

# *Mini Hi-Fi Component System*

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Operating Instructions



***MHC-S7AV***

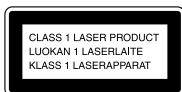
## WARNING

**To prevent fire or shock hazard, do not expose the unit to rain or moisture.**

To avoid electrical shock, do not open the cabinet. Refer servicing to qualified personnel only.

Do not install the appliance in a confined space, such as a bookcase or built-in cabinet.

The following caution label is located inside the apparatus.



This appliance is classified as a **CLASS 1 LASER** product. The **CLASS 1 LASER PRODUCT MARKING** is located on the rear exterior.

To prevent fire, do not cover the ventilation of the apparatus with news papers, table-cloths, curtains, etc. And don't place lighted candles on the apparatus.

To prevent fire or shock hazard, do not place objects filled with liquids, such as vases, on the apparatus.



Don't throw a battery, dispose it as the injurious wastes.

This system incorporates Dolby\* Digital, Pro Logic Surround, DTS\*\*, and the DTS Digital Surround System.

\* Manufactured under license from Dolby Laboratories.

“Dolby”, “Pro Logic” and the double-D symbol are trademarks of Dolby Laboratories.

Confidential unpublished works. © 1992-1997 Dolby Laboratories. All rights reserved.

\*\* Manufactured under license from Digital Theater Systems, Inc. US Pat. No. 5,451,942, 5,956,674, 5,974,380, 5,978,762 and other world-wide patents issued and pending. “DTS” and “DTS Digital Surround” are registered trademarks of Digital Theater Systems, Inc. © 1996, 2000 Digital Theater Systems, Inc. All rights reserved.

**The MHC-S7AV consists of the following components:**

– A/V amplifier	TA-S7AV
– Tuner	ST-S5
– CD player	CDP-S3
– Cassette deck	TC-S3
– Speaker system	
• Front speakers	SS-S9
• Center speaker	SS-CT270
• Rear speakers	SS-RS270

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## Additional Information

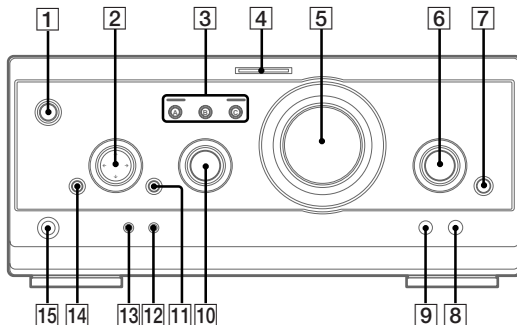
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\* European model only.

The items are arranged in alphabetical order.  
Refer to the pages indicated in parentheses ( ) for details.

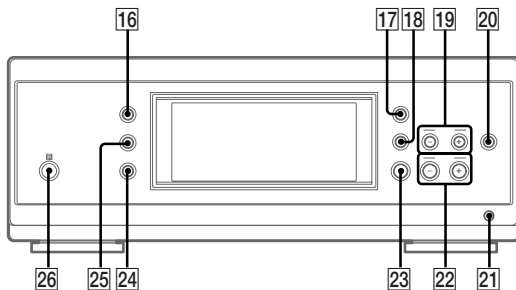
## Main unit

### A/V amplifier



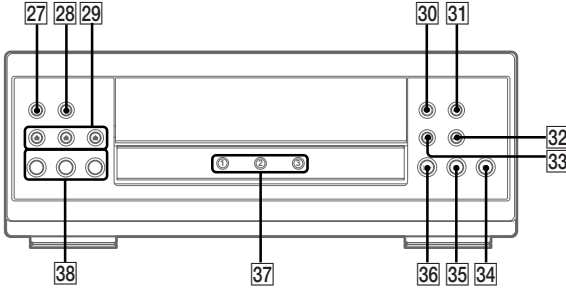
- CINEMA STUDIO A-C **3** (24)
- DIGITAL **7** (31, 35)
- ENTER/ $\leftarrow$ / $\rightarrow$ / $\leftarrow$ / $\rightarrow$  **2** (10, 12, 13, 15, 21, 22, 26-30)
- EQ **11** (27)
- EQ ON/OFF **12** (10, 27)
- FILE SELECT **10** (23, 28)
- FUNCTION **6** (10, 14, 15, 20, 21, 31)
- MIC jack (Except for European model) **9** (31)
- MIC LEVEL (Except for European model) **8** (31)
- MULTI CHANNEL DECODING indicator **4** (25)
- PHONES jack **15**
- SET UP **13** (10, 12, 26, 28, 29)
- SUR **14** (25)
- VOLUME **5**
- I/⏻ (power) **1** (9, 10, 17, 35)

### Tuner



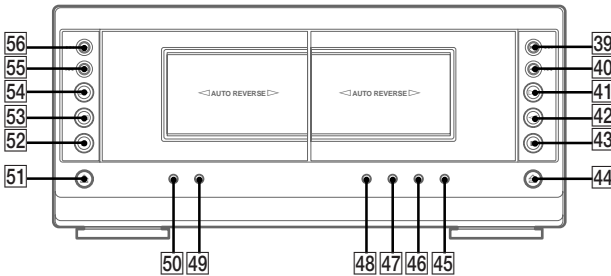
- CLOCK/TIMER **25** (13, 21, 29)
- DISPLAY **16** (13, 16, 18, 29, 35)
- ENTER **20** (17, 18)
- IR receptor **26**
- PRESET +/- **22** (17, 18)
- PTY (European model only) **21** (18)
- STEREO/MONO **17** (17)
- TIMER SELECT **24** (22, 30)
- TUNER/BAND **23** (17)
- TUNER MEMORY **18** (17)
- TUNING +/- **19** (17)

## CD player



- DISC 1-3 **38** (14, 15, 21)
- DISC 1-3 indicators **37** (14)
- DISC 1-3 ▲ (eject) **29** (14)
- PLAY MODE **27** (14, 15, 21)
- REPEAT **28** (14)
- ▶ (play) **36** (14, 15)
- ⏸ (pause) **35** (14)
- (stop) **34** (14, 20)
- ⏮ (go back) **33** (14, 15, 21)
- ⏭ (go forward) **32** (14, 15, 21)
- ⏪ (rewind) **30** (14)
- ⏩ (fast forward) **31** (14)

## Cassette deck



- CD SYNC **46** (20, 21)
- DIRECTION **50** (19, 20, 21)
- DOLBY NR **49** (19, 20)
- EDIT **48** (21)
- HI-DUB **47** (20)
- REC PAUSE/START **45** (20, 21)

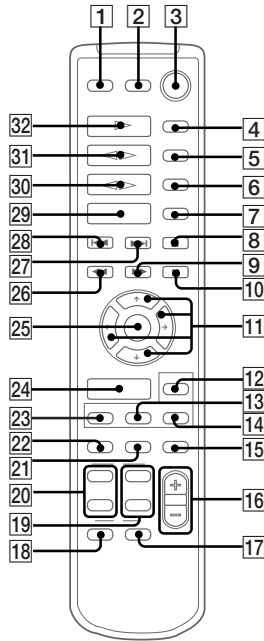
– Deck A –

- ▶ (forward play) **54** (19, 35)
- ◀ (reverse play) **53** (19, 35)
- (stop) **52** (19)
- ▶▶/▶▶▶ (fast forward/go forward) **56** (19)
- ◀◀/◀◀◀ (rewind/go back) **55** (19)
- ▲ (eject) **51** (19)

– Deck B –

- ▶ (forward play) **41** (19, 20, 35)
- ◀ (reverse play) **42** (19, 20, 35)
- (stop) **43** (19, 20)
- ▶▶/▶▶▶ (fast forward/go forward) **39** (19)
- ◀◀/◀◀◀ (rewind/go back) **40** (19)
- ▲ (eject) **44** (19)

# Remote Control



CD ▷ [32] (14, 15)  
 CHECK [5] (15)  
 CLEAR [6] (15)  
 CLOCK/TIMER SELECT [17]  
 (30)  
 CLOCK/TIMER SET [18] (13, 21,  
 29)  
 DBFB [15] (23)  
 DISPLAY [22] (13, 16, 18, 29, 35)  
 D.SKIP [4] (14)  
 ENTER [25] (10, 12, 13, 15, 17,  
 18, 21, 22, 26-30)  
 EQ [13] (27)  
 EQ ON/OFF [14] (10, 28)  
 FUNCTION [24] (10, 14, 15, 20,  
 21, 31)  
 GROOVE [21] (23)

SET UP [12] (10, 12, 26, 28, 29)  
 SLEEP [7] (29)  
 SUR [23] (25)  
 TAPE A ◀▶ [31] (19, 35)  
 TAPE B ◀▶ [30] (19, 20, 35)  
 TUNER/BAND [29] (17)  
 TUNING + [9] (17)  
 TUNING - [26] (17)  
 TV CH +/- [19]  
 TV VOL +/- [20]  
 TV I/⏻ [2]  
 TV/VIDEO [1]  
 VOL +/- [16]

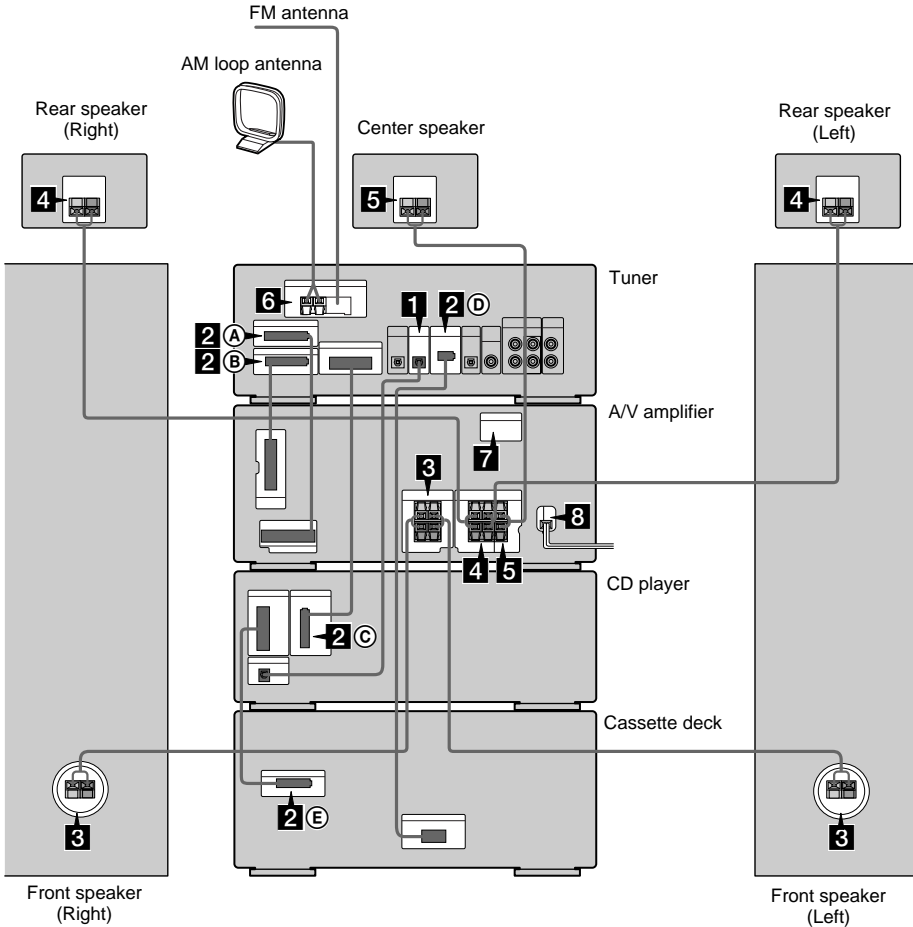
## BUTTON DESCRIPTIONS

I/⏻ (power) [3]  
 || (pause) [10]  
 ■ (stop) [8]  
 ◀◀ (go back) [28]  
 ▶▶ (go forward) [27]  
 ◀◀ (rewind) [26]  
 ▶▶ (fast forward) [9]  
 ↑/↓/←/→ [11]

# Hooking up the system

Do the following procedure **1** to **8** to hook up your system using the supplied cords and accessories.

Before connecting, place the system as described below.



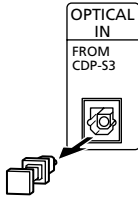
continued

## Hooking up the system (continued)

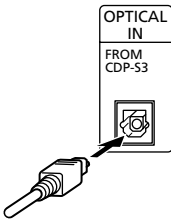
### 1 Connect the CD player and the tuner with the optical cable.

Connect from the OPTICAL OUT jack on the CD player to the OPTICAL IN jack on the tuner.

- 1 Remove the cover of the jack.



- 2 Connect the optical cable.



### 2 Connect the flat system control cables to the SYSTEM CONTROL connectors until it clicks.

Connect to the same colored jack in the order indicated on the rear panel.

#### A SYSTEM CONTROL 1 (Red)

Connect from the tuner to the A/V amplifier.

#### B SYSTEM CONTROL 2 (Blue)

Connect from the tuner to the A/V amplifier.

#### C SYSTEM CONTROL 3 (Black)

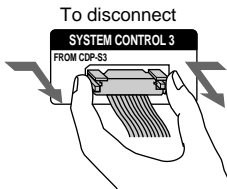
Connect from the CD player to the tuner.

#### D SYSTEM CONTROL 4 (Black)

Connect from the tuner to the cassette deck.

#### E SYSTEM CONTROL 5 (White)

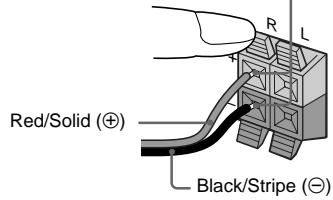
Connect from the cassette deck to the CD player.



### 3 Connect the front speakers.

Connect the speaker cords to the FRONT SPEAKER jacks.

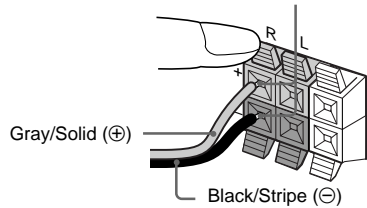
Insert only the stripped portion.



### 4 Connect the rear speakers.

Connect the speaker cords to the REAR SPEAKER jacks.

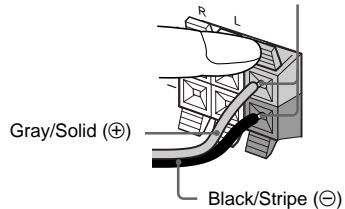
Insert only the stripped portion.



### 5 Connect the center speaker.

Connect the speaker cords to the CENTER SPEAKER jacks.

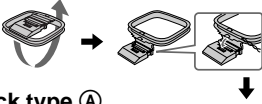
Insert only the stripped portion.



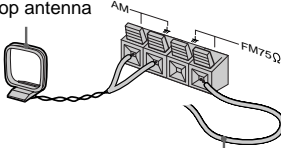


**6 Connect the FM/AM antennas.**

Set up the AM loop antenna, then connect it.

**Jack type ①**

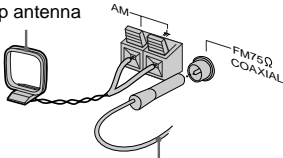
AM loop antenna



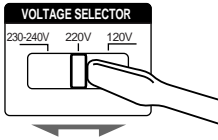
Extend the FM lead antenna horizontally.

**Jack type ②**

AM loop antenna



Extend the FM lead antenna horizontally.

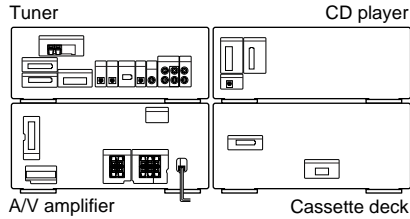
**7 For models with a voltage selector, set VOLTAGE SELECTOR to the position of your local power line voltage.****8 Connect the power cord to a wall outlet.**

The demonstration appears in the display. When you press I/⏻, the system turns on and the demonstration automatically ends.

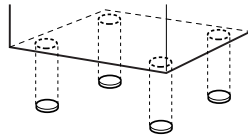
If the supplied adaptor on the plug does not fit your wall outlet, detach it from the plug (only for models equipped with an adaptor).

**Tip**

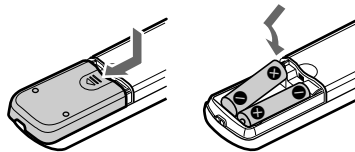
You can place the components as described below. In this case, place the components first, then connect the components.

**To attach the center and rear speaker pads**

Attach the supplied center and rear speaker pads to the bottom of the speakers to stabilize the speakers and prevent them from slipping.

**Notes**

- Keep the speaker cords away from the antennas to prevent noise.
- Do not place the rear speakers on top of a TV. This may cause color distortion in the TV screen.
- Be sure to connect both left and right rear speakers. Otherwise, the sound will not be heard.

**Inserting two size AA (R6) batteries into the remote****Tip**

When the remote no longer operates the system, replace both batteries with new ones.

**Note**

If you do not use the remote for a long period of time, remove the batteries to avoid possible damage from battery leakage.

continued

## Inserting two size AA (R6) batteries into the remote (continued)

### Notice for carrying this system

Do the following to protect the CD mechanism.

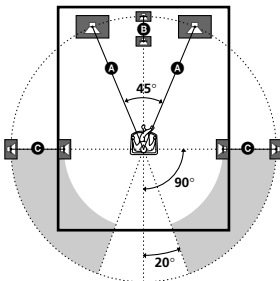
- 1 Turn on the system, then turn FUNCTION to select "CD". Make sure that all discs are removed from the unit.
- 2 While holding down EQ ON/OFF, press I/⏻ until "LOCK" appears.
- 3 Release I/⏻ first, then release EQ ON/OFF.
- 4 Unplug the AC power cord.

## Multi channel surround setup

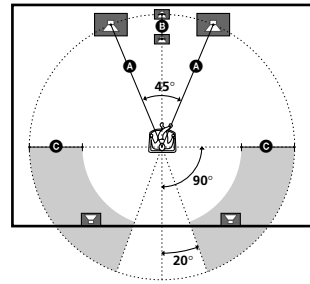
For the best possible surround sound, all speakers should be the same distance from the listening position (A). However, this unit lets you to place the center speaker up to 1.5 meters closer (B) and the rear speakers up to 4.5 meters closer (C) to the listening position. The front speakers can be placed from 1.0 to 12.0 meters from the listening position (A).

You can place the rear speakers either behind you or to the side, depending on the shape of your room (etc.).

### When placing rear speakers to your side



### When placing rear speakers behind you



### Note

Do not place the center speaker farther away from the listening position than the front speakers.

## Specifying the speaker parameters

- 1 Press SET UP.
- 2 Press < or > repeatedly to select "SP. SETUP".
- 3 Press ENTER (A/V amplifier or remote).
- 4 Press < or > repeatedly to select the parameter you want to adjust. See the table on page 38 for the speaker parameters.
- 5 Press ↑ or ↓ repeatedly to select the setting you want. The setting is stored.
- 6 Repeat steps 4 and 5 to set the speaker parameters.
- 7 Press ENTER (A/V amplifier or remote).

### ■ Center speaker selection (CENTER)

- If you connect a center speaker, select "YES".
- If you do not connect a center speaker, select "NO". The sound of the center channel will be output from the front speakers.

### ■ Rear speaker selection (REAR)

- If you connect rear speakers, select "YES".
- If you do not connect rear speakers, select "NO".

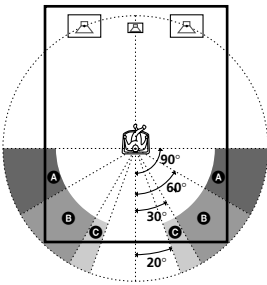
### ■ Rear speaker position (R.PL.)\*

This parameter lets you specify the location of your rear speakers for proper implementation of the Digital Cinema Sound surround modes in the “VIRTUAL” sound fields. Refer to the illustration below.

- Select “SIDE” if the location of your rear speakers corresponds to section **A**.
- Select “MIDDLE” if the location of your rear speakers corresponds to section **B**.
- Select “BEHIND” if the location of your rear speakers corresponds to section **C**.

This setting only effects the surround modes in the “VIRTUAL” sound fields (“VIRTUAL” indicator in the display lights up).

The bass frequencies are effectively reproduced from the speakers.

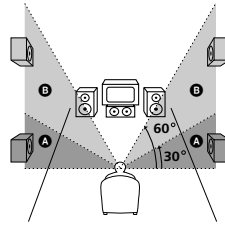


### ■ Rear speaker height (R.HGT.)\*

This parameter lets you specify the height of your rear speakers for proper implementation of the Digital Cinema Sound surround modes in the “VIRTUAL” sound fields. Refer to the illustration below.

- Select “LOW” if the location of your rear speakers corresponds to section **A**.
- Select “HIGH” if the location of your rear speakers corresponds to section **B**.

This setting only effects the surround modes in the “VIRTUAL” sound fields (“VIRTUAL” indicator in the display lights up).



\* These parameters are not available when “Rear speaker selection (REAR)” is set to “NO”.

### Tip

The rear speaker position parameter is designed specifically for implementation of the Digital Cinema Sound modes in the “VIRTUAL” sound fields.

With the Digital Cinema Sound modes, speaker position is not as critical as other modes. All of the modes in the “VIRTUAL” sound fields were designed under the premise that the rear speaker would be located behind the listening position, but presentation remains fairly consistent even with the rear speakers positioned at a rather wide angle. However, if the speakers are pointing toward the listener from the immediate left and right of the listening position, the “VIRTUAL” sound fields will not be effective unless the rear speaker position parameter is set to “SIDE”.

Nevertheless, each listening environment has many variables, like wall reflections, and you may obtain better results using “BEHIND” or “MIDDLE” if your speakers are located high above the listening position, even if they are to the immediate left and right.

Therefore, although it may result in a setting contrary to the “Rear speaker position” explanation, we recommend that you playback multi channel surround encoded software and listen to the effect each setting has on your listening environment. Choose the setting that provides a good sense of spaciousness and that best succeeds in forming a cohesive space between the surround sound from the rear speakers and the sound of the front speakers. If you are not sure which sounds best, select “BEHIND” and then use the speaker distance parameter and speaker level adjustments to obtain proper balance.

continued

## Multi channel surround setup (continued)

### ■ Subwoofer selection (SUB W.)

- If you connect a subwoofer, select “YES”.
- If you do not connect a subwoofer, select “NO”.
- In order to take full advantage of the Dolby Digital bass redirection circuitry, we recommend setting the subwoofer’s cut off frequency as high as possible.

### ■ Front speaker distance (F.DIST.)

Set the distance from your listening position to the front (left or right) speaker (A on page 10).

### ■ Center speaker distance (C.DIST.)

Set the distance from your listening position to the center speaker (B on page 10).

### ■ Rear speaker distance (R.DIST.)

Set the distance from your listening position to the rear (left or right) speaker (C on page 10).

#### Tip

This unit allows you to input the speaker position in terms of distance. However, it is not possible to set the center speaker further than the front speakers. Also, the center speaker cannot be set more than 1.5 meters closer than the front speakers.

Likewise, the rear speakers can not be set farther away from the listening position than the front speakers. And they can be no more than 4.5 meters closer.

This is because incorrect speaker placement is not conducive to the enjoyment of surround sound.

Please note that, setting the speaker distance closer than the actual location of the speakers will cause a delay in the output of the sound from that speaker. In other words, the speaker will sound like it is farther away.

For example, setting the center speaker distance 1–2 m closer than the actual speaker position will create a fairly realistic sensation of being “inside” the screen. If you cannot obtain a satisfactory surround effect because the rear speakers are too close, setting the rear speaker distance closer (shorter) than the actual distance will create a larger soundstage.

Adjusting these parameter while listening to the sound often results in much better surround sound. Give it a try!

### ■ Distance unit (DIST.UNIT)

Lets you select either feet or meters as the unit of measure for setting distances.

## To reset the speaker settings

- 1 Press SET UP.
- 2 Press ← or → repeatedly to select “RESET MENU”.
- 3 Press ENTER (A/V amplifier or remote).
- 4 Press ← or → repeatedly to select “SP. SET. RESET”.
- 5 Press ENTER (A/V amplifier or remote).  
All the speaker settings are reset to the factory settings.

#### To cancel

Press SET UP.

## Adjusting the speaker volume

- 1 Press SET UP.
- 2 Press ← or → repeatedly to select “TEST TONE”.
- 3 Press ENTER (A/V amplifier or remote).
- 4 Press ↑ or ↓ repeatedly to select “ON”.  
You will hear the test tone from each speaker in sequence.
- 5 Adjust the LEVEL parameters so that the volume of the test tone from each speaker sounds the same when you are in your main listening position (see page 26).
- 6 To turn off the test tone, repeat steps 1 to 3 and press ↑ or ↓ repeatedly to select “OFF”.

#### Notes

- The adjustments are shown in the display during adjustment.
- Although these adjustments can be made via the front panel, we recommend you follow the procedure described above and adjust the speaker levels from your listening position using SET UP button on the remote.

## Setting the time

- 1** Turn on the system.
- 2** Press **CLOCK/TIMER** (or **CLOCK/TIMER SET** on the remote).  
When you set the time for the first time, proceed to step 5.
- 3** Press **↑** or **↓** repeatedly to select “**CLOCK SET**”.
- 4** Press **ENTER** (A/V amplifier or remote).
- 5** Press **↑** or **↓** repeatedly to set the hour.
- 6** Press **ENTER** (A/V amplifier or remote).
- 7** Press **↑** or **↓** repeatedly to set the minutes.
- 8** Press **ENTER** (A/V amplifier or remote).

### Tip

If you have made a mistake or want to change the time, start over from step 2.

### Note

The clock settings are canceled when you disconnect the power cord or if a power failure occurs.

## Saving the power in standby mode

Press **DISPLAY** repeatedly when the power is off.

Each time you press the button, the system switches cyclically as follows:

Demonstration → Clock → Power Saving Mode

### To cancel the Power Saving Mode

Press **DISPLAY** once to show the demonstration, twice to show the clock display.

### Tips

- **I/⏻** indicator lights up even in the Power Saving Mode.
- The timer functions during the Power Saving Mode.

### Note

During the Power Saving Mode, the following functions do not work:

- Setting the time.
- Changing the AM tuning interval (except for European and Middle Eastern models).
- One Touch Play function.

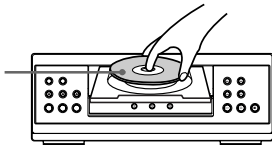
## Loading a CD

### 1 Press one of the DISC 1–3 ▲ buttons.

The disc tray slides out.

### 2 Place a CD with the label side up on the disc tray.

When you play a CD single, place it on the inner circle of the tray.



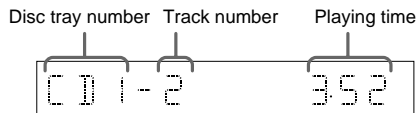
To insert additional discs, press ▲ of the other numbers to open the disc tray.

### 3 Press the same button to close the disc tray.

## Playing a CD

### — Normal Play/Repeat Play/Shuffle Play

This unit lets you play the CD in different play modes.



### 1 Turn FUNCTION to select “CD”.

### 2 When playback is stopped, press PLAY MODE repeatedly until the mode you want appears in the display.

Select	To play
ALL DISCS	All CDs in the disc tray continuously.
1 DISC	The CD you have selected in the original order.
ALL DISCS SHUFFLE	The tracks on all CDs in random order.
1 DISC SHUFFLE	The tracks on the CD you have selected in random order.
PROGRAM	The tracks on all CDs in the order you want them to be played (see “Programming the CD tracks” on page 15).

### 3 Press ► (CD) (or CD ▷ on the remote).

#### Tip

You cannot change the play mode during playback.

## Other operations

To	Do this
Stop playback	Press ■ (CD).
Pause playback	Press II. Press again to resume playback.
Select a track	During playback or pause, press ►► (CD) (to go forward) or ◀◀ (CD) (to go back).
Find a point in a track	Press and hold ►► or ◀◀ (CD) during playback and release it at the desired point.
Select a CD when playback is stopped	Press one of the DISC 1–3 buttons (or D.SKIP on the remote).
Switch to CD function from another source	Press one of the DISC 1–3 buttons (Automatic Source Selection).
Play repeatedly (Repeat Play)	Press REPEAT during playback until “REPEAT” or “REPEAT 1” appears. REPEAT*: For all the tracks on the CD up to 5 times. REPEAT 1: For a single track only. To cancel Repeat Play, press REPEAT until “REPEAT” and “REPEAT 1” disappears.
Remove the CD	Press one of the DISC 1–3 ▲ buttons.

\*You cannot use this function during ALL DISCS SHUFFLE.

#### Note

Do not use force to close the disc tray, as this may cause the CD player trouble. Always close the disc tray by pressing one of the DISC 1–3 ▲ buttons.

# Programming the CD tracks

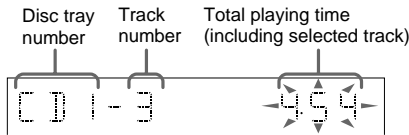
## — Program Play

You can make a program of up to 25 tracks from all the CDs in the order you want them to be played.

- 1** Turn **FUNCTION** to select “CD”, then place a CD.
- 2** Press **PLAY MODE** repeatedly until “PROGRAM” appears in the display.
- 3** Press one of the **DISC 1–3** buttons to select a CD.

To program all the tracks on a CD at once, proceed to step 5 while “AL” appears in the display.

- 4** Press **◀◀** or **▶▶** (CD) repeatedly until the track you want appears in the display.



- 5** Press **ENTER** (A/V amplifier or remote).  
The track(s) is (are) programmed. The program step number appears, followed by the total playing time.
- 6** To program additional tracks, repeat steps 3 to 5.  
Skip step 3 to select tracks from the same disc.
- 7** Press **▶** (CD) (or **CD ▶** on the remote).

To	Press
Cancel Program Play	PLAY MODE repeatedly when the playback is stopped until “1 DISC” or “ALL DISCS” appears in the display.
Check the program	CHECK on the remote repeatedly. After the last track, “CHECK END” appears in the display.
Clear a track	CLEAR on the remote when playback is stopped. Each time you press the button, a track is cleared from the end of the program.
Clear a specific track	CHECK on the remote repeatedly until the track number you want to clear appears, then press CLEAR on the remote.
Add a track to the program when playback is stopped	<ol style="list-style-type: none"> <li>1 Press one of the DISC 1–3 buttons to select a CD.</li> <li>2 Press <b>◀◀</b> or <b>▶▶</b> (CD) repeatedly to select the track.</li> <li>3 Press <b>ENTER</b> (A/V amplifier or remote).</li> </ol>

### Tips

- The program you made remains in the system’s memory even after it has been played back. Press **▶** (CD) to play the same program again.
- If “--:--” appears instead of the total playing time during programming, this means:
  - you have programmed a track number which exceeds 20.
  - the total playing time has exceeded 100 minutes.

## Using the CD display

You can check the remaining time of the current track or that of the CD.

When a CD TEXT disc is loaded, you can check the information stored on the disc. When the unit detects CD TEXT discs, the “CD TEXT” indication appears in the display.

### **Press DISPLAY.**

Each time you press the button, the display changes cyclically as follows:

#### **During normal playback**

Playing time on the current track →  
Remaining time on the current track →  
Remaining time on the current CD (“1 DISC” mode) or “--.-- ” display (“ALL DISCS” mode)  
→ Title name of the current track\* → Clock display (for 8 seconds) → Effect status (for 8 seconds)

#### **When playback is stopped**

Total number of tracks and the total playing time\*\* → Title name of the CD\* → Clock display (for 8 seconds) → Effect status (for 8 seconds)

\* With CD TEXT discs only (certain characters cannot be displayed). Depending on the disc, some CD TEXT information may not appear. When the disc contains more than 20 tracks, CD TEXT information is not displayed from track 21 on.

\*\*When the program mode is selected and there is a program, the last track number, the total playing time, and the total number of the programmed tracks are displayed.



## Presetting radio stations

You can preset 20 stations for FM and 10 stations for AM.

- 1 Press **TUNER/BAND** repeatedly to select **FM** or **AM**.
- 2 Press and hold **TUNING +** or **-** until **"AUTO"** appears in the display.  
Scanning stops when the system tunes in a station. **"TUNED"** and **"STEREO"** (for a stereo program) appear.



- 3 Press **TUNER MEMORY**.

A preset number appears in the display. The stations are stored from preset number 1.

Preset number



- 4 Press **ENTER** (Tuner or remote).

The station is stored.

- 5 Repeat steps 1 to 4 to store other stations.

### To tune in a station with a weak signal

Press **TUNING +** or **-** repeatedly to tune in the station manually.

### To set another station to an existing preset number

Start over from step 1. After step 3, press **PRESET +** or **-** repeatedly to select the preset number where you want to store a new station, then proceed to step 4.

#### Tips

The preset stations are retained for half a day even if you unplug the power cord or if a power failure occurs.

### To change the AM tuning interval (Except for European and Middle Eastern models)

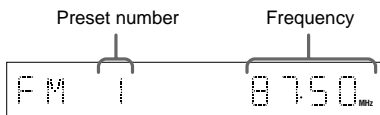
The AM tuning interval is factory set to 9 kHz (10 kHz in some areas). To change the AM tuning interval, tune in any AM station first, then turn off the power. While holding down **ENTER** (Tuner), turn the power back on. Release **I/⏻** first, then release **ENTER** (Tuner). Press **I/⏻** again. The AM tuning interval is changed. When you change the interval, AM preset stations will be erased. To reset the interval, repeat the same procedure.

## Listening to the radio

### — Preset Tuning

Preset radio stations in the tuner's memory first (see "Presetting radio stations").

- 1 Press **TUNER/BAND** repeatedly to select the band you want.
- 2 Press **PRESET +** or **-** repeatedly to tune in the preset station you want.



To	Do this
Turn off the radio	Press <b>I/⏻</b> .

### To listen to non-preset radio stations

In step 2, press **TUNING +** or **-** repeatedly (Manual Tuning) or press and hold **TUNING +** or **-** (Automatic Tuning).

#### Tips

- When an FM program is noisy, press **STEREO/MONO** so that **"MONO"** appears in the display. There will be no stereo effect, but the reception will improve.
- To improve broadcast reception, reorient the antennas.

## Using the Radio Data System (RDS)

(European model only)

### What is the Radio Data System?

Radio Data System (RDS) is a broadcasting service that allows radio stations to send additional information along with the regular program signal. This tuner offers convenient RDS features like station name display and location of stations by program type. RDS is available only for FM stations.

#### Note

RDS may not work properly if the station you are tuned to is not transmitting the RDS signal properly or if the signal is weak.

### Receiving RDS broadcasts

#### Simply select a station from the FM band.

When you tune in a station that provides RDS services, the station name appears in the display.

#### To check the RDS information

##### Press DISPLAY.

Each time you press the button, the display changes cyclically as follows:

Station name\* → Frequency → Program type\* → Clock display → Effect status

\* If the RDS broadcast is not received, the station name and program type may not appear in the display.

### Locating a station by program type (PTY)

You can locate a station you want by selecting a program type. The tuner tunes in the type of programs currently being broadcast from the RDS stations stored in the tuner's preset memory.

The types of programs include NEWS, AFFAIRS (current news), INFORMATION, SPORT, EDUCATION (education programs), DRAMA, CULTURE, SCIENCE, VARIED (interviews, games and comedy), POP, ROCK, EASY MUSIC, L.CLASSICAL, S.CLASSICAL, OTHER MUSIC, WEATHER, FINANCE, CHILDREN, SOCIAL, RELIGION, PHONE IN, TRAVEL, LEISURE, JAZZ, COUNTRY (country music), NATION (nation's popular music), OLDIES, FOLK, DOCUMENTARY (investigative features), ALARM TEST (test signal for emergency broadcast), ALARM-ALARM (emergency broadcast) and NONE (any programs not defined above).

- 1 Press PTY while listening to the radio.**
- 2 Press PRESET + or – repeatedly to select the program type you want.**
- 3 Press ENTER (Tuner or remote).**  
“SEARCH” and the selected program type appear alternately in the display.  
When the tuner receives a program, the preset station name flashes.
- 4 Press PRESET + or – repeatedly to continue searching for the station name you want.**
- 5 Press ENTER (Tuner or remote) while the preset station name you want is flashing.**

#### To cancel the PTY search

Press PTY again.

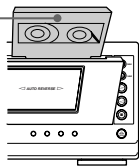
#### Note

“NO PTY” appears when the program type you selected is not currently being broadcast.

## Loading a tape

- 1 Press **▲** (Deck A or B).
- 2 Insert a tape in deck A or B.

Insert with the side you want to play/record facing forward.



## Playing a tape

You can use TYPE I (normal), TYPE II (CrO<sub>2</sub>), or TYPE IV (metal) tapes. The deck automatically detects the tape type.

- 1 Load a tape.
- 2 Press **DIRECTION** repeatedly to select **⇒** to play one side, **↔** to play both sides, or **RELAY\*** (Relay Play) to play both decks in succession.
- 3 Press **▶** (Deck A or B) (or, **TAPE A** **<▶** or **TAPE B** **<▶** on the remote).

The tape starts playing.

Press **◀** (Deck A or B) to play the reverse side. When using the remote, press **TAPE A** **<▶** or **TAPE B** **<▶** again.

When you select **↔** or **RELAY**, the deck stops automatically after repeating the sequence 5 times.

\* Relay Play always follow this cyclic sequence:  
Deck A (front side) → Deck A (reverse side) →  
Deck B (front side) → Deck B (reverse side)

To	Do this
Stop playback	Press <b>■</b> (Deck A or B).
Fast-forward or rewind	Press <b>◀◀</b> or <b>▶▶</b> (Deck A or B) when the playback is stopped.
Remove the cassette	Press <b>▲</b> (Deck A or B).

### Tip

When you want to reduce the hiss noise in low-level high-frequency signals, press **DOLBY NR** so that "DOLBY NR" appears in the display.

### Searching for the beginning of a track (AMS\*)

During playback, press **◀◀** or **▶▶** (Deck A or B) repeatedly for the number of songs you want to skip forward (or backward).

The search direction, + (forward) or - (back), and number of songs being skipped (1~9) appear in the display.

Example: searching forward 2 songs

TAPE B | >>> +2

\* Automatic Music Sensor

### Note

The AMS function may not operate correctly under the following circumstances:

- When the unrecorded space between songs is less than 4 seconds long.
- When the unit is placed near a television.

## Recording to a tape

### — CD Synchro Recording/High-Speed Dubbing/Recording Manually/Program Edit

You can record from a CD, tape, radio or other connected component. You can use TYPE I (normal) or TYPE II (CrO<sub>2</sub>) tapes. The recording level is adjusted automatically.

Steps	Recording from a CD (CD Synchro Recording)	Recording from a tape (High-Speed Dubbing)	Recording manually
1	Insert a recordable tape into deck B.		
2	Turn <b>FUNCTION</b> to select "CD".	Turn <b>FUNCTION</b> to select "TAPE A".	Turn <b>FUNCTION</b> to select the recording source.
3	Insert the CD you want to record.	Insert the tape you want to record into deck A.	Prepare the recording source.
4	Press <b>CD SYNC.</b>	Press <b>HI-DUB.</b>	Press <b>REC PAUSE/START.</b>
	Deck B stands by for recording. "REC" indicator flashes in the display. To reduce the hiss noise in low-level high-frequency signals, press <b>DOLBY NR</b> so that "DOLBY NR" appears in the display (except when recording from a tape).		
5	Press <b>DIRECTION</b> repeatedly to select $\rightleftarrows$ to record on one side. Select $\leftrightarrow$ (or <b>RELAY</b> ) to record on both sides.		
6	Press <b>REC PAUSE/START.</b> Recording starts.		
7			Start playing the recording source.

To	Press
Stop recording	■ (CD or Deck B).
Pause recording*	<b>REC PAUSE/START.</b>

\* Only when recording manually.

#### Tips

- If you want to record from the reverse side, press  $\blacktriangleleft$  or  $\blacktriangleright$  (Deck B) which does not light up after step 4 (when the deck B is in recording pause).
- When you record on both sides, be sure to start from the front side. If you start from the reverse side, recording stops at the end of the reverse side.
- (High-Speed Dubbing only)  
If you set direction to  $\leftrightarrow$  when the tapes have different lengths, the tapes in each deck reverses independently. If you select **RELAY**, the tapes in both decks reverse together.

#### Note

The sound field automatically switches to 2CH STEREO when you start recording.

## Recording a CD by specifying track order

### — Program Edit

When programming, make sure the playing times for each side do not exceed the length of one side of the tape.

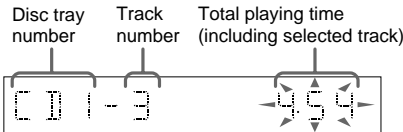
**1** Insert a CD and a recordable tape into deck B, then turn FUNCTION to select “CD”.

**2** Press PLAY MODE repeatedly until “PROGRAM” appears in the display.

**3** Press one of the DISC 1–3 buttons to select a CD.

To program all the tracks on a CD at once, proceed to step 5 while “AL” appears in the display.

**4** Press ◀◀ or ▶▶ (CD) repeatedly until the track you want appears in the display.



**5** Press ENTER (A/V amplifier or remote).

The track(s) is (are) programmed. The program step number appears, followed by the total playing time.

**6** To program additional tracks, repeat steps 3 to 5.

Skip step 3 to select tracks from the same disc.

**7** Press CD SYNC.

Deck B stands by for recording. To reduce the hiss noise in low-level high-frequency signals, press DOLBY NR so that “DOLBY NR” appears in the display. “REC” indicator in the display flashes.

**8** Press DIRECTION repeatedly to select ◀▶ to record on one side.

Select ◀▶ (or RELAY) to record on both sides.

**9** Press REC PAUSE/START.

Recording starts.

### To cancel Program Edit

Press PLAY MODE repeatedly until “1 DISC” or “ALL DISCS” appears in the display.

### Tip

To check the required tape length for recording a CD, press EDIT after you have inserted a CD and selected CD function. The required tape length for the currently selected CD appears, followed by the total playing time for side A and side B (Tape Select Edit).

### Note

You cannot use Tape Select Edit Function for discs containing over 21 tracks. “CANNOT EDIT” appears in the display.

## Timer-recording radio programs

To timer-record, you must set the clock (see “Setting the time” on page 13) and preset the radio stations (see “Presetting radio stations” on page 17) beforehand.

**1** Tune in the preset radio station (see “Listening to the radio” on page 17).

**2** Press CLOCK/TIMER (or CLOCK/TIMER SET on the remote).

“DAILY1 SET” flashes.

**3** Press ↑ or ↓ repeatedly to select “REC SET”, then press ENTER.

“ON” appears and the hour indication flashes.

**4** Set the time to start recording.

Press ↑ or ↓ repeatedly to set the hour, then press ENTER (A/V amplifier or remote).

The minute indication flashes.

Press ↑ or ↓ repeatedly to set the minutes, then press ENTER (A/V amplifier or remote).

The hour indication flashes again.

continued

## **Timer-recording radio programs (continued)**

### **5 Set the time to stop recording following step 4.**

The start time appears, followed by the stop time, the preset radio station to be recorded (e.g., "TUNER FM 5"), then the original display appears.

### **6 Insert a recordable tape into deck B.**

### **7 Turn off the power.**

When the recording starts, the volume level is set to the minimum.

<b>To</b>	<b>Do this</b>
Check the setting	Press TIMER SELECT (or CLOCK/TIMER SELECT on the remote) and press $\uparrow$ or $\downarrow$ repeatedly to select "REC SELECT", then press ENTER (A/V amplifier or remote).
Change the setting	Start over from step 1.
Cancel the Timer-recording	Press TIMER SELECT (or CLOCK/TIMER SELECT on the remote) and press $\uparrow$ or $\downarrow$ repeatedly to select "TIMER OFF", then press ENTER (A/V amplifier or remote).

### **Notes**

- If the power is on at the preset time, the Timer-recording does not work.
- When you use the Sleep Timer, the Timer-recording will not turn on the system until the Sleep Timer turns it off.
- The power turns on 15 seconds before the preset time.

### Adjusting the sound

#### To reinforce bass (DBFB\*)

##### Press DBFB on the remote.

Each time you press the button, the display changes as follows:

DBFB ON ↔ DBFB OFF

\* Dynamic Bass Feedback

#### For a powerful sound

##### Press GROOVE on the remote.

Each time you press the button, the display changes cyclically as follows:

GROOVE → V-GROOVE → OFF

**GROOVE:** The volume switches to power mode and the equalizer curve changes. DBFB is automatically set to full strength.

**V-GROOVE:** The volume switches to power mode, the lower bass frequencies of the sound you are listening to is powerfully reinforced, and the equalizer curve changes. DBFB is automatically set to full strength.



### Selecting a sound field

#### Turn FILE SELECT to select the sound field you want.

The current sound field name appears in the display.

See below for the information of each sound field.

#### Tips

- You can also select a sound field by pressing ← or → while indicators on the SUR and EQ buttons are turned on or off.
- You can identify the encoding format of program software by looking at its packaging. Dolby Digital discs are labeled with the  logo, and Dolby Surround encoded programs are labeled with the  logo.

#### ■ 2 Channel Stereo (2CH STEREO)

Outputs the sound from the front left and right speakers and a subwoofer. Standard two channel (stereo) sources completely bypass the sound field processing. Multi channel surround formats are downmixed to two channels.

#### ■ Auto Format Decoding (A.F.D.)

Automatically detects the type of audio signal being input (Dolby Digital, DTS, Dolby Pro Logic, or standard 2 channel stereo) and performs the proper decoding if necessary. This mode presents the sound as it was recorded/encoded, without adding any effects.

#### ■ Normal Surround (NORMAL SURR.)

Software with multi channel surround audio signals is played according to the way it was recorded. Software with 2 channel audio signals, is decoded with Dolby Pro Logic to create surround effects.

#### ■ Cinema Studio A (C. STUDIO A)<sup>1)</sup>

Reproduces the sound characteristics of the Sony Pictures Entertainment's classic editing studio.

#### ■ Cinema Studio B (C. STUDIO B)<sup>1)</sup>

Reproduces the sound characteristics of the Sony Pictures Entertainment's mixing studio which is one of the most up-to-date facilities in Hollywood.

#### ■ Cinema Studio C (C. STUDIO C)<sup>1)</sup>

Reproduces the sound characteristics of the Sony Pictures Entertainment's BGM recording studio.

continued

## **Selecting a sound field (continued)**

### ■ **Virtual Multi Dimension (V.M.DIMENS.)<sup>2)</sup>**

Uses 3D sound imaging to create an array of virtual rear speakers positioned higher than the listener from a single pair of actual rear speakers. This mode creates 5 sets of virtual speakers surrounding the listener at approximately a 30° angle of elevation.

### ■ **Virtual Semi Multi Dimension (V.SEMI M.D.)<sup>2)</sup>**

Uses 3D sound imaging to create virtual rear speakers from the sound of the front speakers without using actual rear speakers. This mode creates 5 sets of virtual speakers surrounding the listener at a 30° angle of elevation.

### ■ **SMALL HALL<sup>3)</sup>**

Reproduces the acoustics of a small rectangular concert hall.

### ■ **LARGE HALL<sup>3)</sup>**

Reproduces the acoustics of a large rectangular concert hall.

### ■ **OPERA HOUSE<sup>3)</sup>**

Reproduces the acoustics of an opera house.

### ■ **JAZZ CLUB<sup>3)</sup>**

Reproduces the acoustics of a jazz club.

### ■ **DISCO/CLUB<sup>3)</sup>**

Reproduces the acoustics of a discotheque/dance club.

### ■ **CHURCH<sup>3)</sup>**

Reproduces the acoustics of a stone church.

### ■ **LIVE HOUSE<sup>3)</sup>**

Reproduces the acoustics of a 300-seat live house.

### ■ **ARENA<sup>3)</sup>**

Reproduces the acoustics of a 1000-seat concert hall.

### ■ **STADIUM<sup>3)</sup>**

Reproduces the feeling of a large open-air stadium.

### ■ **GAME<sup>3)</sup>**

Obtains maximum audio impact from video game software.

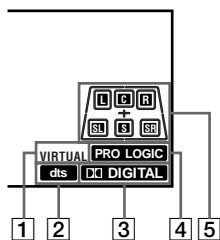
- 1) You can select directly by pressing the buttons on the front panel (CINEMA STUDIO A–C).
- 2) “VIRTUAL” sound field: Sound field with virtual speakers.
- 3) These sound fields are not displayed even if you turn FILE SELECT while the tuner is decoding the DTS signals. When the tuner starts decoding the DTS signals while one of these sound fields is selected, the sound field automatically switches to “A.F.D.” (Auto Format Decoding).

### **Notes**

- The effects provided by the virtual speakers may cause increased noise in the playback signal.
- When listening with sound fields that employ the virtual speakers, you will not be able to hear any sound coming directly from the rear speakers.
- To listen to two channel (stereo) sources using the front left and right speakers and a subwoofer, select “A.F.D.” or “2CH STEREO”.
- If you change the setting of sound, such as changing the sound field menu, while recording, the recording sound is interrupted at the point.



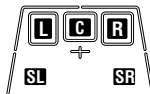
## Understanding the multi channel surround displays



- 1 VIRTUAL:** Lights up when the sound field with virtual speakers is selected.
- 2 dts:** Lights up when DTS signals are input.
- 3 DIGITAL:** Lights up when the unit is decoding signals recorded in the Dolby Digital format.
- 4 PRO LOGIC:** Lights up when the unit applies Pro Logic processing to two channel signals in order to output the center and rear channel signals. However, this indicator does not light if the rear speakers are set to “NO”.
- 5 Playback channel indicators:** The letters (L, C, R, etc.) indicate the channels being played back. The boxes around the letters vary to show how the unit downmixes the source sound (based on the speakers settings). When using sound fields like “LARGE HALL” or “SMALL HALL”, the unit adds reverberation based on the source sound.  
L (Front Left), R (Front Right), C (Center (monaural)), SL (Rear Left), SR (Rear Right), S (Rear (monaural or the rear components obtained by Pro Logic processing))

### Example:

Recording format (Front /Rear): 3/2  
Output channel: Rear speakers absent  
Sound Field: A.F.D.



## Customizing sound fields

By adjusting the surround parameters and the equalization of the front speakers, you can customize the sound fields to suit your particular listening situation.

Once you customize a sound field, the changes are stored in the memory indefinitely (unless the unit is unplugged for half a day). You can change a customized sound field any time by making new adjustments to the parameters.

See the table on page 39 for the parameters available in each sound field.

## To get the most from multi channel surround sound

Position your speakers and do the procedures described in “Multi channel surround setup” starting from page 10 before you customize a sound field.

## Adjusting the surround parameters

The SUR menu contains parameters that let you customize various aspects of the current sound field. The settings available in this menu are stored individually for each sound field.

### 1 Start playing a program source encoded with multi channel surround sound, then select a sound field.

MULTI CHANNEL DECODING indicator lights up when the tuner is decoding signals recorded in a multi channel format.

When the selected sound field contains adjustable surround parameters, the SUR button lights up.

continued

## Customizing sound fields (continued)

### 2 When the SUR button lights up, press SUR.

The button starts blinking and the first parameter is displayed.

### 3 Press ← or → repeatedly to select the parameter you want to adjust.

### 4 Press ↑ or ↓ repeatedly to select the setting you want.

The setting is stored.

### 5 Press ENTER (A/V amplifier or remote).

The SUR button lights up. See the table on page 39 for the surround parameters.

#### ■ Effect level (EFFECT)

Lets you adjust the “presence” of the current surround effect.

#### ■ Wall type (WALL)

Lets you control the level of the high frequencies to alter the sonic character of your listening environment by simulating a softer (S) or harder (H) wall. The midpoint designates a neutral wall (made of wood).

#### ■ Reverberation (REVERB)

Lets you control the spacing of the early reflections to simulate a sonically longer (L) or shorter (S) room. The midpoint (0) designates a standard room with no adjustment.

## Adjusting the level parameters

The SP. LEVEL menu contains parameters that let you adjust the balance and speaker volumes of each speaker. The settings available in this menu are applied to all sound fields.

### 1 Press SET UP.

### 2 Press ← or → repeatedly to select “SP. LEVEL”.

### 3 Press ENTER (A/V amplifier or remote).

### 4 Press ← or → repeatedly to select the parameter you want to adjust.

### 5 Press ↑ or ↓ repeatedly to select the setting you want.

The setting is stored.

### 6 Press ENTER (A/V amplifier or remote).

See the table on page 40 for the speaker level parameters.

#### ■ Front balance (FRONT)

Lets you adjust the balance between the front left and right speakers.

#### ■ Rear balance (REAR)

Lets you adjust the balance between the rear left and right speakers.

#### ■ Rear level (REAR)

Lets you adjust the level of the rear (left and right) speakers.

#### ■ Center level (CENTER)

Lets you adjust the level of the center speaker.

#### ■ Subwoofer level (SUB W.)

Lets you adjust the level of the subwoofer.

#### Notes

- When the center and rear speakers are set to “NO” in the speaker parameters (see page 10), you cannot adjust the rear balance, rear level, or center level.
- When the subwoofer is set to “NO” in the speaker parameters (see page 10), you cannot adjust the subwoofer level.

### ■ LFE (Low Frequency Effect) mix level (LFE)

Lets you attenuate the level of the LFE (Low Frequency Effect) channel output from the subwoofer without effecting the level of the bass frequencies sent to the subwoofer from the front, center or rear channels via the Dolby Digital bass redirection circuitry.

- “0 dB” outputs the full LFE signal at the mix level determined by the recording engineer.
- “MUTING” mutes the sound of the LFE channel from the subwoofer. However, the low frequency sounds of the front, center, or rear speakers are output from the subwoofer according to the settings made for each speaker in the speaker setup (page 10).

### ■ Dynamic range compressor (D.COMP.)

Lets you compress the dynamic range of the sound track. This may be useful when you want to watch movies at low volumes late at night.

- “OFF” reproduces the sound track with no compression.
- “STD” reproduces the sound track with the dynamic range intended by the recording engineer.
- “0.1” – “0.9” allow you to compress the dynamic range in small steps to achieve the sound you desire.
- “MAX” provides a dramatic compression of the dynamic range.

#### Note

Dynamic range compression is possible with Dolby Digital sources only.

## Adjusting the equalizer

The EQ menu lets you adjust the equalization (low, mid, and high frequencies) of the front speakers. The equalizer settings are stored individually for each sound field.

### 1 Start playing a program source encoded with multi channel surround sound, then select a sound field.

When the selected sound field contains adjustable equalizer parameters, the EQ button lights up.

### 2 When the EQ button lights up, press EQ.

The button starts blinking and the first parameter is displayed.

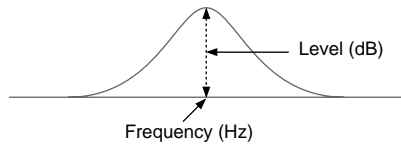
### 3 Press ← or → repeatedly to select the parameter (gain (dB) or frequency (Hz)) you want to adjust.

### 4 Press ↑ or ↓ repeatedly to select the setting you want.

The setting is stored.

### 5 Press ENTER (A/V amplifier or remote).

The EQ button lights up. See the table on page 38 for the equalizer parameters.



continued

## **Customizing sound fields (continued)**

### **To turn on/off the equalizer**

Press EQ ON/OFF. The EQ indicator in the display lights up when the equalizer is turned on. When you adjust the equalizer using the EQ parameters, the settings are stored separately for each sound field and can be reproduced whenever you turn on the equalizer.

#### **■ Front speaker bass (BASS) (Gain/Frequency)**

Lets you adjust the gain and frequency of bass.

#### **■ Front speaker midrange (MID) (Gain/Frequency)**

Lets you adjust the gain and frequency of midrange.

#### **■ Front speaker treble (TREB) (Gain/Frequency)**

Lets you adjust the gain and frequency of treble.

## **Resetting customized sound fields to the factory settings**

### **To reset the settings of a customized sound field**

- 1** Turn FILE SELECT to select the sound field you want to reset the settings.
- 2** Press SET UP.
- 3** Press < or > repeatedly to select "RESET MENU".
- 4** Press ENTER (A/V amplifier or remote).
- 5** Press < or > repeatedly to select "CUR. F. RESET".
- 6** Press ENTER (A/V amplifier or remote) again.

All the surround, equalizer, and speaker level parameters of the selected sound field are reset to the factory settings.

#### **To cancel**

Press SET UP.

### **To reset the settings of all the customized sound fields**

- 1** Press SET UP.
- 2** Press < or > repeatedly to select "RESET MENU".
- 3** Press ENTER (A/V amplifier or remote).
- 4** Press < or > repeatedly to select "ALL F. RESET".
- 5** Press ENTER (A/V amplifier or remote) again.

All the surround, equalizer, and speaker level parameters are reset to the factory settings.

#### **To cancel**

Press SET UP.

## Changing the spectrum analyzer display

Press and hold DISPLAY for more than 2 seconds.

Each time you press the button, the display changes as follows:

SPECTRUM ON ↔ SPECTRUM OFF

## To adjust the brightness of the display

- 1** Press SET UP.
- 2** Press ← or → repeatedly to select “DIMMER”.
- 3** Press ENTER (A/V amplifier or remote).
- 4** Press ↑ or ↓ repeatedly to select the setting you want.  
The setting is stored.
- 5** Press ENTER (A/V amplifier or remote).

## Falling asleep to music

### — Sleep Timer

You can set the system to turn off at a preset time, so you can fall asleep to music.

Press SLEEP on the remote.

Each time you press the button, the minute display (the turn-off time) changes as follows:

OFF → AUTO\* → 90min → 80min → 70min → ... → 10min

\* The power turns off when the current CD or tape finishes playback (for up to 100 minutes).

To	Press
Check the remaining time	SLEEP once.
Change the time to turn off	SLEEP repeatedly to select the time you want.
Cancel the Sleep Timer	SLEEP repeatedly until “SLEEP OFF” appears.

## Waking up to music

### — Daily Timer

You can wake up to music at a preset time every day. Make sure you have set the clock (see “Setting the time” on page 13).

- 1** Prepare the music source you want to play.
  - CD: Load a CD. To start from a specific track, make a program (see “Programming the CD tracks” on page 15).
  - Tape: Load a tape with the side you want to play facing forward.
  - Radio: Tune in the preset station you want (see “Listening to the radio” on page 17).
- 2** Adjust the volume.
- 3** Press CLOCK/TIMER (or CLOCK/TIMER SET on the remote).  
“DAILY1 SET” appears.
- 4** Press ↑ or ↓ repeatedly to select “DAILY 1 (or 2)”, then press ENTER (A/V amplifier or remote).  
“ON” appears and the hour indication flashes.

continued

## Waking up to music (continued)

### 5 Set the time to start playback.

Press  $\uparrow$  or  $\downarrow$  repeatedly to set the hour, then press ENTER (A/V amplifier or remote).

The minute indication flashes.

Press  $\uparrow$  or  $\downarrow$  repeatedly to set the minutes, then press ENTER (A/V amplifier or remote).

The hour indication flashes again.

### 6 Set the time to stop playback following step 5.

### 7 Press $\uparrow$ or $\downarrow$ repeatedly until the music source you want appears.

The indications change as follows:



### 8 Press ENTER (A/V amplifier or remote).

The type of timer (“DAILY 1” or “DAILY 2”), followed by the start time, stop time and the music source, appears, then the original display appears.

### 9 Turn off the power.

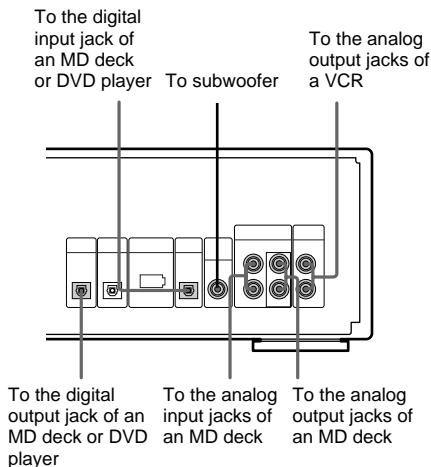
## Notes

- If the power is on at the preset time, the Daily Timer does not work.
- When you use the Sleep Timer, the Daily Timer will not turn on the system until the Sleep Timer turns it off.
- The power turns on 15 seconds before the preset time.

To	Do this
Check the setting	Press TIMER SELECT (or CLOCK/TIMER SELECT on the remote) and press $\uparrow$ or $\downarrow$ repeatedly to select the respective mode (“DAILY 1” or “DAILY 2”), then press ENTER (A/V amplifier or remote).
Change the setting	Start over from step 1.
Cancel the Daily Timer	Press TIMER SELECT (or CLOCK/TIMER SELECT on the remote) and press $\uparrow$ or $\downarrow$ repeatedly to select “TIMER OFF”, then press ENTER (A/V amplifier or remote).

## Connecting audio components

To connect audio components, connect to the jacks on the rear panel of the tuner.



### Notes

- Make sure to match the color of the plugs and the connectors.
- When you connect a VIDEO CD player, connect the audio output jacks of the VIDEO CD player to the MD IN jacks of this unit.
- Digital signals are output from DIGITAL OUT jack during CD or DIGITAL function only. Besides, the sound output from the DIGITAL OUT jack is not affected by the sound adjustment.
- This unit is not compatible with 96 kHz sampling frequencies and SACD format.

### Connecting a microphone (Except for European model)

You can connect an optional microphone to the MIC jack. Turn MIC LEVEL to adjust the microphone level.

To	Do This
Make a digital recording from CD to MD	Connect an optional optical cable.
Listen to the digital sound of a connected MD deck	Press DIGITAL.
Listen to the analog sound of a connected MD deck	Turn FUNCTION to select "MD".
Listen to the analog sound of a connected VCR	Turn FUNCTION to select "VIDEO".

### Tip

When you remove the optical cover, keep it for future use.

## Precautions

### On operating voltage

Before operating the unit, check that the operating voltage of your unit is identical with the voltage of your local power supply.

### On safety

- The unit is not disconnected from the AC power source (mains) as long as it is connected to the wall outlet, even if the unit itself has been turned off.
- Unplug the unit from the wall outlet (mains) if it is not to be used for an extended period of time. To disconnect the cord (mains lead), pull it out by the plug. Never pull the cord itself.
- Should any solid object or liquid fall into the component, unplug the unit and have the component checked by qualified personnel before operating it any further.
- The AC power cord must be changed only at a qualified service shop.

### On placement

- Do not place the unit in an inclined position.
- Do not place the unit in locations where it is:
  - extremely hot or cold.
  - dusty or dirty.
  - very humid.
  - vibrating.
  - subject to direct sunlight.

### On heat buildup

- Although the unit heats up during operation, this is not a malfunction.
- Place the unit in a location with adequate ventilation to prevent heat build-up in the unit.

If you continuously use this unit at a large volume, the cabinet temperature of the top, side and bottom rises considerably. To avoid burning yourself, do not touch the cabinet.

To prevent a malfunction, do not cover the ventilation hole for the cooling fan.

### On operation

- If the unit is brought directly from a cold to a warm location, or is placed in a very damp room, moisture may condense on the lens inside the CD player. Should this occur, the unit will not operate properly. Remove the CD and leave the unit turned on for about an hour until the moisture evaporates.
- When you move the unit, take out any discs.

If you have any questions or problems concerning the unit, please consult your nearest Sony dealer.

### Notes on CDs

- Before playing, clean the CD with a cleaning cloth. Wipe the CD from the center out.
- Do not use solvents.
- Do not expose the CD to direct sunlight or heat sources.
- Discs with non-standard shapes (e.g., heart, square, star) cannot be played on this unit. Attempting to do so may damage the unit. Do not use such discs.

### Note on CD-R/CD-RW playback

Discs recorded on CD-R/CD-RW drives may not be played back because of scratches, dirt, recording condition or the drive's characteristics. Besides, the discs, which are not yet finalized at the end of recording, cannot be played back.

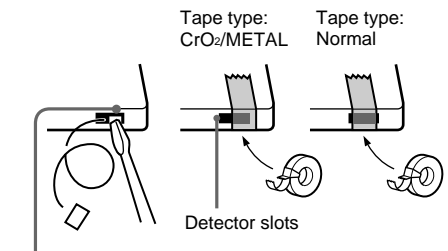
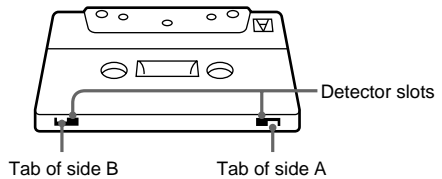
### Cleaning the cabinet

Use a soft cloth slightly moistened with mild detergent solution.

### To save a tape permanently

To prevent a tape from being accidentally recorded over, break off the cassette tab from side A or B as illustrated.

If you later want to reuse the tape for recording, cover the broken tab with adhesive tape. However, be careful not to cover the detector slots which allow the tape player to automatically detect the type of tape.



Break off the cassette tab of side A



## Before placing a cassette in the tape deck

Take up any slack in the tape. Otherwise the tape may get entangled in the parts of the tape deck and become damaged.

## When using a tape longer than 90 minutes

The tape is very elastic. Do not change the tape operations such as play, stop, and fast-winding, etc. frequently. The tape may get entangled in the tape deck.

## Cleaning the tape heads

Clean the tape heads after every 10 hours of use.

Make sure to clean the tape heads before you start an important recording or after playing an old tape. Use a separately sold dry-type or wet-type cleaning cassette. For details, refer to the instructions of the cleaning cassette.

## Demagnetizing the tape heads

Demagnetize the tape heads and the metal parts that have contact with the tape every 20 to 30 hours of use with a separately sold demagnetizing cassette. For details, refer to the instructions of the demagnetizing cassette.

## Troubleshooting

If you run into any problem using this unit, use the following check list.

First, check that the power cord is connected firmly and the speakers are connected correctly and firmly.

Should any problem persist, consult your nearest Sony dealer. When bringing the system in for repairs, be sure to bring in the entire system. This product is a system product, and the entire system is necessary to determine the location requiring to repair.

## General

---

**The display starts flashing as soon as you plug in the power cord even though you haven't turned on the power.**

- The demonstration mode started. Press  $I/\cup$  (see step 8 on page 9).

---

**The clock setting/timer is canceled.**

- The power cord is disconnected or a power failure occurs. Redo "Setting the time" (page 13). If you have set the timer, redo "Waking up to music" (page 29) and/or "Timer-recording radio programs" (page 21).

---

**The radio presetting is canceled.**

- The power cord is disconnected or a power failure occurs for longer than half a day. Redo "Presetting radio stations" (page 17).

---

**There is no sound.**

- Turn VOLUME clockwise.
- The headphones are connected.
- Insert only the stripped portion of the speaker cord into the SPEAKER jack. Inserting the vinyl portion of the speaker cord will obstruct the speaker connections.
- The protective device on the amplifier has been activated because of a short circuit. ("PROTECT" and "PUSH POWER" flash alternately.) Turn off the power, eliminate the short-circuit problem and turn on the power again.
- There is no audio output during Timer-recording.

---

**There is severe hum or noise.**

- A TV or VCR is placed too close to the unit. Move the unit away from the TV or VCR.

---

**"--:--" lights up in the display.**

- A power interruption occurred. Set the clock and timer settings again.

---

**The timer does not function.**

- Set the clock correctly.
  - You cannot activate the Daily timer and the Timer-recording simultaneously.
- 

continued

## Troubleshooting (continued)

---

**“DAILY 1”, “DAILY 2”, or “REC SELECT” does not appear when you press TIMER SELECT (or CLOCK/TIMER SELECT on the remote).**

- Set the timer correctly.
  - Set the clock.
- 

**The remote does not function.**

- There is an obstacle between the remote and the unit.
  - The remote is not pointing in the direction of the unit’s sensor.
  - The batteries have run down. Replace the batteries.
- 

**There is acoustic feedback.**

- Decrease the volume level.
  - Move the microphone away from the speakers or change the direction of the microphone.
- 

**The color irregularity on a TV screen persists.**

- Turn off the TV set once, then turn it on after 15 to 30 minutes. If the color irregularity still persists, place the speakers farther away from the TV set.
- 

**“PROTECT” and “PUSH POWER” appear alternately.**

- A strong signal is input. Turn off the power, leave the system turned off for a while, then turn on the power again. If “PROTECT” and “PUSH POWER” still appear alternately, check the speaker cords.
- 

## Speakers

---

**Sound comes from only one channel or unbalanced left and right volume.**

- Check the speaker connection and speaker placement.
  - The source being played back is monaural.
  - Adjust the balance parameters (page 26).
- 

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**There is no sound from the center speaker.**

- Set the center speaker level to the appropriate level.
  - Make sure the center speaker selection parameter in the “SP. SETUP” menu is set to “YES”.
  - Select a sound field containing the word “CINEMA” or “VIRTUAL”.
- 

**There is no sound from the rear speakers.**

- Set the rear speakers level to the appropriate level.
  - Make sure the rear speakers selection parameter in the “SP. SETUP” menu is set to “YES”.
  - Select a sound field containing the word “CINEMA” or “VIRTUAL”.
  - The software being played back has limited sound effects. Check the volume with the test tone.
- 

**Sound lacks bass.**

- Check that the speaker’s + and – terminals are connected correctly.
- 

## CD Player

---

**The CD tray does not close.**

- The CD is not placed properly.
- 

**The CD will not play.**

- The CD is not lying flat in the disc tray.
  - The CD is dirty (see page 32).
  - The CD is inserted label side down.
  - Moisture condensation has built up.
- 

**Playback does not start from the first track.**

- The player is in Program Play or Shuffle Play mode. Press PLAY MODE repeatedly until “1 DISC” or “ALL DISCS” appears.
- 

**“OVER” is displayed.**

- You have reached the end of the CD or tape by pressing ►► to fast forward.
-

## Tape Deck

### The tape does not record.

- The tab has been removed from the cassette (see “To save a tape permanently” on page 32).
- The tape has reeled to the end.

### The tape does not record nor play, or there is a decrease in sound level.

- The heads are dirty (see “Cleaning the tape heads” on page 33).
- The record/playback heads are magnetized (see “Demagnetizing the tape heads” on page 33).

### The tape does not erase completely.

- The record/playback heads are magnetized (see “Demagnetizing the tape heads” on page 33).

### There is excessive wow or flutter, or the sound drops out.

- The capstans or pinch rollers are dirty (see “Cleaning the tape heads” on page 33).

### Noise increases, or the high frequencies are erased.

- The record/playback heads are magnetized (see “Demagnetizing the tape heads” on page 33).

### After pressing ► (◀) or ▲, there is a mechanical noise, “EJECT” appears in the display, and the unit enters standby mode automatically.

- The cassette tape has not inserted correctly.

## Tuner

### There is severe hum or noise (“TUNED” or “STEREO” flashes in the display).

- Adjust the antenna.
- The signal is too weak. Connect an external antenna.

### A stereo FM program cannot be received in stereo.

- Press STEREO/MONO so that “MONO” disappears.

### If other troubles not described above occur, reset the system as follows:

**1** While holding down DIGITAL, press DISPLAY.

**2** Press I/⏻ to turn on the power.

The unit is reset to factory settings. All the settings are cleared.

## Specifications

### Amplifier section

#### European model:

##### Front Speaker:

DIN power output (rated) 95 + 95 watts  
(6 ohms at 1 kHz, DIN)

Continuous RMS power output (reference)  
120 + 120 watts  
(6 ohms at 1 kHz, 10% THD)

Music power output (reference)  
200 + 200 watts  
(6 ohms at 1 kHz, 10% THD)

##### Center Speaker:

DIN power output (rated) 30 watts  
(8 ohms at 1 kHz, DIN)

Continuous RMS power output (reference)  
40 watts  
(8 ohms at 1 kHz, 10% THD)

Music power output (reference)  
75 watts  
(8 ohms at 1 kHz, 10% THD)

##### Rear Speaker:

DIN power output (rated) 30 + 30 watts  
(8 ohms at 1 kHz, DIN)

Continuous RMS power output (reference)  
40 + 40 watts  
(8 ohms at 1 kHz, 10% THD)

Music power output (reference)  
75 + 75 watts  
(8 ohms at 1 kHz, 10% THD)

continued

## Specifications (continued)

### Other models:

The following measured at AC 120, 220, 240 V, 50/60 Hz

### Front Speaker:

DIN power output (rated) 95 + 95 watts  
(6 ohms at 1 kHz, DIN)

Continuous RMS power output (reference)  
120 + 120 watts  
(6 ohms at 1 kHz, 10% THD)

### Center Speaker:

DIN power output (rated) 30 watts  
(8 ohms at 1 kHz, DIN)

Continuous RMS power output (reference)  
40 watts  
(8 ohms at 1 kHz, 10% THD)

### Rear Speaker:

DIN power output (rated) 30 + 30 watts  
(8 ohms at 1 kHz, DIN)

Continuous RMS power output (reference)  
40 + 40 watts  
(8 ohms at 1 kHz, 10% THD)

### Inputs

VIDEO (AUDIO) IN: voltage 250 mV,  
impedance 47 kilohms  
(phono jacks)

MD IN: voltage 450 mV,  
impedance 47 kilohms  
(phono jacks)

OPTICAL IN:  
(Square optical connector jacks, rear panel)  
wavelength 700 nm

MIC: sensitivity 1 mV,  
impedance 10 kilohms  
(Except for

European model)  
(phone jack)

### Outputs

MD OUT: voltage 250 mV  
impedance 1 kilohms  
(phono jacks)

PHONES: accepts headphones of  
8 ohms or more  
(stereo mini jack)

FRONT SPEAKER: accepts impedance of 6 to  
16 ohms

REAR SPEAKER: accepts impedance of 8 to  
16 ohms

CENTER SPEAKER: accepts impedance of 8 to  
16 ohms

SUB WOOFER OUT: Voltage 1 V,  
impedance 1 kilohms

## CD player section

System Compact disc and digital  
audio system

Laser Semiconductor laser  
( $\lambda=795$  nm)  
Emission duration:  
continuous

Frequency response 2 Hz – 20 kHz ( $\pm 0.5$  dB)

Signal-to-noise ratio More than 90 dB

Dynamic range More than 90 dB

OPTICAL OUT  
(Square optical connector jack, rear panel)

## Tape player section

Recording system 4-track 2-channel stereo

Frequency response 60 – 13,000 Hz ( $\pm 3$  dB),  
(DOLBY NR OFF),  
using Sony TYPE I  
cassette,  
60 – 14,000 Hz ( $\pm 3$  dB),  
using Sony TYPE II  
cassette

Wow and flutter  $\pm 0.15\%$  W.Peak (IEC)  
0.1% W.RMS (NAB)  
 $\pm 0.2\%$  W.Peak (DIN)

## Tuner section

FM stereo, FM/AM superheterodyne tuner

### FM tuner section

Tuning range 87.5 – 108.0 MHz

Antenna FM lead antenna

Antenna terminals 75 ohm unbalanced

Intermediate frequency 10.7 MHz

### AM tuner section

Tuning range

European and Middle Eastern models:

531 – 1,602 kHz  
(with the interval set at  
9 kHz)

Other models:

531 – 1,602 kHz  
(with the interval set at  
9 kHz)

530 – 1,710 kHz  
(with the interval set at  
10 kHz)

Antenna

Antenna terminals AM loop antenna

Intermediate frequency External antenna terminal  
450 kHz

## Speaker

### Front speaker SS-S9

Speaker system	3-way, 3-unit, bass-reflex type, magnetically shielded type
Speaker units	
Woofer:	15 cm, cone type
Subwoofer:	15 cm, cone type
Tweeter:	2.8 cm, dome type
Nominal impedance	6 ohms
Dimensions (w/h/d)	Approx. 235 x 470 x 265 mm
Mass	Approx. 7.3 kg net per speaker

### Rear speaker SS-RS270

Speaker system	1-way, 1-unit, bass-reflex type
Speaker units	
Full-range:	8 cm, cone type
Nominal impedance	8 ohms
Dimensions (w/h/d)	Approx. 180 x 95 x 100 mm
Mass	Approx. 0.65 kg net per speaker

### Center speaker SS-CT270

Speaker system	1-way, 2-units, bass-reflex type, magnetically shielded type
Speaker units	
Full-range:	8 cm, cone type
Nominal impedance	8 ohms
Dimensions (w/h/d)	Approx. 225 x 95 x 100 mm
Mass	Approx. 1.2 kg net

## General

Power requirements	
European model:	230 V AC, 50/60 Hz
Australian model:	230 – 240 V AC, 50/60 Hz
Mexican model:	120 V AC, 60 Hz
Korean model:	220 V AC, 60 Hz
Other models:	120 V, 220 V or 230 – 240 V AC, 50/60 Hz
	Adjustable with voltage selector

Power consumption	
European model:	300 watts 0.6 watts (during Power Saving Mode)
Other models:	300 watts

Dimensions (w/h/d)	
TA-S7AV:	Approx. 280 x 128 x 350 mm
ST-S5:	Approx. 280 x 108 x 340 mm
CDP-S3:	Approx. 280 x 108 x 330 mm
TC-S3:	Approx. 280 x 128 x 330 mm

Mass	
TA-S7AV:	Approx. 7.7 kg
ST-S5:	Approx. 2.1 kg
CDP-S3:	Approx. 2.7 kg
TC-S3:	Approx. 2.4 kg

Supplied accessories:	AM loop antenna (1) FM lead antenna (1) Remote commander (1) Batteries (2) Speaker cords (5) Optical cable (1) Center and rear speaker pads (12)
-----------------------	---

Design and specifications are subject to change  
without notice.

## Table for the settings using SUR, EQ, and SET UP buttons

### SUR parameters (Press SUR)

Press ← or →	Press ↑ or ↓	Initial setting	Page
EFFECT [XX]	depends on sound field	depends on sound field	26
WALL S/H [X]	S (-8) to H (+8)	midpoint	
REVERB S/L [X]	S (-8) to L (+8)	midpoint	

### EQ parameters (Press EQ)

		Press ← or →	Press ↑ or ↓	Page
FRONT BASS	GAIN	BASS [XXX] dB	-8 dB to +8 dB	27
	FREQUENCY	BASS [XXX] kHz	99 Hz to 1.0 kHz	
MID	GAIN	MID [XXX] dB	-8 dB to +8 dB	
	FREQUENCY	MID [XXX] kHz	500 Hz to 5 kHz	
TREBLE	GAIN	TREB [XXX] dB	-8 dB to +8 dB	
	FREQUENCY	TREB [XXX] kHz	1.0 kHz to 10 kHz	

### SET UP parameters (Press SET UP)

Press ← or →	Press ← or →	Press ↑ or ↓	Initial setting	Page
SP. LEVEL	FRONT L/R [X]	-6 to +6	center	26
	REAR L/R [X]	-6 to +6	center	
	REAR XX dB	-6 dB to +6 dB	0 dB	
	CENTER XX dB	-6 dB to +6 dB	0 dB	
	SUB W. XX dB	-10 dB to +10 dB	+10 dB	
	LFE XXXXX	MUTING, -20 dB to 0 dB	0 dB	
	D.COMP.	OFF, 0.1 to 0.9, STD, MAX	OFF	
SP. SETUP	CENTER [XXX]	YES, NO	YES	10
	REAR [XXX]	YES, NO	YES	
	R.PL. [XXXXX]	SIDE, MIDDLE, BEHIND	BEHIND	
	R.HGT. [XXXX]	LOW, HIGH	LOW	
	SUB W. [XXX]	YES, NO	NO	
	F.DIST. [XXXXX]	1.0 meter (3 feet) to 12.0 meters (40 feet)	2.4 meters (8 feet)	
	C.DIST. [XXXXX]	FRONT to 1.5 meters (5 feet)	2.4 meters (8 feet)	
	R.DIST. [XXXXX]	FRONT to 4.5 meters (15 feet)	1.5 meters (5 feet)	
	DIST.UNIT [X]	Meter, Feet	Meter	
TEST TONE	T. TONE [XXX]	ON, OFF	OFF	12
DIMMER	DIMMER [XXX]	OFF, 1, 2	OFF	29
RESET MENU	CUR. F. RESET		—	28
	ALL F. RESET		—	
	SP. SET. RESET		—	12

## Adjustable parameters for each sound field

The adjusted SUR and EQ parameters are stored in each sound field.  
The adjusted SP. LEVEL parameters are applied to all of the sound fields.

	<	SUR	>
	EFFECT LEVEL	WALL TYPE	REVERB
2CH STEREO			
A.F.D.			
NORMAL SURR.			
C.STUDIO A	●		
C.STUDIO B	●		
C.STUDIO C	●		
V.M.DIMENS.			
V.SEMI M.D.			
SMALL HALL	●	●	●
LARGE HALL	●	●	●
OPERA HOUSE	●	●	●
JAZZ CLUB	●	●	●
DISCO/CLUB	●	●	●
CHURCH	●	●	●
LIVE HOUSE	●	●	●
ARENA	●	●	●
STADIUM	●	●	●
GAME	●	●	●

continued

**Adjustable parameters for each sound field (continued)**

	SP. LEVEL						
	FRONT BALANCE	REAR BALANCE	REAR LEVEL	CENTER LEVEL	SUB WOOFER LEVEL	LFE*	D.COMP.*
2CH STEREO	●				●	●	●
A.F.D.	●	●	●	●	●	●	●
NORMAL SURR.	●	●	●	●	●	●	●
C.STUDIO A	●	●	●	●	●	●	●
C.STUDIO B	●	●	●	●	●	●	●
C.STUDIO C	●	●	●	●	●	●	●
V.M.DIMENS.	●	●	●	●	●	●	●
V.SEMI M.D.	●			●	●	●	●
SMALL HALL	●	●	●	●	●	●	●
LARGE HALL	●	●	●	●	●	●	●
OPERA HOUSE	●	●	●	●	●	●	●
JAZZ CLUB	●	●	●	●	●	●	●
DISCO/CLUB	●	●	●	●	●	●	●
CHURCH	●	●	●	●	●	●	●
LIVE HOUSE	●	●	●	●	●	●	●
ARENA	●	●	●	●	●	●	●
STADIUM	●	●	●	●	●	●	●
GAME	●	●	●	●	●	●	●

\* These parameters may not operate depending on the source or may not operate as adjusted. For details, see each item in “Adjusting the level parameters” (page 26).



	EQ					
	FRONT BASS (dB)	FRONT BASS (Hz)	FRONT MID (dB)	FRONT MID (Hz)	FRONT TREB (dB)	FRONT TREB (Hz)
2CH STEREO	●	●	●	●	●	●
A.F.D.	●	●	●	●	●	●
NORMAL SURR.	●	●	●	●	●	●
C.STUDIO A	●	●	●	●	●	●
C.STUDIO B	●	●	●	●	●	●
C.STUDIO C	●	●	●	●	●	●
V.M.DIMENS.	●	●	●	●	●	●
V.SEMI M.D.	●	●	●	●	●	●
SMALL HALL	●	●	●	●	●	●
LARGE HALL	●	●	●	●	●	●
OPERA HOUSE	●	●	●	●	●	●
JAZZ CLUB	●	●	●	●	●	●
DISCO/CLUB	●	●	●	●	●	●
CHURCH	●	●	●	●	●	●
LIVE HOUSE	●	●	●	●	●	●
ARENA	●	●	●	●	●	●
STADIUM	●	●	●	●	●	●
GAME	●	●	●	●	●	●





