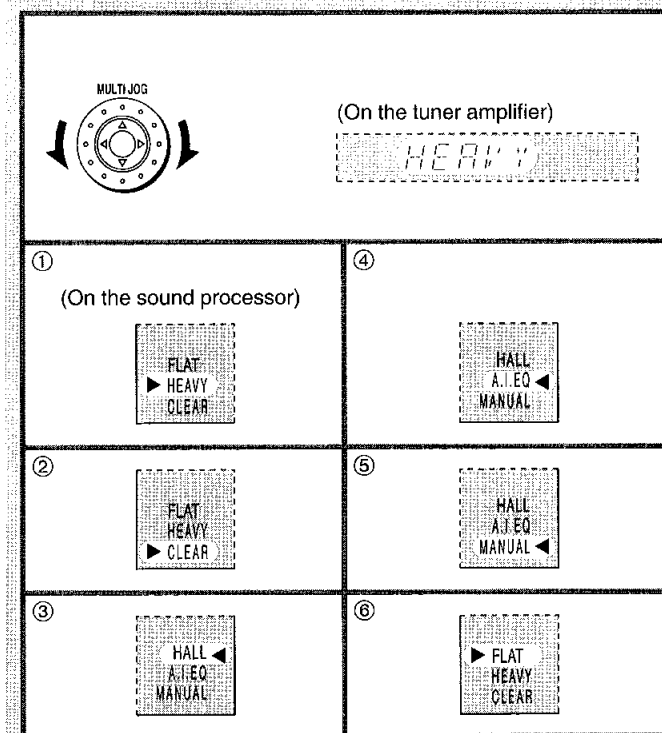
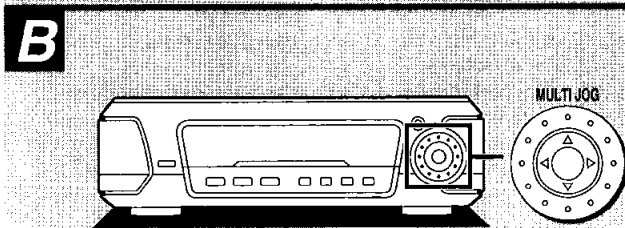
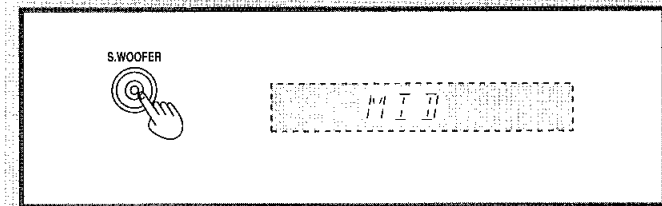
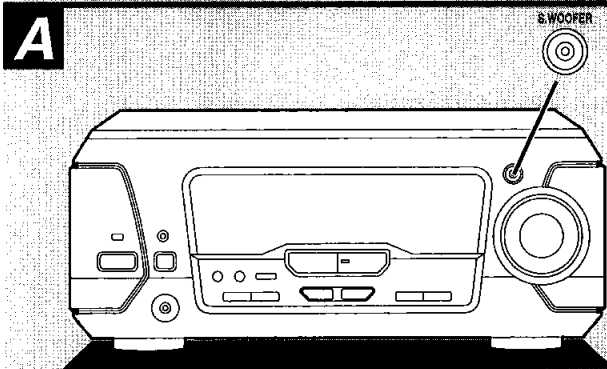
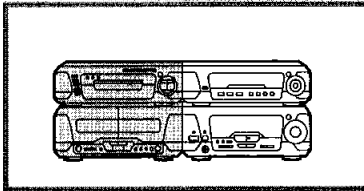


■ Boosting the Super Woofer **A**



Press [**S. WOOFER**].
[S. WOOFER] lamp lights.

- When listening to the sound through the speakers:
MID (medium) → MAX (high) → Light off (OFF)
- When listening to the sound through the headphones:
Light on (ON) ↔ Light off (OFF)

To cancel

Press [**S. WOOFER**] to select OFF.

■ Using the Built-in Sound Quality/ Sound Field Settings **B**

Turn [**MULTI JOG**] to select the sound quality or sound field.

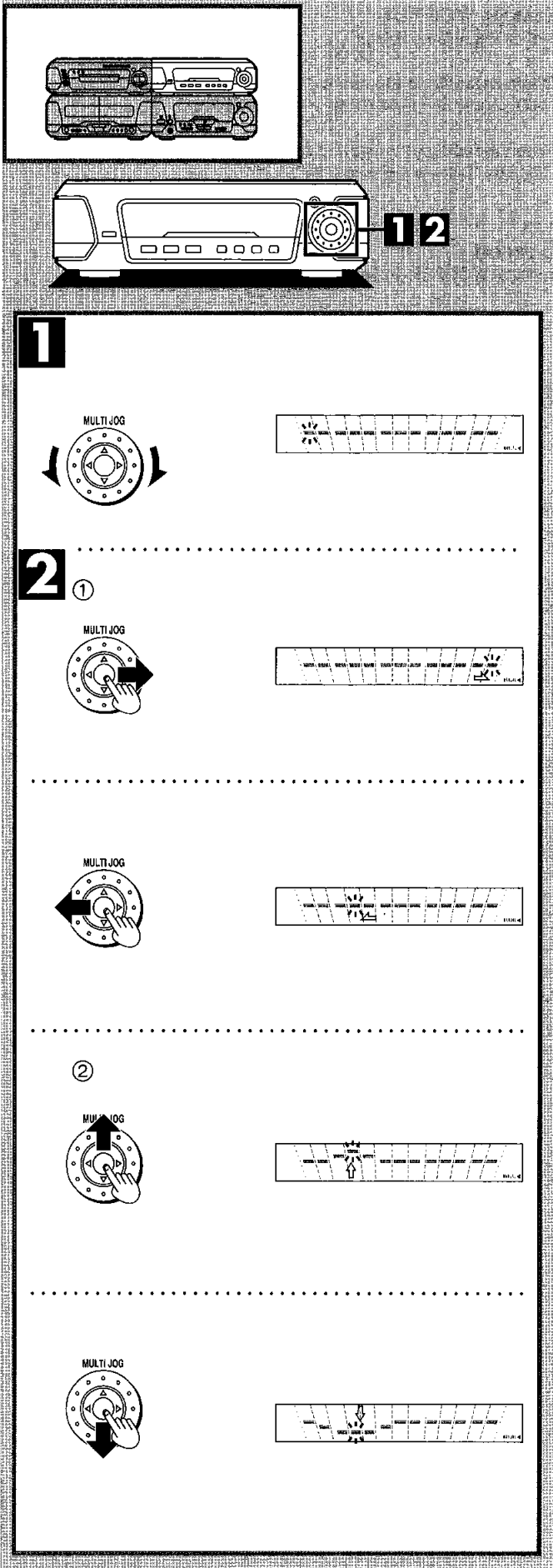
When [**MULTI JOG**] is turned clockwise the settings are selected in the following sequence.

- ① **HEAVY (sound quality)**
Select this when playing rock or other kinds of music that sound better with an added punch.
- ② **CLEAR (sound quality)**
Select this for jazz or other kinds of music for which clarity in the treble range is desired.
- ③ **HALL (sound field)**
Select this to add an expansiveness to the sound to produce the atmosphere of a great concert hall.
- ④ **AI EQ**
- ⑤ **MANUAL**
- ⑥ **FLAT**
The original display is restored on the display panel in about 5 seconds.

To release the equalizer

Turn [**MULTI JOG**] to select "FLAT".

■ Varying the Sound Quality with the Manual Equalizer (Manual EQ)



1 Turn [MULTI JOG] to select "MANUAL".

When [MULTI JOG] is turned clockwise, the settings are selected in the following sequence.

- ① HEAVY
- ② CLEAR
- ③ HALL
- ④ AI EQ
- ⑤ **MANUAL**
- ⑥ FLAT

2 Adjust the sound quality.

- ① ← → direction: For selecting the range of the sound to be adjusted

Characteristics of each sound range

Under 100 Hz: Super woofer range

Around 315 Hz: Bass to midrange

Around 1 kHz: Midrange

Around 3.15 kHz: Midrange to treble

Above 10 kHz: Treble

- ② ↓ ↑ direction: For adjusting the level

Repeat steps ① and ② to set the desired sound quality.

The original display is restored on the display panel in about 5 seconds.

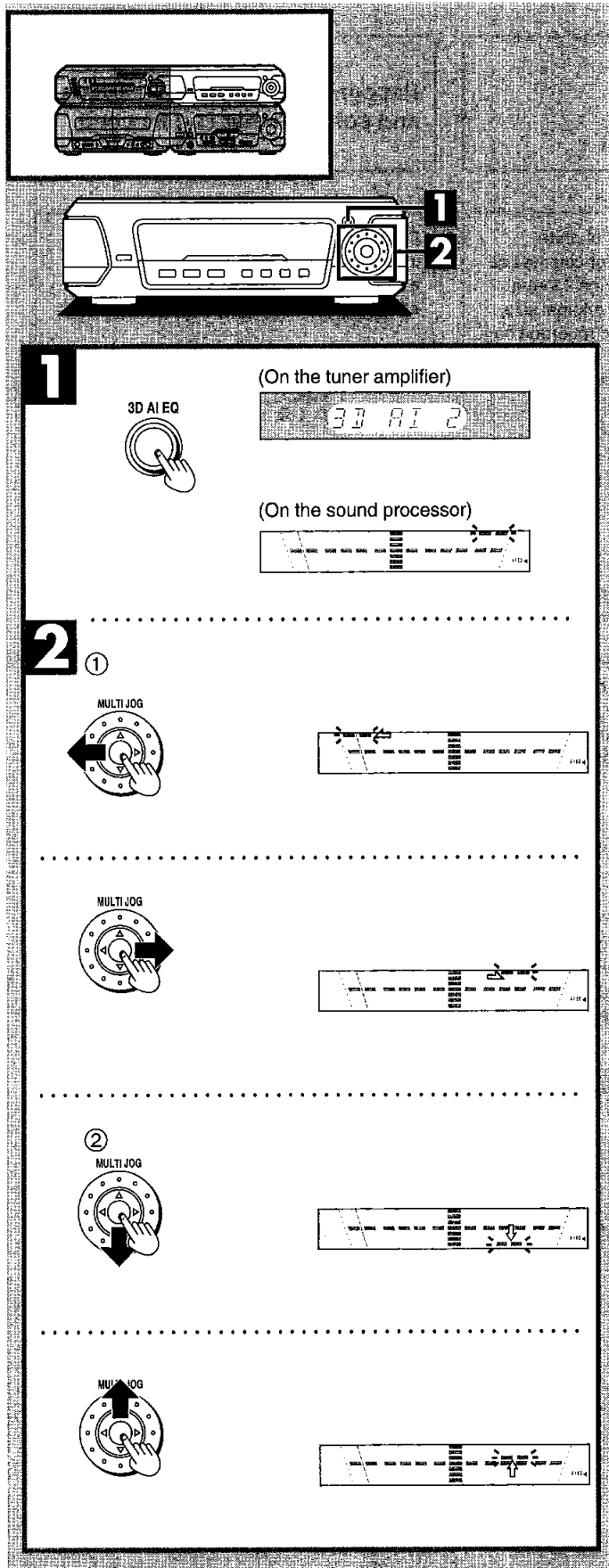
To release the equalizer

Turn [MULTI JOG] to select "FLAT".

Note

- The sound quality setting is stored automatically. It is recalled when "MANUAL" is next selected.
- All recordings are performed at the flat setting even if an alternative sound quality setting has been selected.

■ Varying the Sound Quality with the Acoustic Image (AI) Equalizer (3D AI EQ)



It is possible to use the acoustic image equalizer (AI EQ) together with the surround effect to create your own sound effect.

The AI EQ equalizer uses the SOFT, SHARP, HEAVY and LIGHT sound quality coordinates to achieve subtle sound quality settings with ease.

1 Press [3D AI EQ] to adjust the surround level.

Everytime you press the button;

AI EQ → 3D AI 1 → 3D AI 2

2 Adjust the sound quality.

① ← → direction: SOFT–SHARP setting

② ↓ ↑ direction: LIGHT–HEAVY setting

Repeat steps ① and ② to set the desired sound quality.

The original display is restored on the display panel in about 5 seconds.

To release the equalizer



Turn [MULTI JOG] to select "FLAT".

Note

- The sound quality setting is stored automatically. It is recalled when "AI EQ" is next selected.
- All recordings are performed at the flat setting even if an alternative sound quality setting has been selected.
- 3D AI 1 and 3D AI 2 cannot be selected while the 6CH DISCRETE INPUT, DOLBY PRO LOGIC, SUPER SURROUND, SIMULATED STEREO and VIRTUAL DOLBY SURROUND modes are on.

■ Surround Systems

• Select the surround mode appropriate to the source you are using. Read the following explanations to aid your selection.

Surround system	Features	Recognizing the sound sources and software that can be used					
<p>6CH DISCRETE INPUT</p>	<ul style="list-style-type: none"> • Dolby Digital is a discrete 5.1 channel surround system developed for cinema use. The sound signals in Dolby Digital format are compressed to 1/10 their original size, allowing an entire movie to be recorded on a single DVD. • You will need a DVD player that has a built in decoder to enjoy DVDs with this unit. • Connect a subwoofer (not included) to SUBWOOFER OUT terminal on the rear panel of the sound processor to increase the effect. 	<p>Discs with the following mark are recorded in Dolby Digital:</p> <ul style="list-style-type: none"> • DVD • Laser Disc 					
<p>DOLBY PRO LOGIC</p>	<ul style="list-style-type: none"> • This system was developed to get a better sense of presence from sources encoded with Dolby Surround. • The feeling of position has been improved by the addition of a separate center speaker channel. • This unit has built-in Dolby Pro Logic circuitry so you can enjoy Dolby Surround by connecting the speakers. 	<p>Software with the following mark is recorded in Dolby Pro Logic:</p> <ul style="list-style-type: none"> • Laser Disc • DVD • Video tape (VCR) • CD  <p>This mode cannot be used with the radio and 6CH DISCRETE INPUT mode.</p>					
<table border="1"> <tr> <td data-bbox="124 1218 316 1547" rowspan="2">SUPER SURROUND</td> <td data-bbox="316 1218 507 1386">MOVIE mode</td> </tr> <tr> <td data-bbox="316 1386 507 1547">MUSIC mode</td> </tr> <tr> <td colspan="2" data-bbox="124 1547 507 1785">SIMULATED STEREO</td> </tr> </table>	SUPER SURROUND	MOVIE mode	MUSIC mode	SIMULATED STEREO		<ul style="list-style-type: none"> • This mode adds surround effects to movie software that isn't recorded with the above systems. In MOVIE mode you can adjust the volume of the surround speaker to get the best surround effect. • This mode adds surround effects to normal music sources. • This mode adds stereo-like effects to monaural sound sources. 	<p>Any general sound source can be used.</p> <ul style="list-style-type: none"> • CD • Tape • Video tape <p>This mode cannot be used with the radio and 6CH DISCRETE INPUT mode.</p> <p>Any general sound source recorded in monaural can be used.</p> <ul style="list-style-type: none"> • CD • Tape • Video tape <p>This mode cannot be used with the radio and 6CH DISCRETE INPUT mode.</p>
SUPER SURROUND		MOVIE mode					
	MUSIC mode						
SIMULATED STEREO							

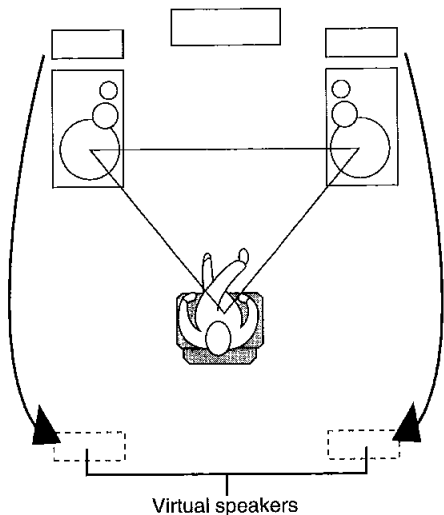
Add these audio effects to improve the experience

• Check the set-up of your speakers.

Set your speakers up to suit the surround mode you have selected to get the best surround effect. These modes cannot be used with the radio.

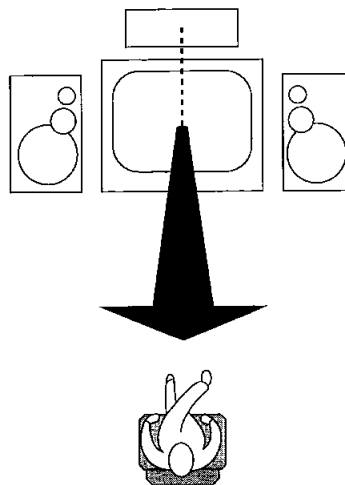
Virtual rear surround effect

- This mode is useful if you have to place your surround speakers on the front speakers because of the room's layout.
- This mode makes it seem like the sound from the surround speakers is coming from behind you.
- It is effective when using 6CH DISCRETE INPUT, DOLBY PRO LOGIC, or SUPER SURROUND MOVIE mode. (The [VIRTUAL REAR SURROUND] lamp turns orange.)



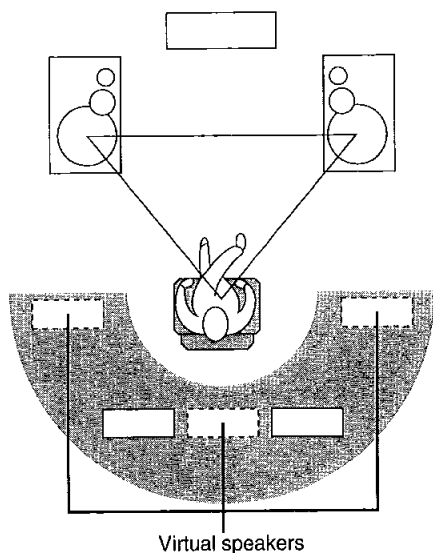
Center focus effect

- This mode makes it seem like the sound from the center speaker channel (dialogue, etc.) is coming from within the television.
- The center speaker must be placed on top of the television.
- It is effective when using 6CH DISCRETE INPUT or DOLBY PRO LOGIC. (The [CENTER FOCUS] lamp turns orange.)



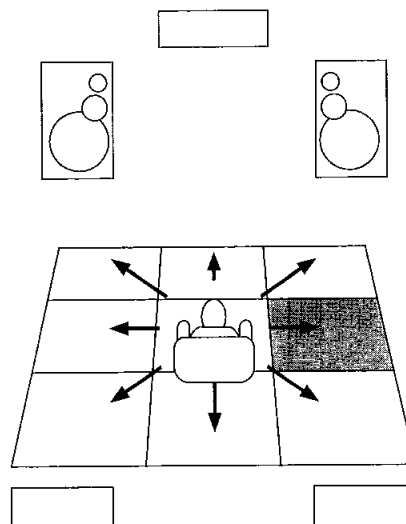
Multi rear surround effect

- Through processing of the surround sound signals, this mode makes it seem like there are multiple surround speakers in your room.
- This mode increases the cinema-like sense of presence.
- It is effective when using 6CH DISCRETE INPUT, DOLBY PRO LOGIC, or SUPER SURROUND MOVIE mode. (The [MULTI REAR SURROUND] lamp turns orange.)

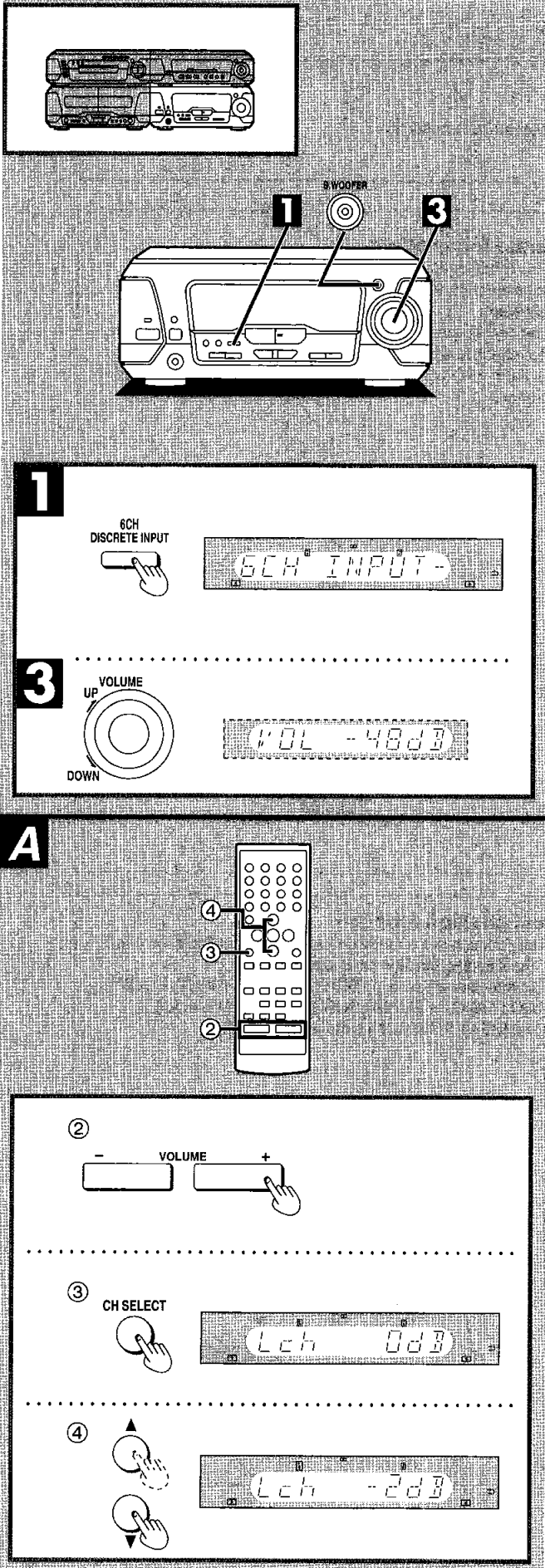


Seat position function

- This function helps maintain the sound signal position even if the listening position itself is changed.
- It is effective when using 6CH DISCRETE INPUT, DOLBY PRO LOGIC, or SUPER SURROUND MOVIE mode. (The [SEAT POSITION] lamp turns orange.)



■ Enjoying Sound with 6 CH DISCRETE INPUT



This mode allows you to enjoy the 5.1 channel Dolby Digital surround effects recorded on DVDs when they are played on a player which has 5.1 channel analog output.

1 Press [6CH DISCRETE INPUT].

For your reference

If you have connected a subwoofer (not included), press and hold [S. WOOFER] for about 2 seconds so "SUB W ON" is shown on the display. The SUBWOOFER can only be turned on and off if 6CH DISCRETE INPUT mode is selected.

2 Start playing the source (DVD).

Note

Do not switch input to AUX (DVD). This cancels 6CH DISCRETE INPUT mode.

3 Adjust the volume.

To adjust the volume of each speaker 4

Sit in the normal listening position and make the adjustments with the remote control.

Preparation:

Press [6CH DISCRETE INPUT] to select 6CH DISCRETE INPUT mode.

① Output the test signal from the DVD player (not included).

Set the channel level to 0 dB on the DVD player, and adjust the channel level on this system.

② Press [VOLUME (- or +)].

Set the volume to the normal listening level.

The following steps are for setting the output level of the front speakers and the other speakers to approximately the same level.

③ Press [CH SELECT].

Select the speaker channel to be adjusted.

L: Front speaker (Left)

C: Center speaker

R: Front speaker (Right)

RS: Surround speaker (Right)

LS: Surround speaker (Left)

SW: Subwoofer

④ Press [▲] or [▼].

Adjust the output level.

▲: Increases the output level

▼: Decreases the output level

Repeat steps ③ and ④ to adjust the level accordingly.

Note

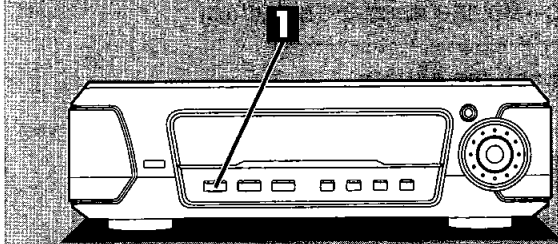
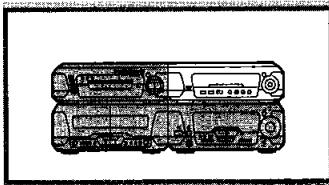
You cannot record sound or use MIC MIX when [6CH DISCRETE INPUT] is selected.

To record or use MIC MIX with DVDs, reconnect the DVD player from its MIXED OUT terminals to this unit's AUX (DVD) or VCR (EXT) IN terminals and select the external source with [INPUT SELECTOR].

Reference:

- Add audio effects to improve the surround effect.
- The 6CH DISCRETE INPUT mode is canceled when another source is selected.

■ To Playback a Dolby Surround Source with Dolby Pro Logic



Use this mode when playing sources recorded with Dolby Pro Logic.

- 1 Press [PRO LOGIC, OFF/ON].**
The [PRO LOGIC] lamp lights.

- 2 Playback a Dolby Surround source.**

To turn off DOLBY PRO LOGIC

Press [PRO LOGIC OFF/ON].
The [PRO LOGIC] lamp goes out.

To adjust the volume of each speaker **A**

Sit in the normal listening position and make the adjustments with the remote control.

Preparation:

Press [PRO LOGIC OFF/ON] to turn on DOLBY PRO LOGIC.


- 1 Press [TEST].**
A test signal is output.
The speaker outputting the test signal is displayed while the test is running.
L: Front speaker (Left)
C: Center speaker
R: Front speaker (Right)
S: Surround speakers
- 2 Press [VOLUME (- or +)].**
Set the volume to the normal listening level.
The following steps are for setting the output level of the front speakers and the other speakers to the same listening level.
- 3 Press [CH SELECT].**
Select the speaker channel to be adjusted.
C ch: Center channel
S ch: Surround channel
- 4 Press [▲] or [▼].**
Adjust the output level. The level can be adjusted between +6 and -10.
▲: Increases the output level
▼: Decreases the output level
Repeat steps ③ and ④ to adjust the level accordingly.

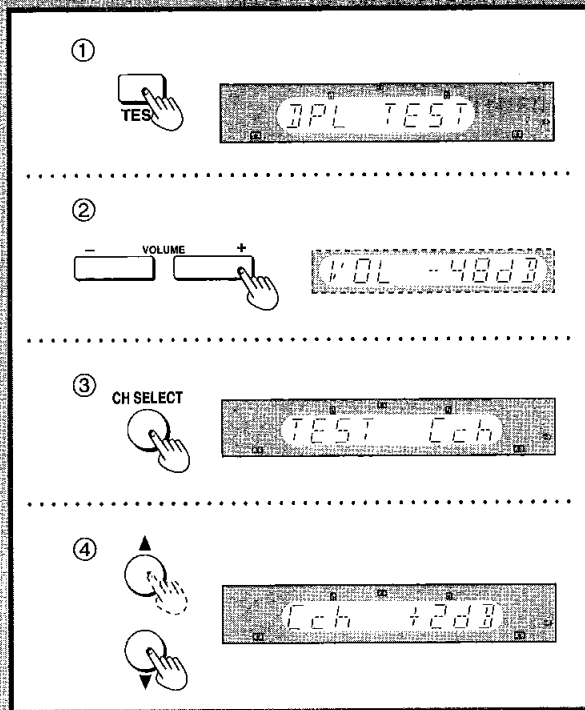
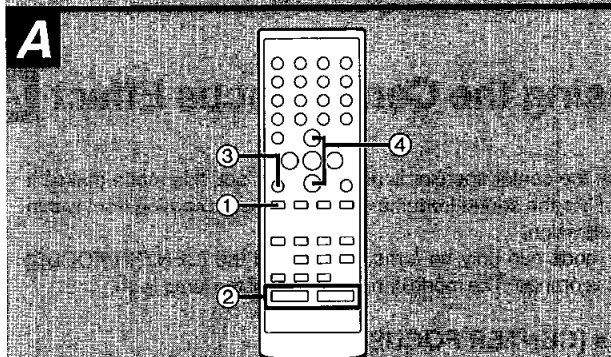
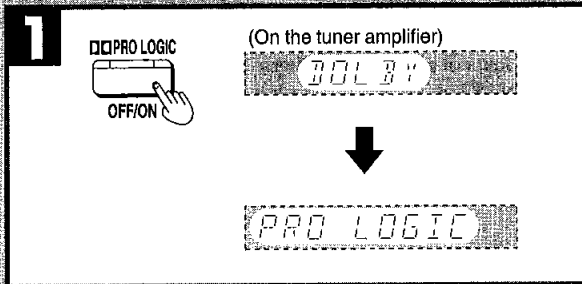
To stop the test signal

Press [TEST] again.

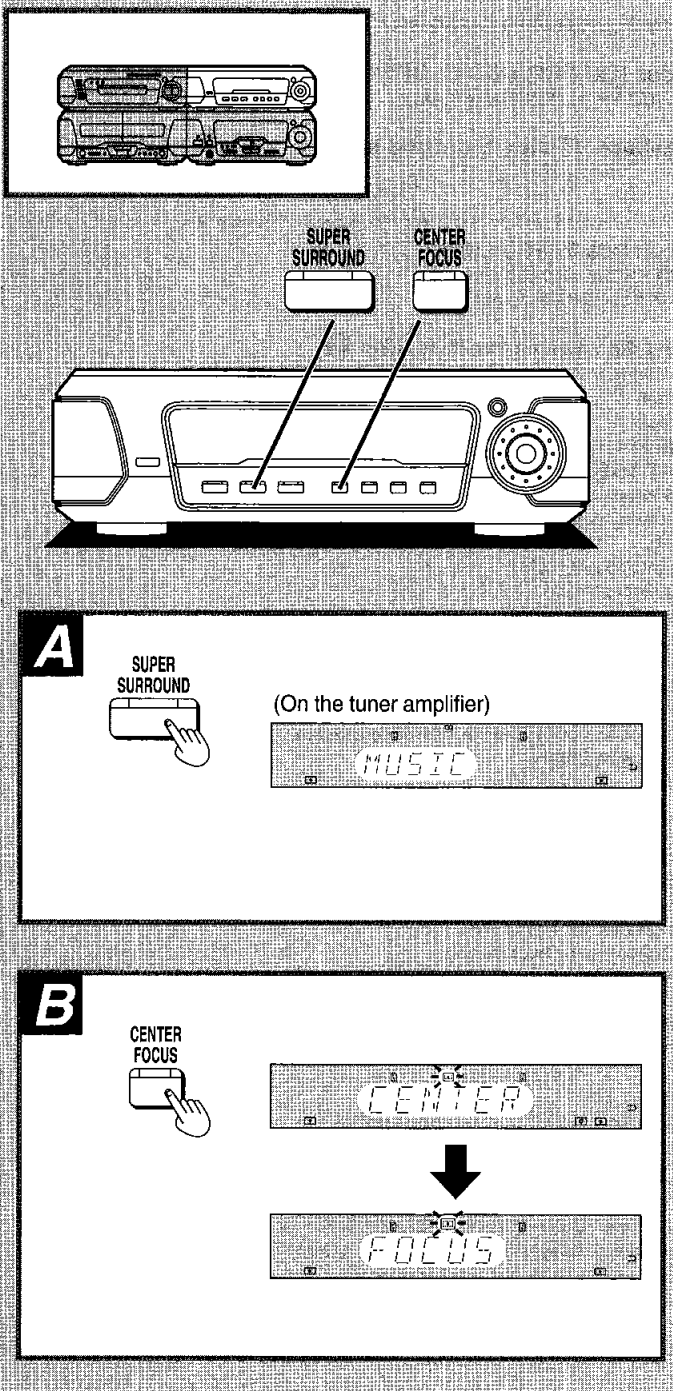
Reference:

Add audio effects to improve the surround effect.

Manufactured under license from Dolby Laboratories Licensing Corporation.
DOLBY, the double-D symbol  and "PRO LOGIC" are trademarks of Dolby Laboratories Licensing Corporation.



■ Enjoying Sound with Stereophonics (SUPER SURROUND) **A**



- This mode adds 5 channel surround effects to normal stereo sources.
- SUPER SURROUND is only effective if speakers are used. No discernable effect will be heard through headphones.

1 Press [SUPER SURROUND] and select MOVIE mode or MUSIC mode.

Each time the button is pressed;
MUSIC → MOVIE → NORMAL STEREO (off)

2 Playback the source.

To turn off the SUPER SURROUND mode

Press [SUPER SURROUND] to select "NORMAL STEREO".

To adjust the volume of surround speakers

You can change the output level of surround speakers manually. While enjoying the desired source:

1. Press [CH SELECT] on the remote control.
The output level of surround speakers is displayed.
2. Press [▲] or [▼] on the remote control.
Adjust the output level. The level can be adjusted between +6 and -10.
▲: Increase the output level
▼: Decrease the output level

Reference:

Add audio effects to improve the surround effect.

■ Using the Center Focus Effect **B**

- When the center speaker is put on the TV set, this mode makes it seem like the sound from the center speaker is coming from within the television.
- This mode can only be turned on or off if the [CENTER FOCUS] lamp is orange. The mode cannot be used if the lamp is off.

Press [CENTER FOCUS].

The [CENTER FOCUS] indicator turns green.

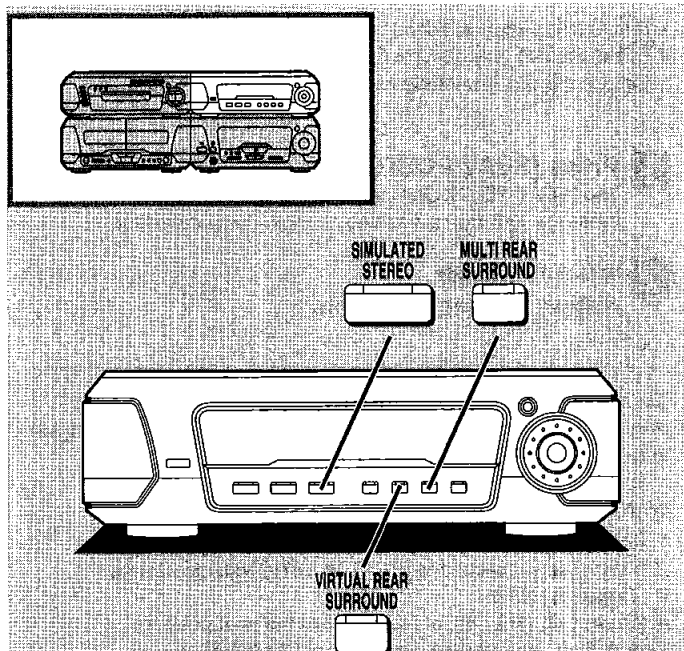
To turn off the CENTER FOCUS mode

Press [CENTER FOCUS].

With the remote control

1. Press [AV EFFECT].
2. Press [◀] or [▶] so the [CENTER FOCUS] lamp flashes.
3. Press [▼] (OFF) or [▲] (ON).

■ Using the Virtual Rear Surround Effect **A**



- When the surround speakers are put on the front speakers, this mode makes it seem like the sound from the surround speakers is coming from behind you.
- This mode can only be turned on or off if the "VIRTUAL REAR SURROUND" lamp is orange. The mode cannot be used if the lamp is off.

Press [VIRTUAL REAR SURROUND].

The [VIRTUAL REAR SURROUND] lamp turns green.

To turn off the VIRTUAL REAR SURROUND mode

Press [VIRTUAL REAR SURROUND].

With the remote control

1. Press [AV EFFECT].
2. Press [◀] or [▶] so the [VIRTUAL REAR SURROUND] lamp flashes.
3. Press [▼] (OFF) or [▲] (ON).

■ Using the Multi Rear Surround Effect **B**

- This mode makes it seem like there are multiple surround speakers in your room.
- This mode can only be turned on or off if the [MULTI REAR SURROUND] lamp is orange. The mode cannot be used if the lamp is off.

Press [MULTI REAR SURROUND].

The [MULTI REAR SURROUND] indicator turns green.

To turn off the MULTI REAR SURROUND mode

Press [MULTI REAR SURROUND].

With the remote control

1. Press [AV EFFECT].
2. Press [◀] or [▶] so the [MULTI REAR SURROUND] lamp flashes.
3. Press [▼] (OFF) or [▲] (ON).

■ Enjoy the Sound with Simulated Stereo **C**

This mode adds stereo effect to monaural sources.

1 Press [SIMULATED STEREO].

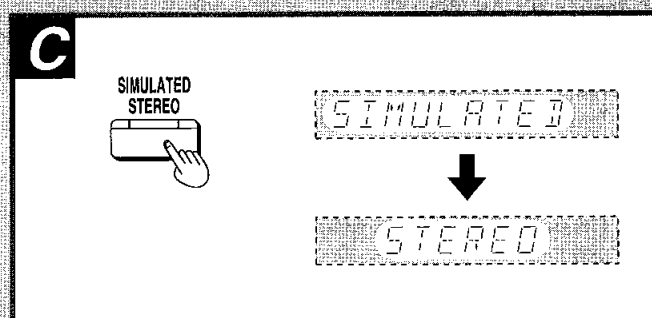
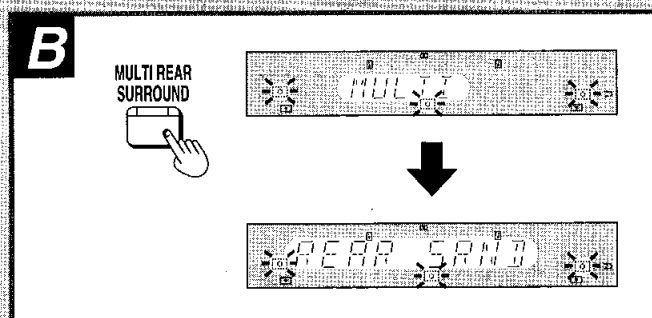
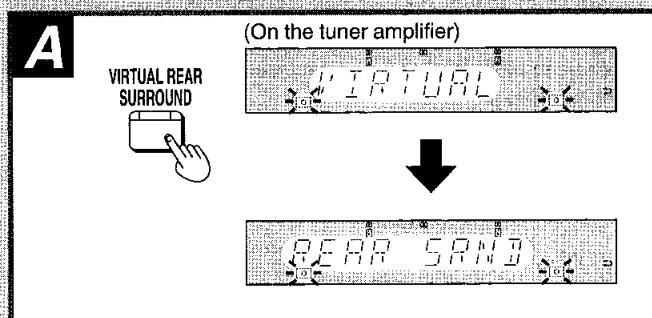
The [SIMULATED STEREO] lamp lights.

2 Playback the source.

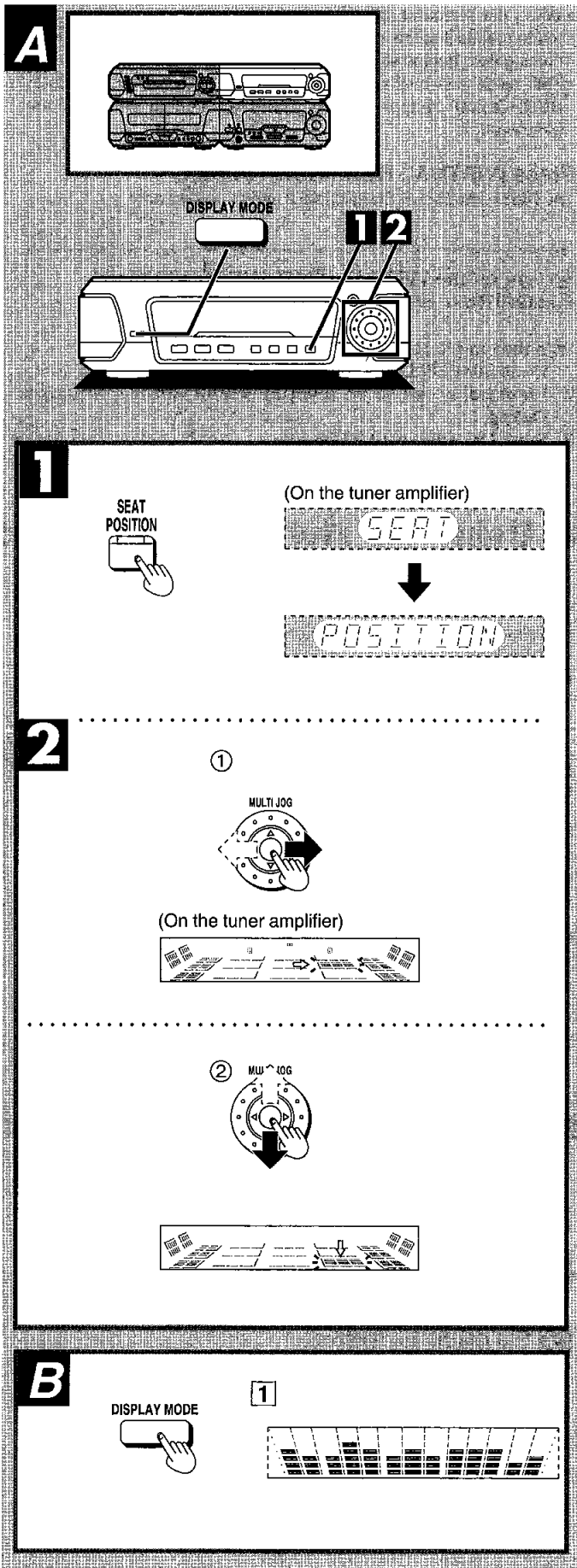
To turn off the SIMULATED STEREO mode

Press [SIMULATED STEREO].

The [SIMULATED STEREO] lamp goes out.



■ Using the Seat Position Function **A**



- This function lets you adjust the listening position for better effect.
- This mode can only be turned on or off if the [SEAT POSITION] lamp is orange. The mode cannot be used if the lamp is off.

1 Press [SEAT POSITION].

The [SEAT POSITION] lamp flashes green.
While the indicator is flashing change the seat position.

2 Within 10 seconds Adjust the seat position.

To turn off the SEAT POSITION mode

Press [SEAT POSITION] once to select the function and once again to turn it off while the lamp flashes.

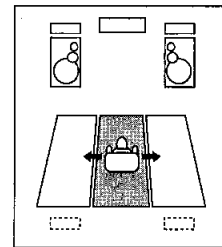
With the remote control

1. Press [AV EFFECT].
 2. Press [◀] or [▶] so the [SEAT POSITION] lamp flashes.
 3. Press [▲] (ON).
 4. Press [◀], [▶], [▼], or [▲] to adjust the seat position.
- To turn it off, after steps 1 and 2, press [▼] (OFF).

Note

- When used with virtual rear surround, seat position is changed in 3 horizontal steps.

With virtual rear surround



■ Concerning the Display **B**

The sound processor shows the level of each sound range with the three types of display described below. **B**

Press [DISPLAY MODE].

The spectrum display will change as follows.

1 Normal display

This display indicates the strength of the sound in each tonal range.

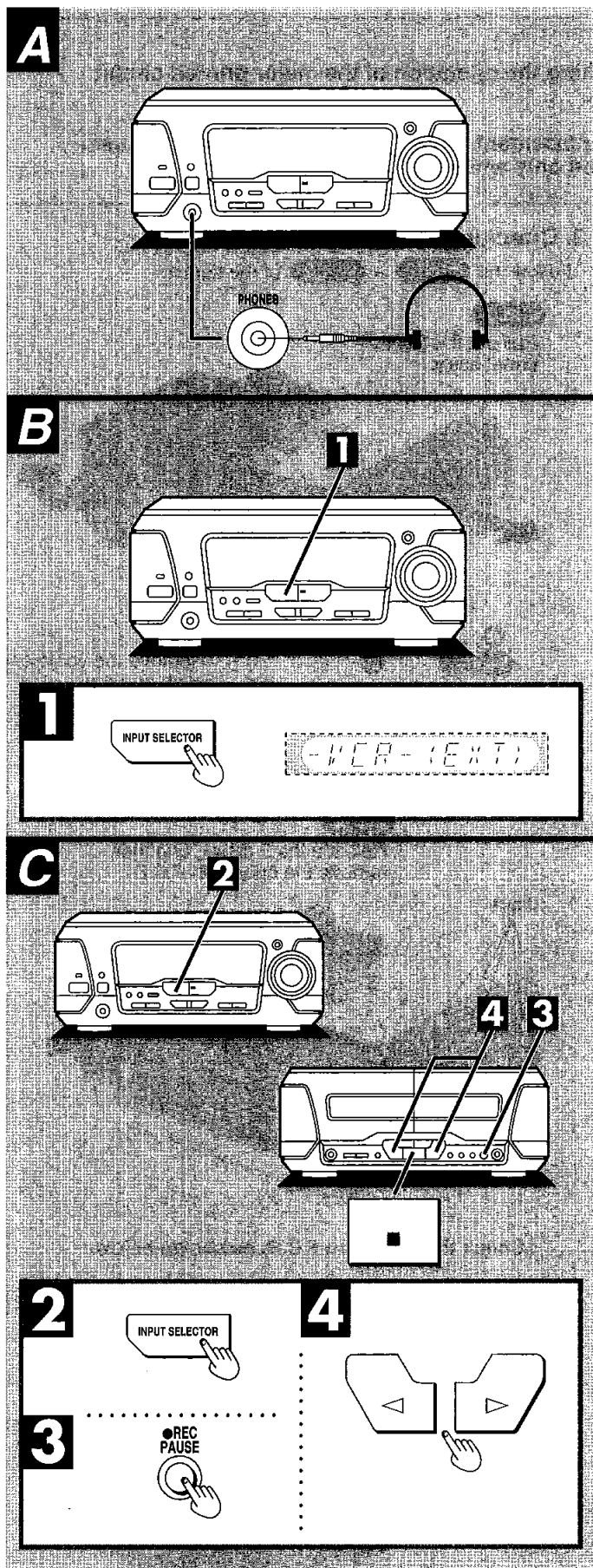
2 Peak-hold display

The peak sound value of each sound range is held on the display for about one second after it occurs.

3 Aurora display

The peak sound value of each sound range is displayed in inverted form.

Using the External Unit



To use headphones

A

- Before connecting, reduce the volume level.
- Avoid listening for prolonged periods of time to prevent hearing damage.
- Plug type: 3.5 mm stereo

Listening to an external source

B

- 1** Press [INPUT SELECTOR] to select the external source.

Each time you press this button, sound sources will be switched as follows.

TUNER → CD → TAPE → VCR (EXT) → AUX (DVD)

- 2** Operate the external unit which you have connected to the system.

Refer to your equipment's operating instructions.

Recording from an external source

C

- 1** Press [▲ OPEN] on deck 2 and insert the tape.
- 2** Press [INPUT SELECTOR] to select the external source.
- 3** Press [● REC PAUSE] to put the cassette deck into the recording standby mode.
- 4** Press [◀] or [▶] to start recording.
- 5** Start playing the source to be recorded.
- Refer to your equipment's operating instructions.

To stop recording:

Press [■] on the cassette deck.

To briefly interrupt recording:

Press [● REC PAUSE].

The cassette deck will go into the recording standby mode.

To resume recording:

Press [◀] or [▶] corresponding to the direction in which recording is taking place.

Recording on an external unit

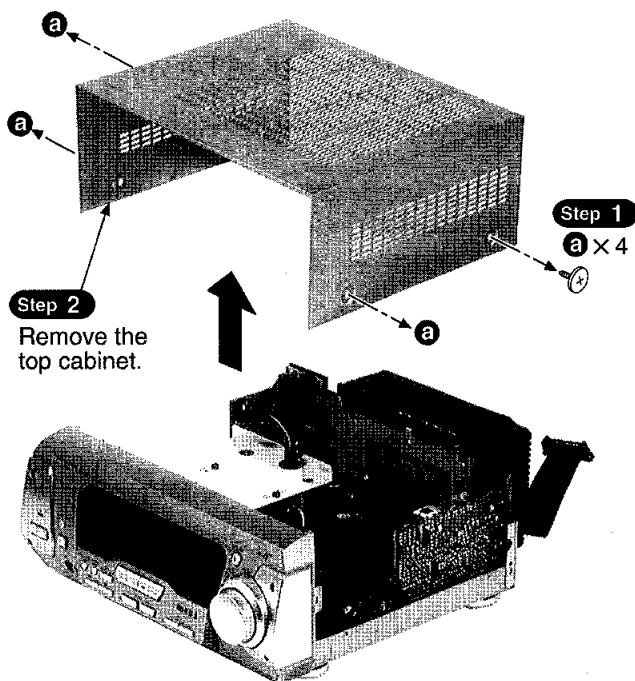
First, select the source with [INPUT SELECTOR].

Start recording on an external unit, and then start playing the source to be recorded.

Operation Checks and Component Replacement Procedures

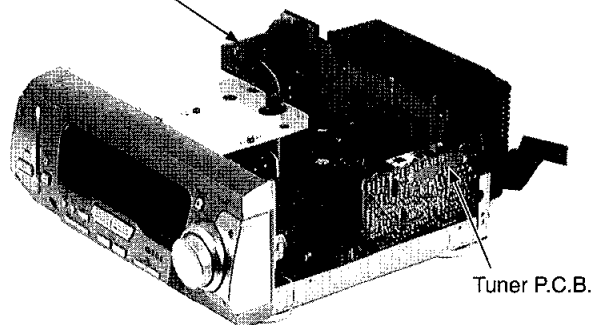
- NOTE** 1. This section describes procedures for checking the operation of the major printed circuit boards and replacing the main components.
2. For reassembly after operation checks or replacement, reverse the respective procedures. Special reassembly procedures are described only when required.

1. Checking for the tuner P.C.B. and power supply P.C.B.



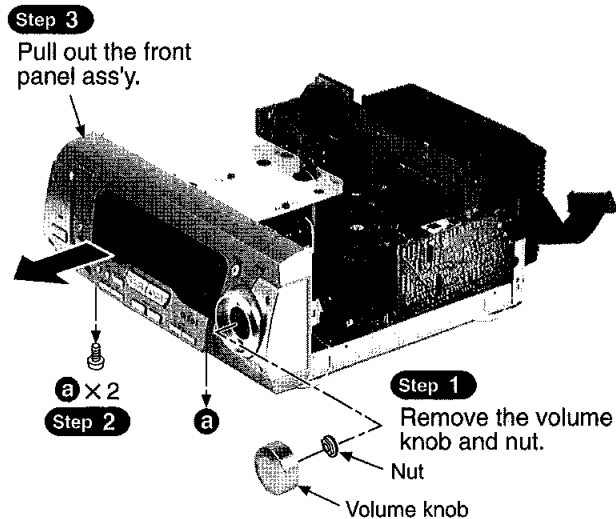
• Check the tuner P.C.B. and power supply P.C.B. as shown below.

Power supply P.C.B.



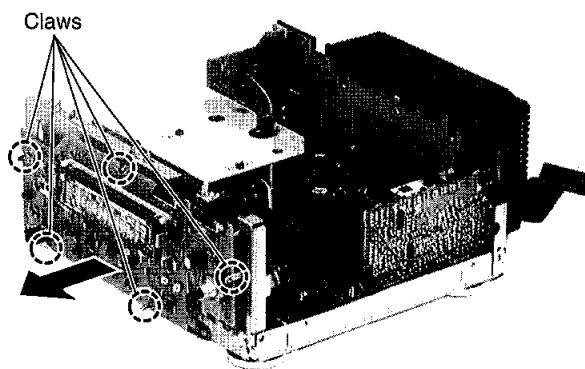
2. Checking for the operation P.C.B.

• Follow the Step 1 ~ Step 2 of the item 1.

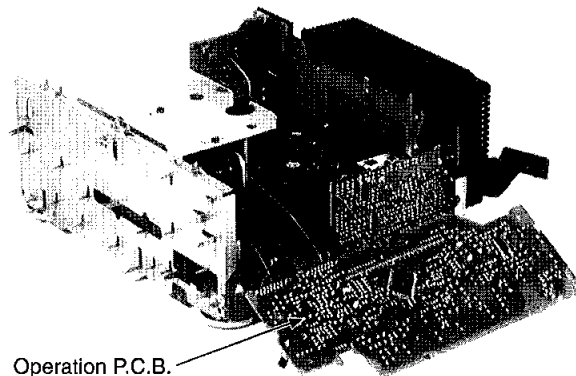


Step 4

Release the 5 claws, and then remove the operation P.C.B..

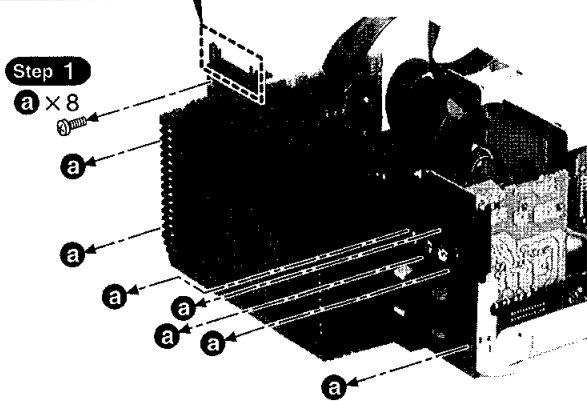
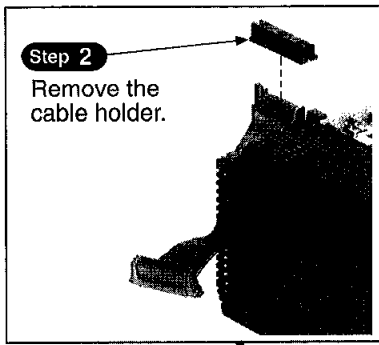


• Check the operation P.C.B. as shown below.

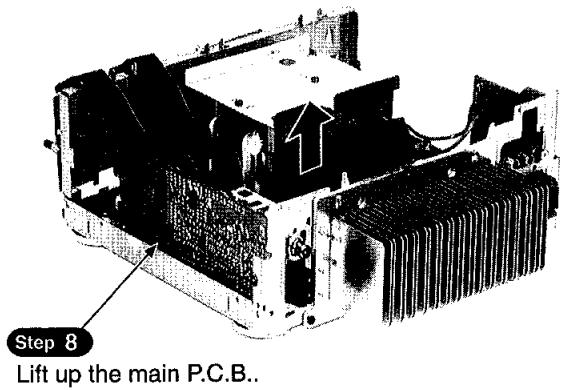
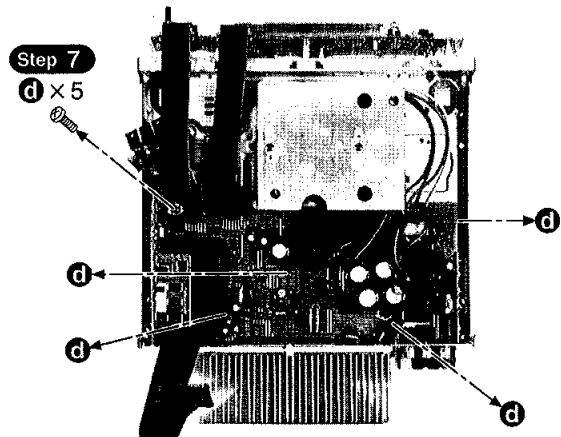
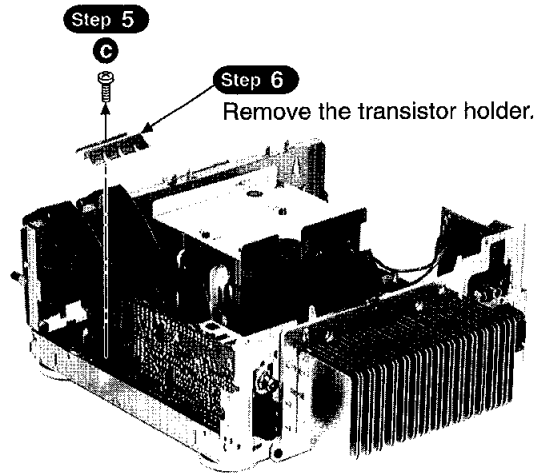
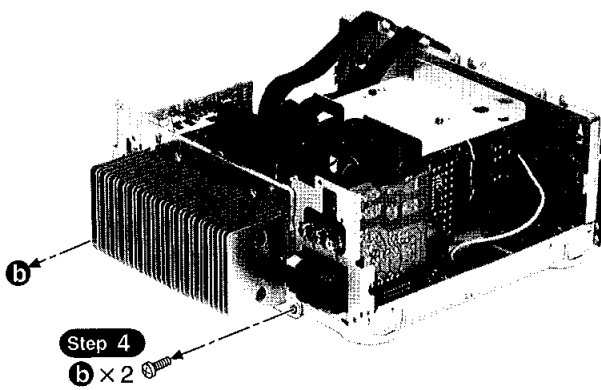
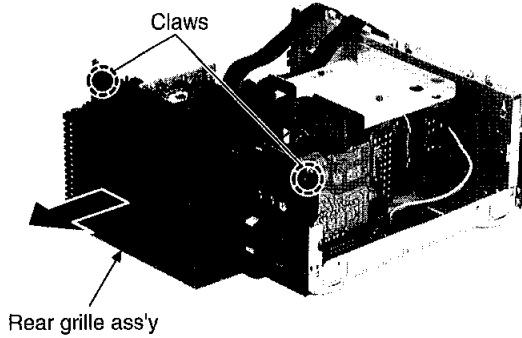


3. Checking for the main P.C.B.

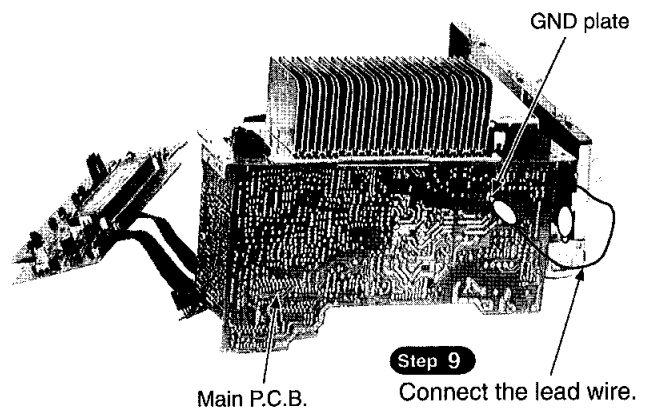
- Follow the **Step 1** ~ **Step 2** of the item 1.
- Follow the **Step 1** ~ **Step 4** of the item 2.



Step 3
Release the 2 claws, and then remove the rear grille ass'y.

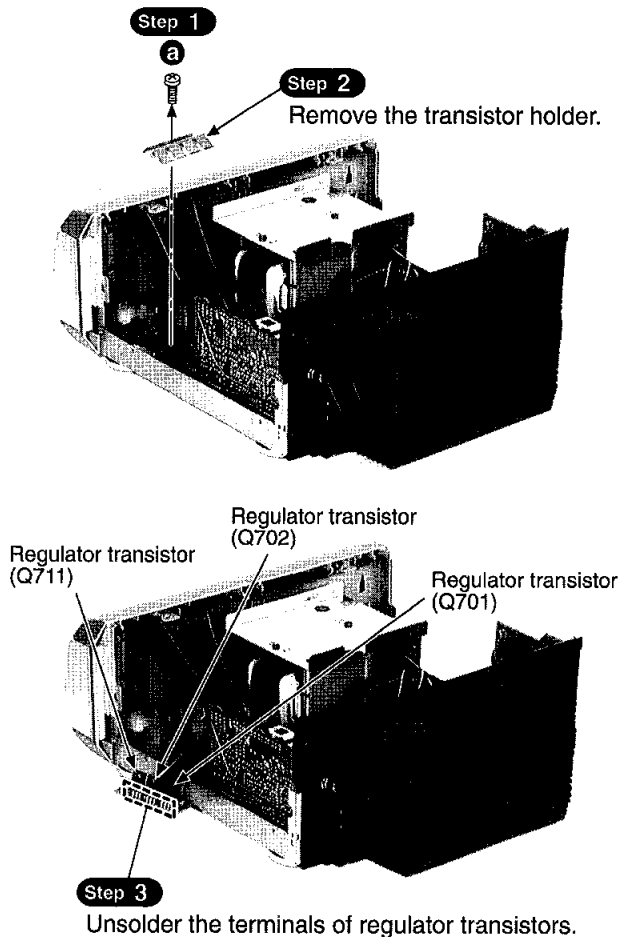


• Check the main P.C.B. as shown below.



4. Replacement for the regulator transistor

· Follow the **Step 1** ~ **Step 2** of the item 1.

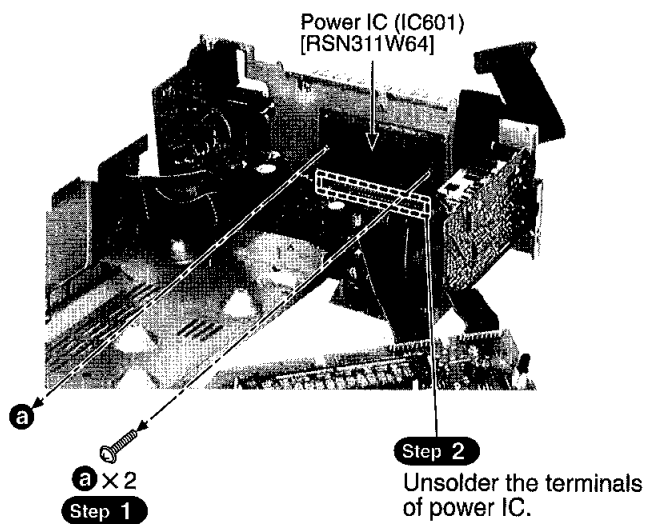


5. Replacement for the power IC

· Follow the **Step 1** ~ **Step 2** of the item 1.

· Follow the **Step 1** ~ **Step 4** of the item 2.

· Follow the **Step 1** ~ **Step 8** of the item 3.



NOTE

When mounting the power IC apply silicone compound (RFKX0002) to the rear side of power IC.