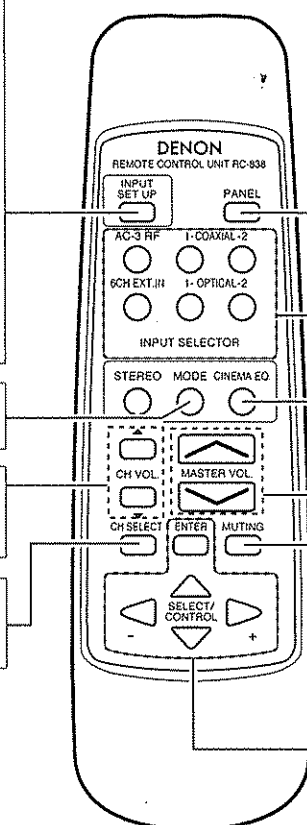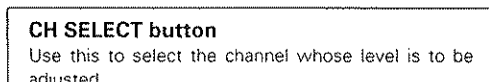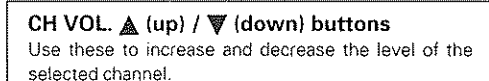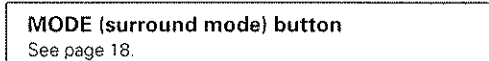
AC OUTLETS
120V ~ 60Hz

R L
ANALOG OUT
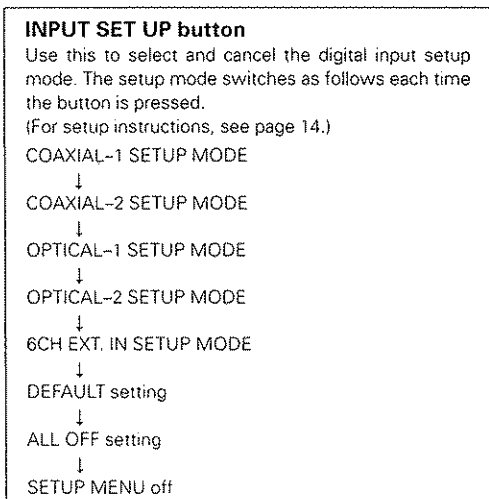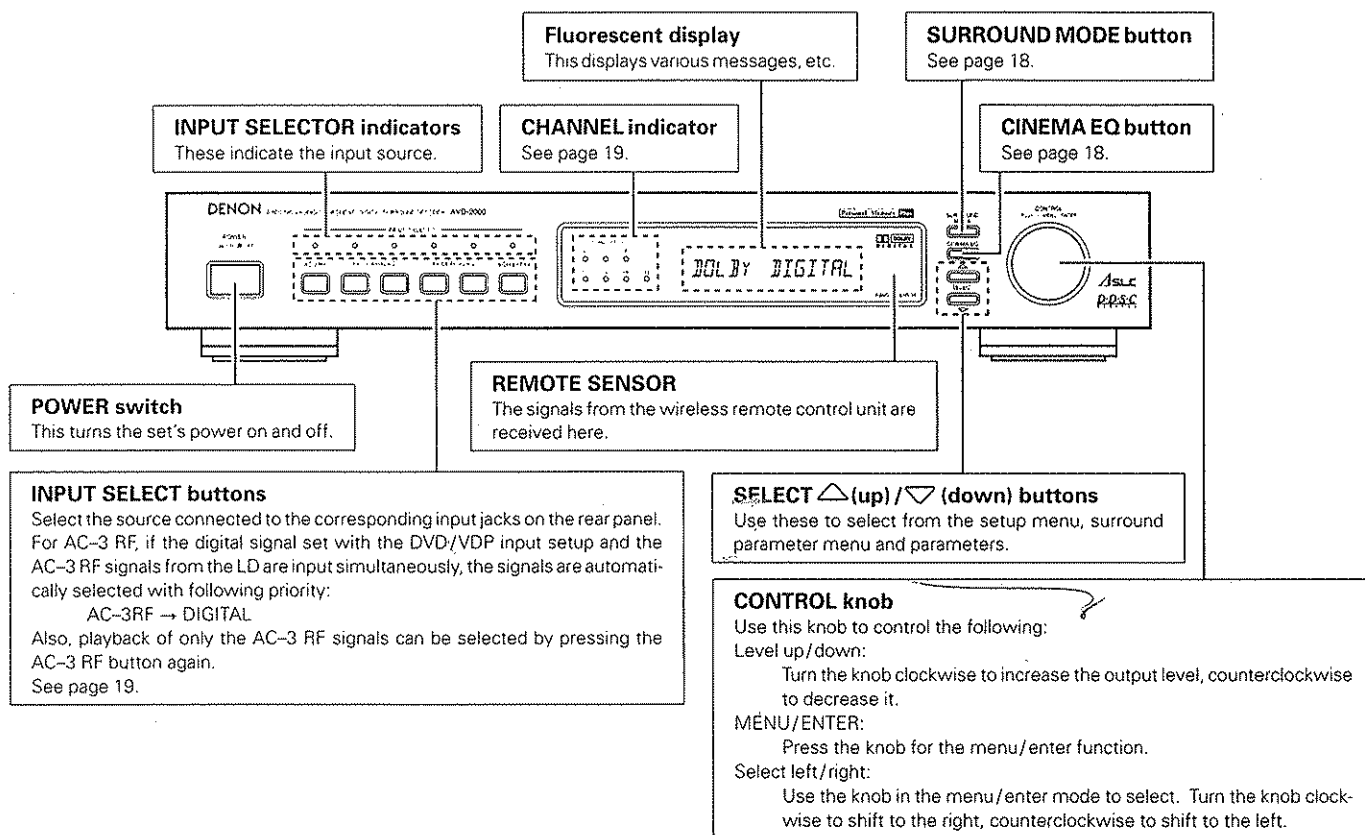VIDEO OUT
COAXIAL OUT

TV or DBS tuner

SWITCHED
TOTAL 120W(1A.) MAX.

When the AC cord is connected to the AC OUTLET (SWITCHED) outlet on the AV receiver, the power of the AVD–2000 turns on and off together with the AV receiver's power.

6 NAMES AND FUNCTIONS OF PARTS

Fluorescent display
This displays various messages, etc.

SURROUND MODE button
See page 18.

INPUT SELECTOR indicators
These indicate the input source.

CHANNEL indicator
See page 19.

CINEMA EQ button
See page 18.

DENON

DOLBY DIGITAL

POWER switch
This turns the set's power on and off.

REMOTE SENSOR
The signals from the wireless remote control unit are received here.

INPUT SELECT buttons
Select the source connected to the corresponding input jacks on the rear panel.
For AC-3 RF, if the digital signal set with the DVD/VDP input setup and the AC-3 RF signals from the LD are input simultaneously, the signals are automatically selected with following priority:
AC-3RF → DIGITAL
Also, playback of only the AC-3 RF signals can be selected by pressing the AC-3 RF button again.
See page 19.

SELECT △(up) / ▽ (down) buttons
Use these to select from the setup menu, surround parameter menu and parameters.

CONTROL knob
Use this knob to control the following:
Level up/down:
Turn the knob clockwise to increase the output level, counterclockwise to decrease it.
MENU/ENTER:
Press the knob for the menu/enter function.
Select left/right:
Use the knob in the menu/enter mode to select. Turn the knob clockwise to shift to the right, counterclockwise to shift to the left.

INPUT SET UP button
Use this to select and cancel the digital input setup mode. The setup mode switches as follows each time the button is pressed.
(For setup instructions, see page 14.)
COAXIAL-1 SETUP MODE
↓
COAXIAL-2 SETUP MODE
↓
OPTICAL-1 SETUP MODE
↓
OPTICAL-2 SETUP MODE
↓
6CH EXT. IN SETUP MODE
↓
DEFAULT setting
↓
ALL OFF setting
↓
SETUP MENU off

MODE (surround mode) button
See page 18.

CH VOL. ▲ (up) / ▼ (down) buttons
Use these to increase and decrease the level of the selected channel.

CH SELECT button
Use this to select the channel whose level is to be adjusted.

PANEL button
The fluorescent display switches as follows each time this button is pressed:
MASTER VOLUME
↓
CHANNEL LEVEL, LFE TRIM
↓
DIGITAL INPUT SETUP
↓
CINEMA EQ PARAMETER

DENON
REMOTE CONTROL UNIT RC-838

INPUT SET UP | PANEL

AC-3 RF | I-COAXIAL-2
6CH EXT.IN | I-OPTICAL-2
INPUT SELECTOR

STEREO | MODE | CINEMA EQ

CH VOL | MASTER VOL

CH SELECT | ENTER | MUTING

SELECT/CONTROL

INPUT SELECT buttons

CINEMA EQ button
See page 18.

MASTER VOL. buttons
See page 16.

MUTING button
Press this button to turn off the sound immediately.
Press the button again to cancel the mute mode.

ENTER button and SELECT/CONTROL buttons
Use these to make settings in the setup and surround modes.

8

7 SYSTEM SETUP

After connections with other components have been made, make the various settings on the fluorescent display using remote control unit (RC–838) or the keys on the main unit.

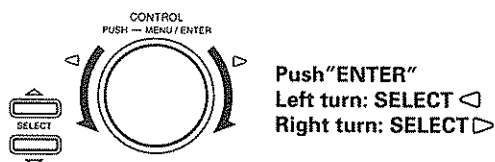Make the five settings described below.

Caution:

Do not play any apparatus connected to this set while in setting item ① or ② below, or some malfunction may occur.
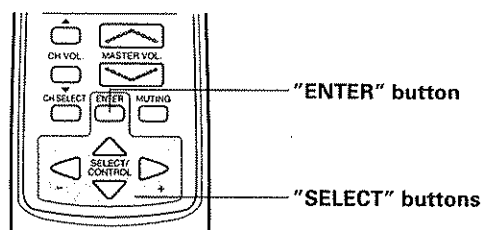
① **Speaker Configuration**   ④ **LFE Trim**
② **Speaker Distance**   ⑤ **Dimmer**
③ **Channel Level**

Use the following buttons to make the settings:

Main unit

Remote control unint

Push"ENTER"
Left turn: SELECT ◁
Right turn: SELECT ▷

"ENTER" button

"SELECT" buttons

Before setting up the system

1 POWER ON OFF — Press the POWER operation switch on the main unit to turn on the power.
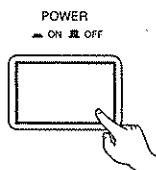
2 ENTER — Press the ENTER button.
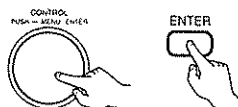
DISPLAY on the fluorescent display

$$\boxed{SYSTEM\ SETUP}$$

3 SELECT SELECT/CONTROL — Use the SELECT △ and ▽ buttons to set the "SYSTEM SETUP".

$$\boxed{SYSTEM\ SETUP}$$

4 ENTER — Press the ENTER button to switch the display
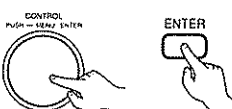
$$\boxed{SPKR\ CONFIG.}$$

Setting the speaker configuration

1 ENTER — Press the ENTER button.

DISPLAY on the fluorescent display

$$\boxed{SYSTEM\ SETUP}$$

2 ENTER — Press the ENTER button.
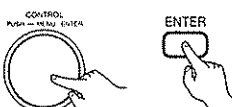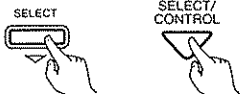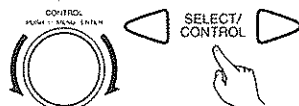
$$\boxed{SPKR\ CONFIG.}$$

3 ENTER — Press the ENTER button.

$$\boxed{FRONT\qquad SMALL}$$

9
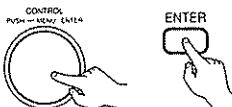
4   Use the SELECT ◁ and ▷ to select SMALL or LARGE.

```
FRONT    SMALL
◁↓       ↑▷
FRONT    LARGE
```

5   Press the SELECT ▽ button.

```
CENTER   SMALL
```

6   Use the SELECT ◁ and ▷ to select SMALL, LARGE or NONE.

```
CENTER    NONE
◁↓        ↑▷
CENTER   SMALL
◁↓        ↑▷
CENTER   LARGE
```

7   Press the SELECT ▽ button.

```
SURROUND YES
```

8   Use the SELECT ◁ and ▷ to select YES or NO.

```
SURROUND YES
◁↓        ↑▷
SURROUND  NO
```

9   Press the SELECT ▽ button.

```
S. WOOFER YES
```

10   Use the SELECT ◁ and ▷ to select YES or NO.

```
S. WOOFER YES
◁↓        ↑▷
S. WOOFER  NO
```

11   Press the ENTER button.
The sound switches according to the setting.

```
SPKR CONFIG.
```

■ **Parameters**

Large . . . . Select this when using speakers that can fully reproduce low sounds of below 80 Hz.

Small . . . . Select this when using speakers that cannot reproduce low sounds of below 80 Hz with sufficient volume.
When this setting is selected, low frequencies of below 80 Hz are assigned to the subwoofer.

None . . . . Select this when no speakers are installed.

Yes/No . . . . Select "Yes" when surround speakers and a subwoofer are installed, "No" when they are not installed.

NOTES:

● Select "Large" or "Small" not according to the physical size of the speaker, but according to the bass reproduction capacity at 80 Hz.
If you cannot determine the best setting, try comparing the sound when set to "Small" and when set to "Large", at a level that will not damage the speakers.

● When "None" has been selected for the center speaker, "No" cannot be selected for the surround speakers. Also note that when "No" has been selected for the surround speakers, "None" cannot be selected for the center speaker.

Caution:

In case the subwoofer is not used, be sure to set "Subwoofer = No", or the bass sound of front channel is divided to subwoofer channel and not reproduced in some mode.
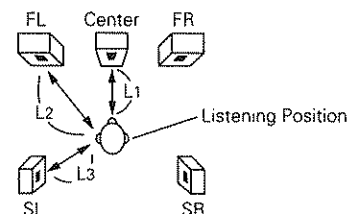
Setting the speaker distance

Input the distances from the listening position to the speakers and set the surround delay time.

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

L_1: Distance from center speaker to listening position
L_2: Distance from front speakers to listening position
L_3: Distance from rear speakers to listening position

FL   Center   FR

L2   L1

L3   Listening Position

SL   SR

---

1 Use the SELECT △ and ▽ buttons to set the "SPKR DISTANCE".

DISPLAY on the fluorescent display

SPKR DISTANCE

---

2 Press the ENTER button.

IN METERS

---

3 Use the SELECT ◁ and ▷ to select METER or FEET as a unit of distance.

IN METERS
◁↓   ↑▷
IN FEET

---

4 Press the SELECT ▽ button.
● When selecting feet and subwoofer YES.

FL/FR/SW 12FT
(3.6m)

---

5 Use the SELECT ◁ and ▷ to select the distance.
● The distance can be selected from 1 foot (0.1 meters) to 60 feet (18.0 meters) in steps of 1 foot (0.1 meters).

FL/FR/SW 60FT
◁↓   ↑▷ (18.0m)
FL/FR/SW 12FT
◁↓   ↑▷ (3.6m)
FL/FR/SW 1FT
(0.1m)

---

6 Press the SELECT ▽ button.
● When using a center speaker. (When not using a center speaker, the next step — the surround speaker setting — is displayed.)

CENTER 12FT
(3.6m)

---

7 Use the SELECT ◁ and ▷ to select the distance.
● The distance can be selected from 1 foot (0.1 meters) to 60 feet (18.0 meters) in steps of 1 foot (0.1 meters).

CENTER 60FT
◁↓   ↑▷ (18.0m)
CENTER 12FT
◁↓   ↑▷ (3.6m)
CENTER 1FT
(0.1m)

---

8 Press the SELECT ▽ button.
● When using surround speakers. (When not using surround speakers, the next step — "DEFAULT Y/N" — is displayed.)

SL/SR 10FT
(3.0m)
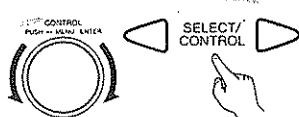
11

9 Use the SELECT ◁ and ▷ to select the distance.
- The distance can be selected from 1 foot (0.1 meters) to 60 feet (18.0 meters) in steps of 1 foot (0.1 meters).

```
SL/SR      60FT
```
◁ ↕ ▷ (18.0m)
```
SL/SR      10FT
```
◁ ↕ ▷ (3.0m)
```
SL/SR       1FT
```
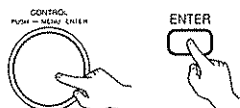(0.1m)

10 Press the SELECT ▽ button.

```
DEFAULT    Y/N
```
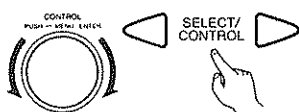
11 Use the SELECT ◁ and ▷ to select YES or NO.
- Select "NO" to activate the DELAY TIME setting. If "DEFAULT YES" is selected, the settings are reset to the initial factory settings. (See page 15.)

```
DEFAULT     NO
```
◁ ↕ ▷
```
DEFAULT    YES
```

12 Press the ENTER button.
- If there is a problem with the distance settings when "NO" is selected, the display shown at the right appears. Press the SELECT DOWN (▽) button to display the problem speakers in order, and reset the distances, paying attention to the explanations below. Use the SELECT UP (△) and SELECT DOWN (▽) buttons to select the speakers.

If there is no problem with the setting, the sound switches according to the input setting.

```
ADJUSTED
```

```
SPKR DISTANCE
```

* If you set an invalid distance, a CAUTION notice, "ADJUSTED" is shown on the fluorescent display. In case, please relocate the blinking speaker(s).
* Set in such a way that the distance to the center speaker is the same as or up to 5 feet (1.5 meters) shorter than the distance to the front left and front right speakers and the subwoofer.
* Set in such a way that the distance to the surround left and right speakers is the same as or up to 15 feet (4.5 meters) shorter than the distance to the front left and front right speakers and the subwoofer.
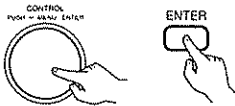
Setting the channel level

1 Use the SELECT △ and ▽ buttons to set the "CHANNEL LEVEL"
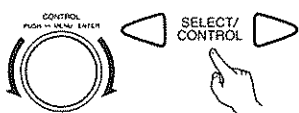
DISPLAY on the fluorescent display
```
CHANNEL LEVEL
```
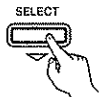
2 Press the ENTER button.

```
LEVEL CLR Y/N
```
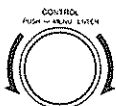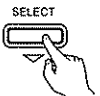
3 Use the SELECT ◁ and ▷ to select YES or NO.
- Select "YES" if you want to reset the CHANNEL LEVEL setting.

```
LEVEL CLR   NO
```
◁ ↕ ▷
```
LEVEL CLR  YES
```

NOTE:
When the level clear operation is performed, all channel levels for all modes are set to 0 dB.

4	SELECT · SELECT/CONTROL	Press the SELECT ▽ button.	$\boxed{\text{T\_TONE \quad AUTO}}$

5	CONTROL · SELECT/CONTROL ◁ ▷	Use the SELECT ◁ and ▷ to select AUTO or MANUAL.	$\boxed{\text{T\_TONE \quad AUTO}}$ ◁↓ ↑▷ $\boxed{\text{T\_TONE \quad MANUAL}}$

6	SELECT · SELECT/CONTROL	Press the SELECT ▽ button.	$\boxed{\text{T\_TONE \quad START}}$

7	CONTROL · ENTER	Press the ENTER button to enter the setting.	$\boxed{\text{AUTO--FL}}$ $\boxed{\text{MANUAL--FL}}$

A. If the "Auto" mode is selected:

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:

→ FL → C → FR → SR → SL → SW →

Use the SELECT △ and ▽ buttons to adjust so that the volume of the test tones output from the different speakers sounds the same.
The volume can be adjusted in units of 1 dB from −12 to +12 dB.

$\boxed{\text{AUTO--FL}}$
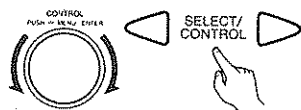$\boxed{\text{AUTO--C}}$
$\boxed{\text{AUTO--FR}}$
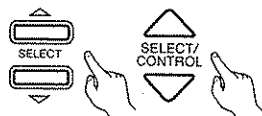$\boxed{\text{AUTO--SR}}$
$\boxed{\text{AUTO--SL}}$
$\boxed{\text{AUTO--SW}}$

B. If the "Manual" mode is selected:

Use the SELECT ◁ and ▷ buttons to highlight and select the speaker from which you want to output test tones, then use the SELECT △ and ▽ buttons to adjust so that the volume of the test tones output from the different speakers sounds the same.

$\boxed{\text{MANUAL--FL}}$
$\boxed{\text{MANUAL--C}}$
$\boxed{\text{MANUAL--FR}}$
$\boxed{\text{MANUAL--SR}}$
$\boxed{\text{MANUAL--SL}}$
$\boxed{\text{MANUAL--SW}}$

8	CONTROL · ENTER	Press the ENTER button.	$\boxed{\text{CHANNEL \quad LEVEL}}$

The level of each channel should be adjusted to 75 dB (C–weighted, slow meter mode) on a sound level meter at the listening position.
If a sound level meter is not available, adjust the channels by ear so the sound levels are the same. Because adjusting the subwoofer level with test tone by ear is difficult, use a well known music and adjust for natural balance.

NOTE:
When adjusting the level of an active subwoofer system, you may also need to adjust the subwoofer's own volume control.

13

DOLBY DIGITAL

1
Use the SELECT △ and ▽ buttons to set the "LFE TRIM".

DISPLAY on the fluorescent display

```
LFE TRIM  0 dB
```

2
Use the SELECT ◁ and ▷ to select the LFE level.
The level can be set from 0 dB to −10 dB in steps of 1 dB.
Set to the desired level according to the speaker systems being used and the source to be played.

```
LFE TRIM  0 dB
```
◁↓   ↑▷
```
LFE TRIM -10 dB
```

3
Press the ENTER button to enter the setting.
The "DISPLAY" is showed on the display.
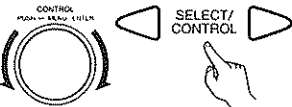
```
DISPLAY  DIM
```

Setting the DIMMER

1
Use the SELECT △ and ▽ buttons to set the "DISPLAY".

DISPLAY on the fluorescent display

```
DISPLAY  DIM
```

2
Use the SELECT ◁ and ▷ to select the dimmer.

(BRIGHT)
```
DISPLAY  DIM
```
◁↓   ↑▷
(MEDIUM)
```
DISPLAY  DIM
```
◁↓   ↑▷
(DIMMER)
```
DISPLAY  DIM
```
◁↓   ↑▷
(DISPLAY OFF)
```
DISPLAY
```

3
Press the ENTER button to enter the setting.
The "SETUP END" is shown on the display.
Press the ENTER button again to return to the normal display.

```
SETUP END
```

The system setup settings are now complete. If you want to change a setting, use the SELECT DOWN (▽) and SELECT UP (△) buttons to select the setting, then change it. If all the settings are OK, press the ENTER button.

Setting the digital inputs

Input the setting of the components connected to the digital input connectors.
When this setting is made and the AVD–2000 is used with a DENON AV receiver, the AVD–2000's function can be selected using the AV receiver's remote control unit.

NOTE:
- This setting is for using the AVD–2000 with a DENON 6CH EXT. IN compatible AV receiver. When using the AVD–2000 alone or with another receiver, set "ALL OFF" using the procedure described below. However, when using in the "AC–3RF AUTO" mode, set the corresponding function to "DVD/VDP".
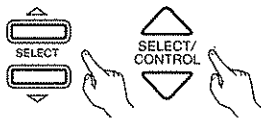
1
Press the INPUT SETUP button to enter the setting.

DISPLAY on the fluorescent display

```
COAX1:CD
```

2

Use the SELECT ▽ and SELECT △ buttons to select the input.
Next, press the input function key on your AV receiver's remote control unit to select the source.
The following sources can be selected:
PHONO, CD, TUNER, AUX, MD/TAPE, DVD/VDP, TV/DBS, V.AUX, VCR–1, VCR–2, VCR–3.
In addition, in this state, "DVD/VDP" can be set by pressing the "AC–3RF" key on the main unit's remote control unit.
(Use for AC–3RF AUTO setting See page 19)

```
COAX1:
◁↓      ↑▷
COAX2:
◁↓      ↑▷
OPT-1:
◁↓      ↑▷
OPT-2:
◁↓      ↑▷
6CHIN:
```
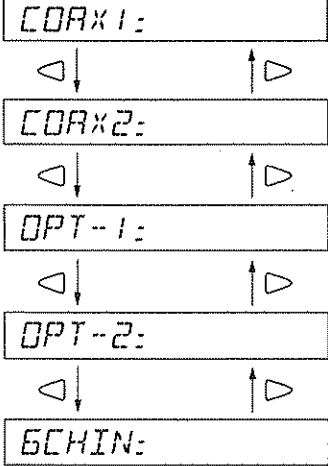
NOTES:
- Be sure to use your AV receiver's remote control unit to select the source. This setting is not possible using the keys on the AV receiver itself or another remote control unit with a learning function.
- The names of the input functions on the AV receiver may differ from those displayed on the AVD–2000. This is normal. Though the display may differ, the function can be selected normally.
- After making the setting, set the AV receiver's surround mode to "6CH EXT. IN".
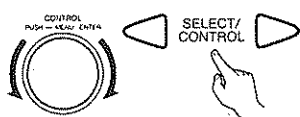
3
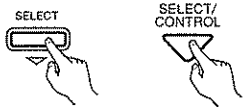
Once all the settings have been made, press the SELECT ▽ button. "DEFAULT" is displayed.
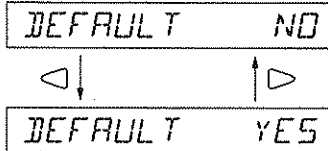
```
DEFAULT   Y/N
```
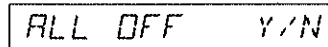
4
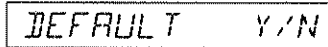
Use the SELECT ◁ and ▷ to select YES or NO.
- Select "NO" to activate the digital input settings.
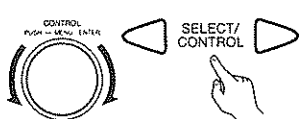If "YES" is selected, the settings are reset to the initial factory settings. (Described below.)

```
DEFAULT    NO
◁↓        ↑▷
DEFAULT   YES
```

5

Press the SELECT ▽ button to enter the setting.

```
ALL OFF   Y/N
```

6

Use the SELECT ◁ and ▷ to select YES or NO.
- If "YES" is selected, all the digital inputs are set to "OFF".

```
ALL OFF    NO
◁↓        ↑▷
ALL OFF   YES
```
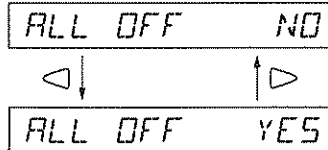
7
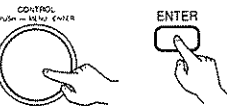
Press the ENTER button to enter the setting.
The display returns to normal.

```
PRO LOGIC
```
(Example)

■ SYSTEM SETUP DEFAULT VALUE

① SPEAKER CONFIGURATION	Front Sp.		Center Sp.	Surround Sp.		Subwoofer
	Small		Small	Yes		Yes
② SPEAKER DISTANCE	FL, FR & Subwoofer		Center	SL & SR		
	12 ft. (3.6 m)		12 ft. (3.6 m)	10 ft. (3.0 m)		
③ CHANNEL LEVEL	FL	FR	C	SL	SR	SW
	0 dB	0 dB	0 dB	0 dB	0 dB	0 dB
④ DOLBY DIGITAL	LFE Trim 0 dB					
⑤ DIMMER	BRIGHT					

■ INPUT SETUP DEFAULT VALUE

FUNCTION	INPUT
① COAXIAL–1	CD
② COAXIAL–2	TV/DBS

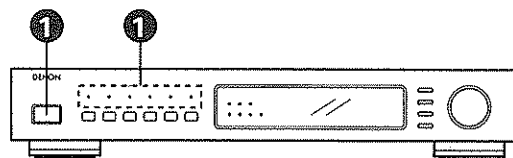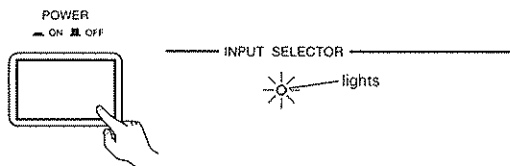| FUNCTION	INPUT
③ OPTICAL–1	DVD/VDP
④ OPTICAL–2	MD/TAPE
⑤ 6CH EXT. IN	OFF

8 OPERATIONS

Preparations for playback

Preparations:
Check that all connections are proper.

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

POWER
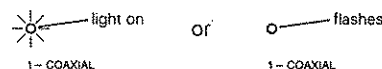— ON ■ OFF

——— INPUT SELECTOR ———

lights

● ___ ON
The power turns on and "INPUT SELECTOR" indicator is lit.
Several seconds are required from the time the power switch is set to the " ___ ON " position until sound is output. This is due to the built–in muting circuit that prevents noise when the power switch is turned on and off.

● ■ OFF
The power turns off and "INPUT SELECTOR" indicator is off.
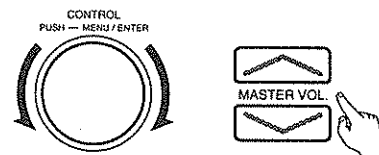
Playing the digital program source

1 Press the button for the program source to be played that is connected to the digital input jacks.
EX: COAXIAL–1

1 - COAXIAL   1 - COAXIAL

● When the AVD–2000 is used with a DENON AV receiver, the program source can be selected using the function buttons on the AV receiver's remote control unit. If this does not work properly or if you want to change the settings, see page 14. Also set the AV receiver's surround mode to "6CH EXT. IN".

2 Check that "INPUT SELECTOR" indicator is lit.
EX: COAXIAL–1

light on   or   flashes

1 - COAXIAL   1 - COAXIAL

※ If the "INPUT SELECTOR" indicator is flashes, check that the system setup's input setting (refer to page 14) and the connections are proper, that the component's power is turned on, etc.

3 Start playback on the selected component.
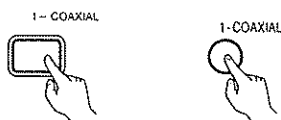For operating instructions, refer to the various components' manuals.

4 Adjust the MASTER VOLUME control.

CONTROL
PUSH — MENU / ENTER

MASTER VOL.

NOTES:
● NEVER try to play CD–ROM discs.
● If a CD–ROM is played, the INPUT SELECTOR indicator is lit but no sound is heard.
● When using the AVD–2000 with a DENON AV receiver, leave the AVD–2000's MASTER VOLUME control at the 0 position and adjust the volume using the MASTER VOLUME control on the AV receiver.

Using the muting function

Use this to turn off the audio output temporarily.

1 Press the MUTING button.
   ✳ Cancelling MUTING mode.
   Press the MUTING button again.

MUTING
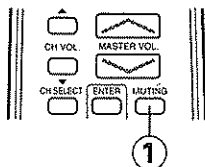
✳ **Caution:** Switching off the power of the unit and the remote control
   unit will cancel the settings.

Front panel display

When an operation is performed on the main unit or on the remote control unit, that operation appears on the display, making it possible to check the operation visually.
The set's operating status can also be checked on the display using the procedure described below.

1 Press the PANEL button.

PANEL
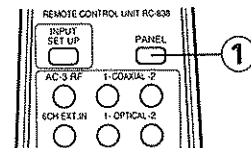
The input and output sources and the surround setting, etc., appear in order on the display each time the button is pressed.

[9] USING THE SURROUND FUNCTION

Dolby Surround

This unit is equipped with digital signal processing sections for decoding and reproducing movie soundtracks the same way as in movie theaters.

1. DOLBY PRO LOGIC

When using conventional video tapes, laser discs, TV programs or CDs with the [DD DOLBY SURROUND] mark, Dolby Pro Logic provides extremely natural sound movement and positioning, immersing you in the on screen action. Pro Logic uses a directional emphasis circuit to decode four output channels (front left and right, center and surround) from the two audio channels provided on the software.
This set is equipped with four Dolby Pro Logic play modes: Normal, Phantom, Wide and 3–channel. The set automatically selects the optimum mode according to the system setup's speaker configuration settings.
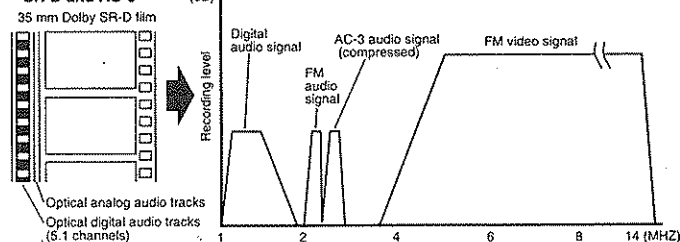
2. DOLBY DIGITAL (AC–3)

When you connect the DVD player or an LD player with an AC–3RF output to the AC–3RF input terminal and play DVD, laser discs with [DD DOLBY] (or [DD DOLBY SURROUND]) mark, you can experience improved sound spatiality, positioning, and impact compared with Pro Logic. This is because Dolby Digital delivers up to 5 totally discrete, full frequency audio channels (front left and right, center, and surround left and right), plus a bass–only effects channel. Since the signal is digital from the input of the program source until to the output of this unit, a higher quality and clarity of surround sound results.

Dolby Digital AC–3 (Audio Coding 3) is a system developed by Dolby Laboratories that transmits 5.1 channels of digital signals. The surround system developed for movie theaters using this system is called "Dolby SR–D (Surround Digital)". Whereas the conventional Dolby Pro Logic Surround is an analog matrix system, Dolby SR–D is a digital discrete system in which the different channels are completely independent. This makes it possible to achieve a realistic sound field with a "three–dimensional" feel, giving the sound a sense of distance, movement and relative position, and creating a surprisingly real and powerful sense of presence when playing movie software in AV rooms. There are "5.1 ch" playback channels: three front channels (front left, center and front right), two surround channels (surround left and surround right), plus "0.1 channel" called LFE (Low Frequency Effect) for low bass effect sounds of 120 Hz or less. The signals are recorded on the software in fully discrete fashion, eliminating crosstalk between channels and making it possible to control the sound field in the listening/viewing space with greater precision.
In addition, the frequency range of the five channels extends up to 20 kHz, (the same as CDs,) resulting in clear sound with greater richness of expression.

● Relationship between SR-D and AC-3

35 mm Dolby SR-D film

Optical analog audio tracks
Optical digital audio tracks (5.1 channels)

Digital audio signal / FM audio signal / AC-3 audio signal (compressed) / FM video signal

(dB) Recording level — 1 2 4 6 8 14 (MHZ)

● Dolby Digital and Pro Logic

Home surround methods	Dolby Digital	Dolby Pro Logic
No. recording channels (material)	5.1 ch	2 ch
No. playback channels	5.1 ch	4 ch
Playback channels	L, R, C, SL, SR and SW	L, R, C, S (SW recommended)
Audio processing	Digital discrete processing, AC–3 encoding / decoding	Analog matrix processing, Dolby Surround
Upper reproduction limit of surround channel	20 kHz	7 kHz

Before playing with the surround function

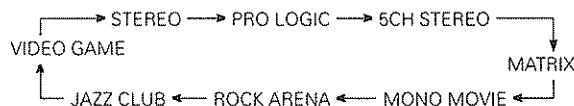Before using the surround function, be sure to adjust the playing level of the different speakers using the test tones.
After doing so, adjust the levels for the different channels as described below according to the source to be played and your personal tastes.

1 Use the INPUT SELECTOR buttons to select the function to which the program source you want to play is connected.
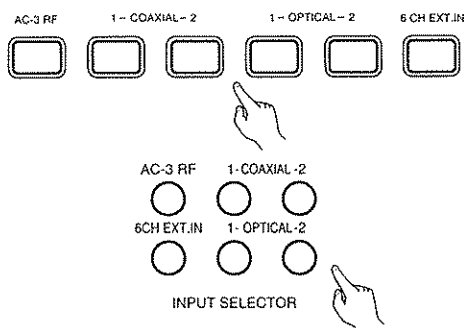

2 Select the desired surround mode.
Use the SURROUND MODE (main unit), MODE (remote control unit), SELECT UP (△)/DOWN (▽) (main unit) and SELECT CONTROL UP (△)/DOWN (▽) (remote control unit) buttons to switch the surround mode in the following order:

```
┌──→ STEREO ──→ PRO LOGIC ──→ 5CH STEREO ──┐
VIDEO GAME                                  ↓
↑                                         MATRIX
└─ JAZZ CLUB ←── ROCK ARENA ←── MONO MOVIE ←┘
```

3 Use the CH SELECT button to select the speaker whose level is to be adjusted.
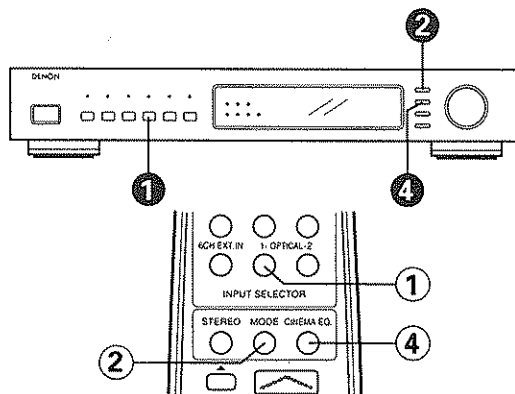

4 Use the CH VOL. button to adjust the speaker level.
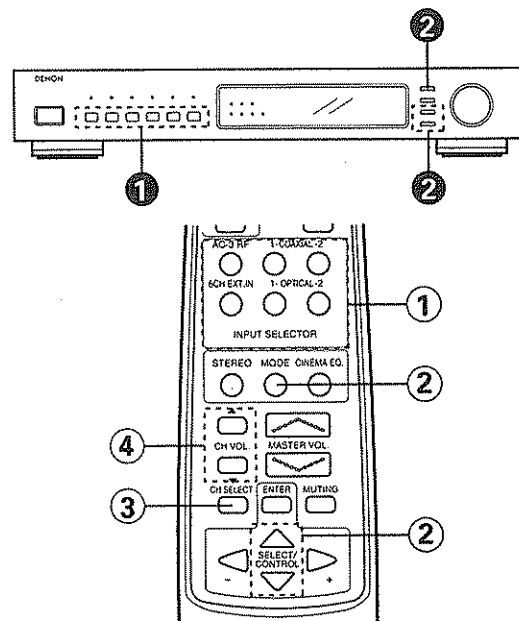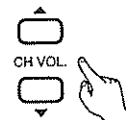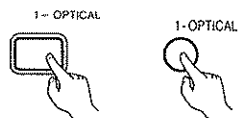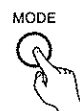

Using the Dolby Pro Logic mode

Play a pre-recorded source with the ⊡⊡ DOLBY SURROUND mark.

1 Press the button for the program source to be played.

2 Set the DOLBY SURROUND mode.

DISPLAY

$$PRO\ LOGIC$$

3 Start playback on the selected component.
For operating instructions, refer to the various components' manuals.

4 Press the CINEMA EQ button when playing back movie video software and the speech portion is felt to be harsh upon the ears. The output frequency response of the center and front speakers becomes closer to that in a theater and the sound becomes more pleasant to the ears.

18

Using the Dolby Digital mode
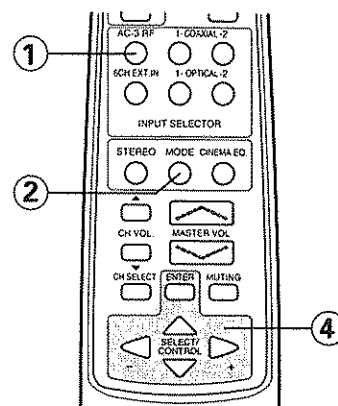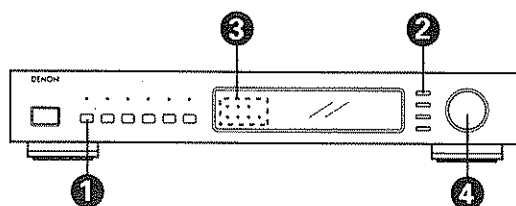
1

AC-3 RF   AC-3 RF

Press the AC-3 RF button.
The input mode switches as follows each time the button is pressed:
AC-3 RF AUTO ◄────► AC-3 RF

AC–3 RF AUTO:
When AC–3RF and digital signals are input from an LD, the signals are automatically selected with following priority: AC–3RF → Digital.

AC–3RF: The input is fixed to AC–3RF.

* In the "AC–3RF AUTO" mode, when an LD containing AC–3 audio signals is detected, the decoder switches automatically and the AC–3 audio signals are played. In addition, AC–3 signals are not detected in any modes other than the normal LD player playback mode, so in these modes the PCM digital signals are selected automatically.

* In the "AC–3RF AUTO" mode, when switching from pause/chapter forward or other modes to playback during playback of an LD's AC–3 audio signals, the PCM audio signals may be output for an instant before switching to the AC–3 audio signals. If this happens, switch to the "AC–3RF" (fixed AC–3RF input) mode. The sound will no longer be interrupted.

* The AC–3RF input mode setting is reset to "AC–3RF AUTO" when the power is turned off.

NOTES:
- The "AC–3 RF AUTO" setting automatically switches between the function selected for "DVD/VDP" with the digital input setting and AC–3 RF. When using the AVD–2000 with a DENON AV receiver, automatic switching between the analog input (connected to the receiver's input jacks) and the AVD–2000's input is not possible. Switch manually using the AV receiver's surround mode selection function.
- To conduct automatic switching with any function with AC–3RF AUTO, set that function to "DVD/VDP".(See page 14.)
- If there is no other digital output (COAXIAL or OPTICAL OUT) for the VDP player connected to the AVD–2000's AC–3RF jacks or if no such output is connected to the AVD–2000, be sure to use in the "AC–3 RF" fixed AC–3RF input mode. Failure to do so may result in malfunction.

2

SURROUND MODE   MODE

Select the Dolby surround mode.

3

Play a program source with the ⊡⊡ DOLBY DIGITAL mark.

For operating instructions, refer to the manuals for the various components.
During playback, the channel LEDs shown at the right indicating the signals in the source light. (The number of channels differs from source to source.)
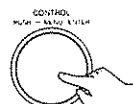
If the source contains low frequency effect signals, the low frequency effect (LFE) LED lights.

CH INDICATOR
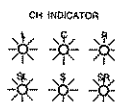
L : Front left channel
C : Center channel
R : Front right channel
SL : Left surround channel
S : Mono surround channel
SR : Right surround channel

lights
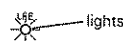
4 Set the surround parameters according to the source and adjust the sound quality.

DISPLAY on the fluorescent display

1. Press the ENTER button to display "SYSTEM SETUP".

```
5YSTEM SETUP
```

2. Press the SELECT ▽ button to display "S.PARAMETER".

```
5_ PRRRMETER
```
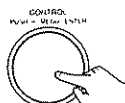
3. Press the ENTER button again.

```
J_ COMP_     OFF
```
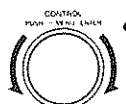
4. Use the SELECT ◁ and ▷ to select Dynamic Compression.

```
J_ COMP_    HIGH
```
◁↓   ↑▷
```
J_ COMP_     MIJ
```
◁↓   ↑▷
```
J_ COMP_     LOW
```
◁↓   ↑▷
```
J_ COMP_     OFF
```
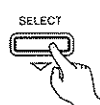
5. Press the SELECT ▽ button to enter the setting.

```
J/NORMRL     ON
```

6. Use the SELECT ◁ and ▷ to select Dialog Normalization

```
J/NORMRL     ON
```
◁↓   ↑▷
```
J/NORMRL    OFF
```
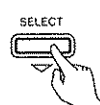
7. Press the SELECT ▽ button to enter the setting.

```
JEFRULT    Y/N
```
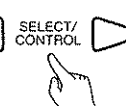
8. Use the SELECT ◁ and ▷ to select DEFAULT.

```
JEFRULT     NO
```
◁↓   ↑▷
```
JEFRULT    YES
```
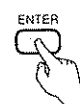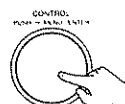
9. Press the ENTER button to enter the setting.
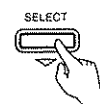
```
5_ PRRRMETER
```

10. Press the SELECT ▽ button to enter the setting.

```
5ETUP ENJ
```

11. Press the ENTER button again to cancel the surround parameter setting mode and return to the normal display (surround mode). If you want to change a setting, use the SELECT △ and ▽ buttons to select the setting, then change it. If the setting is OK, press the ENTER button.

5 CINEMA EQUALIZER setting:
Use this when playing movie software if the dialogue sounds scratchy.

NOTES:
- With the AVD–2000, signals encoded in Dolby Digital (AC–3) can only be played in the Dolby Pro Logic, Dolby Digital AC–3 and STEREO modes.
- If the input signal switches to the signal encoded in Dolby Digital while playing PCM digital signals in the MONO MOVIE, 5CH STEREO, ROCK ARENA, JAZZ CLUB, VIDEO GAME or MATRIX modes, **the mode is forcibly switched to the Dolby surround mode (Dolby Digital or Dolby Pro Logic).**
- When playing back in the DOLBY PRO LOGIC mode, depending on the settings of each output channel, it may not be possible to make a setting of the master volume that exceeds – 3dB.

Surround parameters

D. COMP. . . . . "DYNAMIC RANGE COMPRESSION" compresses the dynamic range. This is only effective for Dolby Digital program sources. — There are four parameters: "OFF" ↔ "LOW" ↔ "MID" ↔ "HIGH" (Only effective in the Dolby Digital mode and STEREO mode.)

D/NORMAL . . . . "DIALOG NORMALIZATION" automatically adjusts the playback level during source playback to the optimum value. This parameter is only valid for settings that use the center and surround speakers with Dolby Digital program sources and in the "SPKR.CONFIG" screen of the "SYSTEM SETUP" menu. (Only effective in the Dolby Digital mode.)

NOTE:
- "D/NORMAL" automatically restores the power to "ON" when the power of the unit has been switched "OFF".

Surround parameter default setting

1	Dynamic range compresstion	Off
2	Dialog normalization	On

DSP surround simulation

This unit is equipped with a high precision D.S.P. (Digital Signal Processor) for processing signals digitally to simulate sound fields. Select the surround mode according to the playback source and adjust the parameters according to the conditions in the listening room to achieve realistic venue ambience.

Types of surround modes and their characteristics

1	STEREO	Sound is produced from the two front channels. (Nothing is output from the Surround and center channels.)
2	5CH STEREO	The signals of the left and right channels are distributed to the different speakers to achieve a stereo sound from all directions at the listening position.
3	MATRIX	Use this to enjoy stereo music sources with rich reverberations.
4	MONO MOVIE	In this mode, a sense of expansion is added to monaural audio sources. This mode is best suited for playing old movies or movie tapes recorded in monaural.
5	ROCK ARENA	The powerful reverberations of this mode produce a sound field which recreates the excitement of live concerts. This mode is effective for rock, popular music, etc.
6	JAZZ CLUB	This mode creates the sound field of a live house with a low ceiling and hard wall reverberations. The result is that the artist seems to be performing right before your eyes.
7	VIDEO GAME	Use this to enjoy video game sources.
8	6CH EXT. IN	Connect the output of the external decoder to this unit's 6CH EXT. IN.

※ When used with a DENON AV receiver, the effects of the surround modes on the AV receiver may differ from those of the surround modes of the same name on the AVD–2000. This is because the AVD–2000 uses a high performance DSP for greater effect.
※ 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.
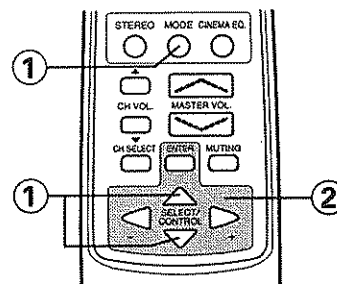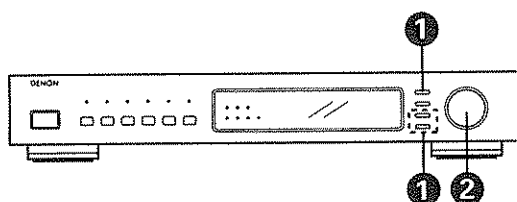

Personal Memory Plus function .... for EASY USE

This unit automatically stores the surround mode adding selected effects for all input sources. The corresponding surround mode is recalled automatically each time an input source is selected.
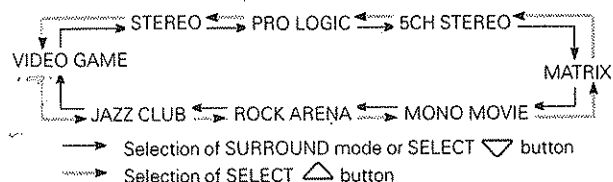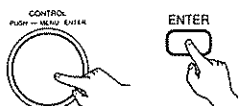---

Using the DSP surround simulation

Preparations:
Start playing the program source.

1 Select the surround mode according to the input mode.
Use the SURROUND MODE (main unit), MODE (remote control unit), SELECT UP (△)/DOWN (▽) (main unit) and SELECT CONTROL UP (△)/DOWN (▽) (remote control unit) buttons to switch the surround mode in the order shown at the right:

```
          ┌─── STEREO ⇆ PRO LOGIC ⇆ 5CH STEREO ───┐
          │                                        │
VIDEO GAME ↑                                    MATRIX
          │                                        │
          └─ JAZZ CLUB ⇆ ROCK ARENA ⇆ MONO MOVIE ─┘
```

⟶ Selection of SURROUND mode or SELECT ▽ button
⟿ Selection of SELECT △ button

2 Set the surround parameters according to the source and adjust the sound quality.

DISPLAY on the fluorescent display

1. Press the ENTER button to display "SYSTEM SETUP".

```
| SYSTEM SETUP |
```

2. Press the SELECT ▽ button to display "S.PARAMETER".

```
| S. PARAMETER |
```
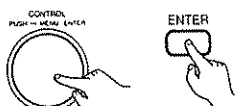
3. Press ENTER button to enter the setting.

```
| ROOM      MED |
```
or
```
| DELAY    30MS |
```

A. When the surround mode is set to MONO MOVIE, ROCK ARENA, JAZZ CLUB or VIDEO GAME:
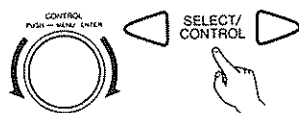
1. Use the SELECT ◁ and ▷ to select room size.

```
| ROOM     LARGE |
    ◁|        |▷
| ROOM     MED-L |
    ◁|        |▷
| ROOM      MED  |
    ◁|        |▷
| ROOM     MED-S |
    ◁|        |▷
| ROOM     SMALL |
```
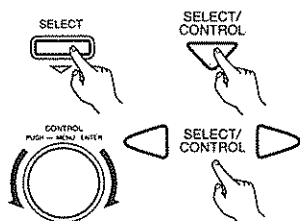
2. Press the SELECT ▽ button to enter the setting.

`EFFECT    10`

3. Use the SELECT ◁ and ▷ to select Effect Level.
   The level can be adjusted between 1 and 15 in steps of
   1.

`EFFECT    15`

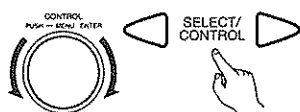◁↓   ↑▷

`EFFECT    10`

◁↓   ↑▷

`EFFECT     1`

4. Press the SELECT ▽ button to enter the setting.

`DEFAULT   Y/N`

B. When the surround mode is set to MATRIX:

1. Use the SELECT ◁ and ▷ to select Delay Time.
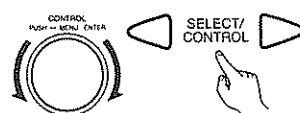   The setting can be adjusted between 0 and 140 ms.

`DELAY   140MS`

◁↓   ↑▷

`DELAY    30MS`

◁↓   ↑▷

`DELAY     0MS`

2. Press the SELECT ▽ button to enter the setting.
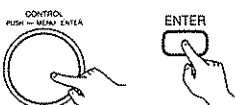
`DEFAULT   Y/N`

1. Use the SELECT ◁ and ▷ to select DEFAULT.

`DEFAULT    NO`

◁↓   ↑▷

`DEFAULT   YES`

2. Press the ENTER button to enter the setting.

`5. PARAMETER`

3. Press the SELECT ▽ button to enter the setting.

`SETUP END`

4. Press the ENTER button again to cancel the surround parameter setting mode and return to the
   normal display (surround mode). If you want to change a setting, use the SELECT ◁ and ▷
   buttons to select the setting, then change it. If the setting is OK, press the ENTER button.

NOTE:
● If the input signal switches to the signal encoded in AC–3 while playing PCM digital signals or analog signals in the MONO MOVIE, 5CH STEREO,
   ROCK ARENA, JAZZ CLUB, VIDEO GAME or MATRIX modes, **the mode is forcibly switched to the Dolby surround mode (Dolby Digital).**

■ Surround parameters

ROOM SIZE . . . . "Room size" refers to the size of the sound field. — There are five parameters: "Small" ↔ "med.S." ↔ "medium" ↔ "med.L." ↔ "large"

EFFECT LEVEL . . . . . . "Effect level" refers to the strength of the effect sounds. If the sound becomes distorted, lower the level. Parameter "1" ~ "15"

DELAY TIME . . . . This can be set to between 0 and 140 msec for the MATRIX mode.

�ått The settings are reset to the factory settings when the DEFAULT is selected.

■ Surround modes and parameters

|	OUTPUT CHANNEL (0 dB)				PARAMETER SOURCE						When playing Dolby Digital (AC-3) data
MODE	FRONT L / R	CENTER	SURROUND	SUBWOOFER	CINEMA EQ.	ROOM SIZE	EFFECT LEVEL	DELAY TIME	DYNAMIC RANGE COMPRESSION	DIALOG NORMALIZATION	
STEREO	○	×	×	ⓒ	×	×	×	×	○ Dolby Digital (AC-3) SOURCE ONLY (OFF)	×	○
DOLBY PRO LOGIC	○	◎	◎	◎	○(OFF)	×	×	×	○ Dolby Digital (AC-3) SOURCE ONLY (OFF)	○ Dolby Digital (AC-3) SOURCE ONLY (ON)	○
DOLBY DIGITAL	○	◎	◎	◎	○(OFF)	×	×	×	○(OFF)	○(ON)	○
5CH STEREO	○	◎	◎	◎	×	×	×	×	×	×	×
MATRIX	○	◎	◎	◎	×	×	×	○(30 msec)	×	×	×
MONO MOVIE	○	◎	◎	◎	×	○(Medium)	○(10)	×	×	×	×
ROCK ARENA	○	◎	◎	◎	×	○(Medium)	○(10)	×	×	×	×
JAZZ CLUB	○	◎	◎	◎	×	○(Medium)	○(10)	×	×	×	×
VIDEO GAME	○	◎	◎	◎	×	○(Medium)	○(10)	×	×	×	×
6CH EXT. IN	○	○	○	○	○(OFF)	×	×	×	×	×	×

The following table shows the presence or absence of signals in the various modes, and whether or not they can be controlled. Initial settings are indicated in parentheses.

○ : Signal present or controllable.
◎ : Can be turned on and off according to the speaker configuration setting.
× : No signal or not controllable.

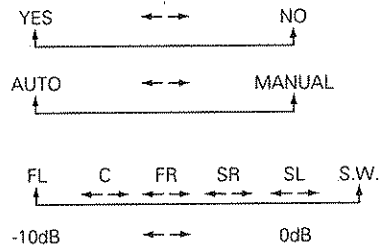# ■ Setup Menu and Surround Parameters
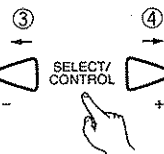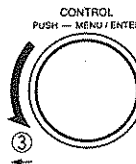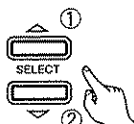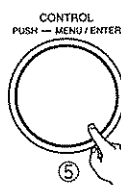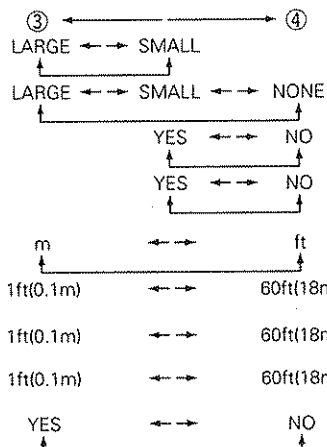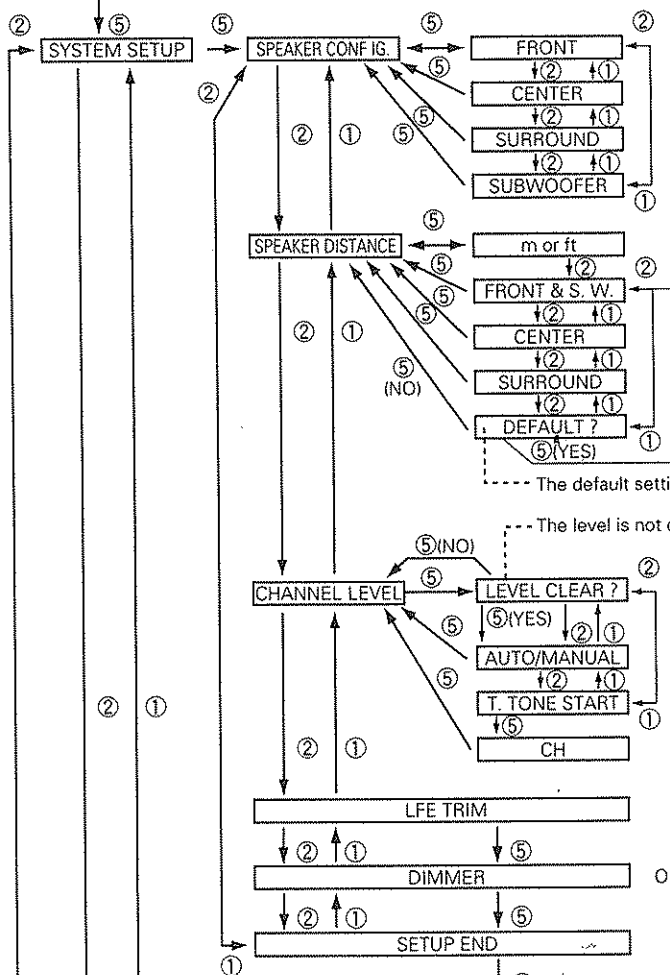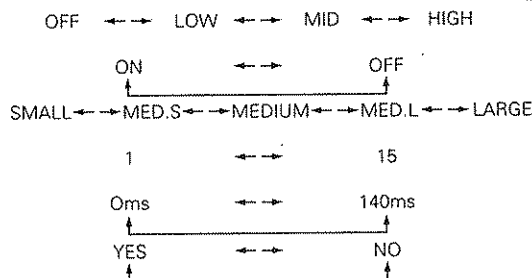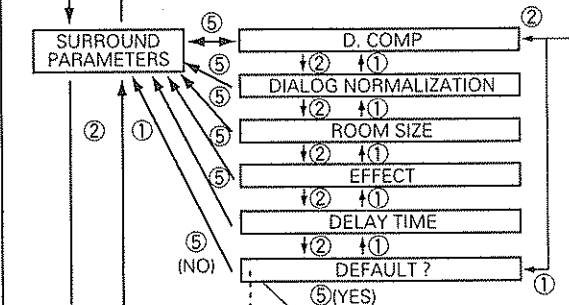
10 REMOTE CONTROL UNIT

Following the procedure outlined below, insert the batteries before using the remote control unit.

Range of operation of the remote control unit
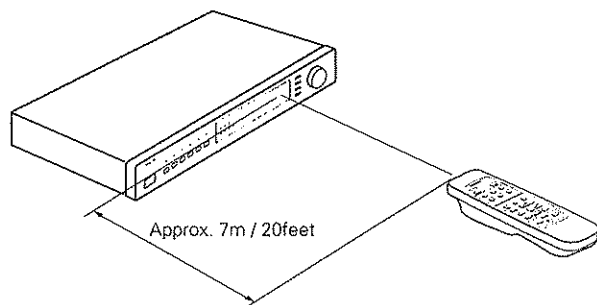
Point the remote control unit at the remote control sensor as shown on the diagram at the left.

Approx. 7m / 20feet

NOTES:
- The remote control unit can be used from a straight distance of approximately 7 meters/20 feet, but this distance will shorten or operation will become difficult if there are obstacles between the remote control unit and the remote control sensor, if the remote control sensor is exposed to direct sunlight or other strong light, or if operated from an angle.
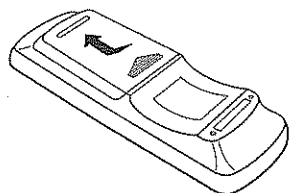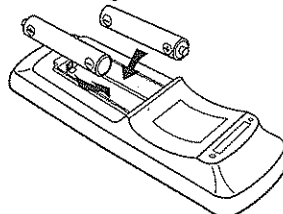- Neon signs or other devices emitting pulse–type noise nearby may result in malfunction, so keep the set as far away from such devices as possible.
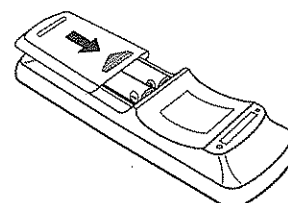
Inserting the batteries

① Press as shown by the arrow and slide off.

② Insert the SUM3 batteries properly, as shown on the diagram.

③ Close the lid.

NOTES:
- Use only AA, R6P, UM–3 batteries for replacement.
- Be sure the polarities are correct. (See the illustration inside the battery compartment.)
- Remove the batteries if the remote control transmitter will not be used for an extended period of time.
- If batteries leak, dispose of them immediately. Avoid touching the leaked material or letting it come in contact with clothing, etc. Clean the battery compartment thoroughly before installing new batteries.
- Have replacement batteries on hand so that the old batteries can be replaced as quickly as possible when the time comes.
- The codes that have been learned may be lost if removed batteries are not replaced within about 5 minutes.

11 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.
- The unit is also equipped with a back–up memory. This function provides approximately one week of memory storage when the main unit's power switch is off and with the power cord disconnected.

12 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 micro-processor is required by the following procedure.
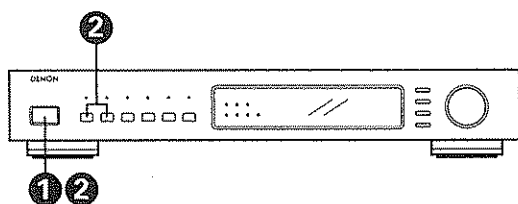
1 Switch off the unit using the main unit's power operation switch.

2 Turn the main unit's power switch on while pressing the AC–3 RF button and COAXIAL–1 button at the same time.

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.

13 TROUBLESHOOTING

If a problem should arise, first check the following:
1. **Are the connections correct?**
2. **Have you operated the receiver according to the Operating Instructions?**
3. **Are the speakers, turntable, and other components operating properly?**

If this unit is not operating properly, check the items listed in the table below. Should the problem persist, there may be a malfunction. Disconnect the power immediately and contact your store of purchase.

	Symptom	Cause	Measures	Page
Common problems arising when listening to the CD, records, tapes, and FM broadcasts, etc.	DISPLAY not lit and sound not produced when power switch set to on.	● Power cord not plugged in securely.	● Check the insertion of the power cord plug.	7
	DISPLAY lit but sound not produced.	● Output cords not securely connected. ● Improper position of the input selection button. ● Volume control set to minimum. ● Digital signals not input Digital input selected. ● Surround mode of AV receiver connected to AVD–2000 not set to "6CH EX. IN".	● Connect securely. ● Set to a suitable position. ● Turn volume up to suitable level. ● Input digital signals or select input jacks to which digital signals are being input. ● Set the AV receiver's surround mode to "6CH EX. IN".	6 16 16 16 ~ 19 16
	DISPLAY is not displayed.	● "DISPLAY" set to "Display off".	● Set the dimmer to an appropriate position.	14
	Sound produced only from one channel.	● Incomplete connection of input/output cords.	● Connect securely.	6, 7
	Positions of instruments reversed during stereo playback.	● Reverse connections of left and right input/output cords.	● Check left and right connections.	6, 7
Remote control unit	This unit does not operate properly when remote control unit is used.	● Batteries dead. ● Remote control unit too far from this unit. ● Obstacle between this unit and remote control unit. ● Different button is being pressed. ● ⊕ and ⊖ ends of battery inserted in reverse.	● Replace with new batteries. ● Move closer. ● Remove obstacle. ● Press the proper button. ● Insert batteries properly.	26 26 26 — 26

14 SPECIFICATIONS

● **D / A output (REC OUT)**
  Rated output: 2 V (at 0 dB playback)
  Total harmonic distortion: 0.005% (1 kHz, at 0 dB)
  S / N ratio: 110 dB
  Dynamic range: 105 dB
  Frequency response: 10 ~ 20 kHz: +0, –3 dB (at LARGE mode)

● **OUTPUT**
  Frequency response: FRONT, CENTER: (at LARGE mode) 20 ~ 20 kHz: +0, –3 dB
       (at SMALL mode) 80 ~ 20 kHz: +0, –3 dB
       SURROUND: 80 ~ 20 kHz: +0, –3 dB
       SUBWOOFER: 20 ~ 80 Hz: +0, –3 dB

● **INPUT format**
  AC–3RF: AC–3RF interface format
  Digital input (COAXIAL–1, COAXIAL–2, OPTICAL–1, OPTICAL–2):
       Digital audio interface (DOLBY DIGITAL, PCM formatted)
  6CH EXT.IN: Input sensitivity: 200 mV

● **General**
  Power supply: AC 120 V, 60 Hz
  Power consumption: 27 W
  Maximum external dimensions: 434 (W) × 75 (H) × 238 (D) mm (17–3/32" (w) × 2–61/64" (H) × 9–3/8" (D))
  Weight: 3.6 kg (7 lbs 15 oz)

● **Remote control unit (RC–838)**
  Batteries: R6P/AA Type (two batteries)
  External dimensions: 44 (W) × 155 (H) × 29 (D) mm (1–47/64" (w) × 6–7/64" (H) × 1–9/64" (D))
  Weight: 90 g (Approx 3 oz) (including batteries)