

FM Stereo FM/AM Receiver

Operating Instructions

STR-DB900

WARNING

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

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.

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



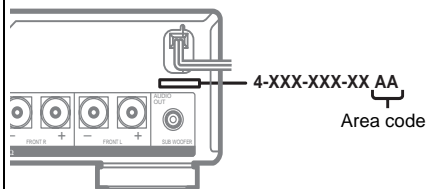
Don't throw away batteries with general house waste; dispose of them correctly as chemical waste.

About this manual

The instructions in this manual describe using the controls on the supplied remote. You can also use the controls on the receiver if they are of the same or similar name as those on the remote.

About area codes

The area code of the receiver you purchased is shown on the right portion of the rear panel (see the illustration below).



Any differences in operation, according to the area code, are clearly indicated in the text, for example, "Models of area code AA only".

This receiver incorporates Dolby* Digital and Pro Logic Surround 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.

** Manufactured under license from Digital Theater Systems, Inc.

"DTS", "DTS-ES Extended Surround" and "Neo:6" are trademarks of Digital Theater Systems, Inc.

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Hooking up Components

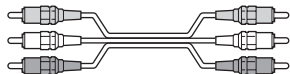
Required cords

Before you get started

The hookup diagrams in this chapter assume the use of the following optional connection cords ((a) to (f), not supplied).

(a) Audio/video cord

Yellow (video)
White (L/audio)
Red (R/audio)



(b) Audio cord

White (L)
Red (R)



(c) Video cord

Yellow



(d) Optical digital cord



(e) Coaxial digital cord



(f) Monaural audio cord

Black



Tip

The audio cord (b) can be split into two monaural audio cords (f).

Notes

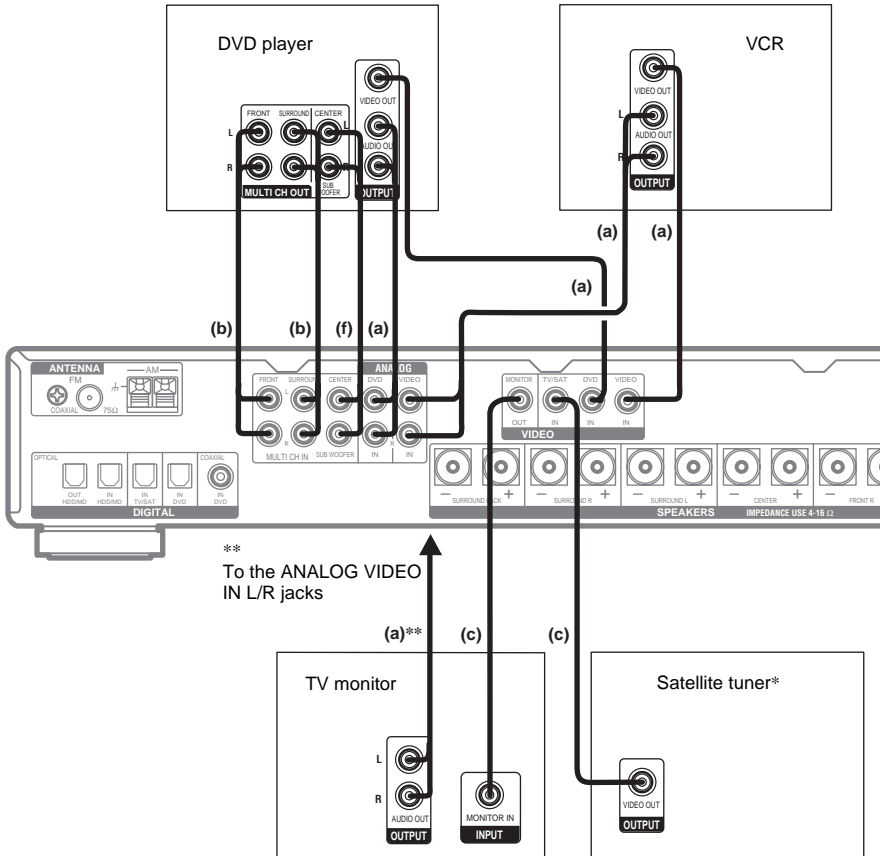
Turn off the power to all components before making any connections.

- Be sure to make connections firmly to avoid humming and noise.
- When connecting an audio/video cord, be sure to match the color-coded pins to the appropriate jack on the components: yellow (video) to yellow; white (left, audio) to white; and red (right, audio) to red.
- When connecting optical digital cords, insert the cord plugs in straight until they click into place.
- Do not bend or tie optical digital cords.

Connecting analog components

If you connect your TV to the MONITOR jack, you can watch video images from the selected input source (page 17).

For details on the required cords ((a) to (f)), see page 4.



* Use digital connections for audio signals. Connect the digital output jack of your satellite tuner to this system's TV/SAT OPT IN jack (see page 6).

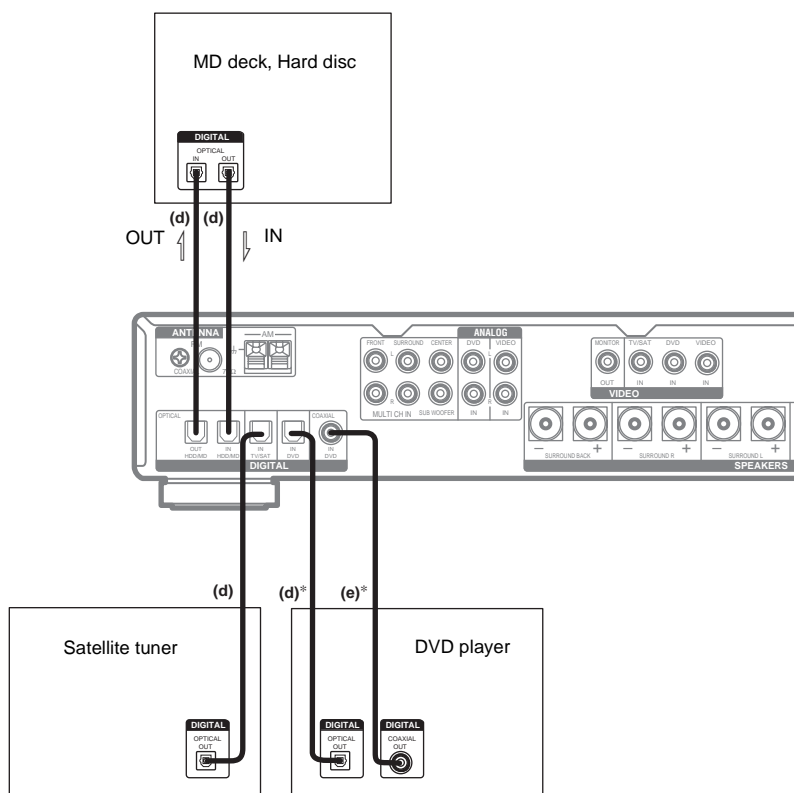
**If you have the sound of the DVD player, VCR or satellite tuner going through the TV monitor, connect the analog audio output jacks of the TV monitor to the ANALOG VIDEO IN L/R jacks. The sound of the DVD player, VCR or satellite tuner will output to the speakers connected to the receiver.

Connecting digital components

Connect the digital output jacks of your DVD player (etc.) to this system's digital input jacks to bring the multichannel surround sound of a movie theater into your home. This receiver allows you to use a speaker system with up to 6.1 channels. To fully enjoy multichannel surround sound, five speakers (two front speakers, two surround speakers, and a center speaker) and a subwoofer are required.

You can enjoy high fidelity reproduction of DVD software recorded in the Dolby Digital EX or DTS-ES format if you connect one additional surround back speaker (for a total of 6.1 channels).

For details on the required cords ((a) to (f)), see page 4.



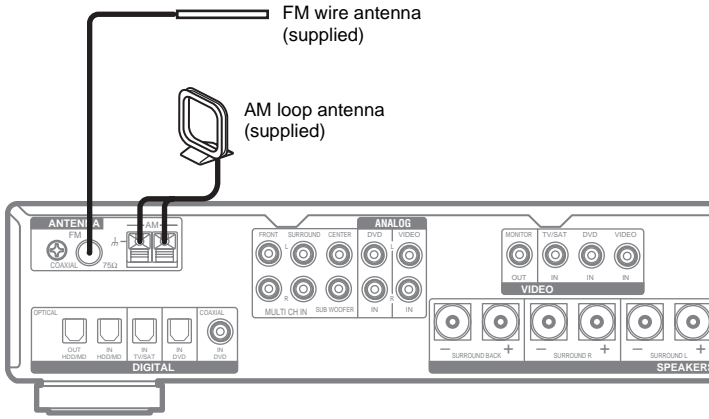
* Connect this cord to either the COAX IN or the OPT IN jack. We recommend making connections to the COAX IN jack.

Notes

- All of the digital audio jacks are compatible with 32 kHz, 44.1 kHz, 48 kHz and 96 kHz sampling frequencies.
- To play back multichannel surround sound through this receiver, you may have to change the digital output setting on the connected component. For details, refer to the operating instructions for the connected component.

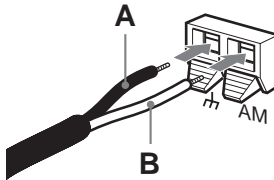
Connecting the antennas

Connect the supplied AM loop antenna and FM wire antenna as shown below.



Notes

- To prevent noise pickup, keep the AM loop antenna away from the receiver and other components.
- Be sure to fully extend the FM wire antenna.
- After connecting the FM wire antenna, keep it as horizontal as possible.
- When you connect the supplied AM loop antenna, connect the black cord (**A**) to the μ terminal, and the white cord (**B**) to the other terminal.

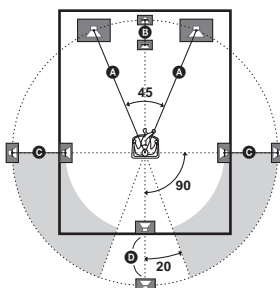


Placing speakers

To fully enjoy surround sound, configure your speakers as follows.

- Place the front speakers in a location 1 to 7 meters from the listening position (A).
- You can enjoy improved sound effects if you place the center speaker from a distance equal to the front speaker distance (A) to a distance 1.5 meters closer to your listening position (B).
- You can enjoy improved sound effects if you place the surround speakers from a distance equal to front speaker distance (A) to a distance 4.5 meters closer to your listening position (C).
- You can enjoy improved sound effects if you place the surround back speakers from a distance equal to the front speaker distance (A) to a distance 4.5 meters closer to your listening position (D).
- You can place the surround speakers either behind you or to the side of your listening position, depending on the shape of your room (etc.).
- You can place one surround back speaker immediately behind the listening position.
- Place the subwoofer at the same distance from the listening position as the front speakers (left or right).

Place the speakers as illustrated below.



Note

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

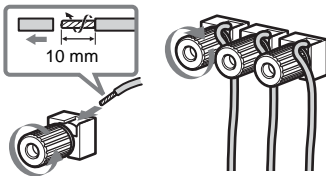
Note for connecting the speaker cords to the receiver

If the speaker cords are not properly connected, the receiver may be fatally damaged. To avoid the possibility of damage, follow the instructions below.

- 1 Do not hook up the speaker cords while the receiver power is turned on.
Be sure to turn off the power first. After turning off the power, it is recommended that you disconnect the power cord for greater safety.
- 2 Do not allow the stripped end of a speaker cord to come into contact with any part of the rear panel or the adjacent speaker terminal.
Before inserting a stripped speaker cord into a speaker terminal, twist the wires tightly together to prevent contact between any single strand from the cord and the rear panel or the adjacent speaker terminal on the receiver.

Remove about 10 mm of insulation at the end of the cord, then twist the exposed wires. Connect the stripped ends of the cords to the terminals, taking care to avoid contact between the cords.

Make sure the cords are firmly connected to the speaker and receiver terminals.

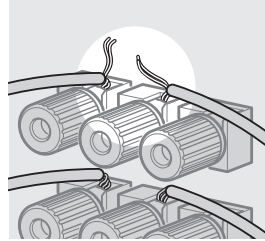


To avoid short-circuiting the speakers

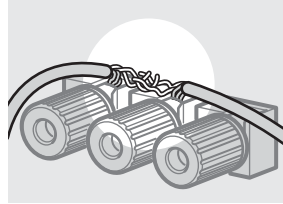
Short-circuiting of the speakers may damage the receiver. To prevent this, be sure to follow these precautions when connecting the speakers. Make sure the bare wire of each speaker cord does not touch another speaker terminal or the bare wire of another speaker cord.

Examples of poor speaker cord connections

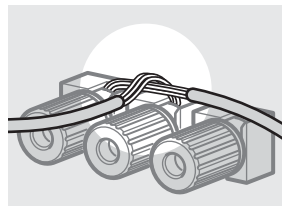
Stripped cords are not fully attached and are touching the rear panel of the receiver.



Stripped speaker cord is touching another speaker terminal.



Stripped cords are touching each other due to excessive removal of insulation

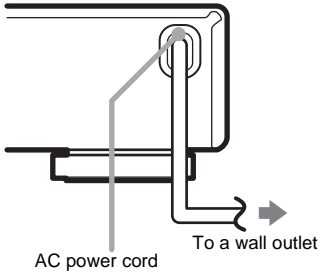


Before performing the initial setup

Before performing the initial setup procedure, be sure to perform the following operations.

Connecting the AC power cord

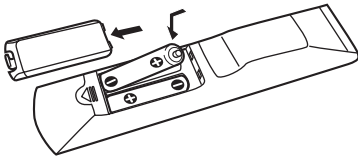
Connect the AC power cord to a wall outlet.



Before you use your remote

Inserting batteries into the remote

Insert two R6 (size AA) batteries with the polarity (+ and -) properly oriented in the battery compartment.



Tip

Under normal conditions, the batteries should last for about 6 months. When the remote no longer operates the control center, replace both batteries with new ones.

Notes

- Do not leave the remote in an extremely hot or humid place.
- Do not use a new battery with an old one.
- Do not expose the remote sensor of the control center to direct sunlight or lighting apparatuses. Doing so may cause a malfunction.

- When not using the remote for an extended period of time, remove the batteries to avoid possible damage from battery leakage and corrosion.
- Turn off the power to all components before making any connections.
- Be sure to make connections firmly to avoid humming and noise.

About the remote operation

- The instructions in this manual are described using the controls on the remote. You may also use the controls on the receiver if they are of the same or similar name as those on the remote.
- The initial settings are underlined>.

Performing initial setup operations

Before using the receiver for the first time, perform the initialization procedure as follows. This procedure can also be used to return settings you have made to their factory defaults.

Press 1/⏻ while pressing 2CH. When “CONFIRM” appears, press 2CH again.

The following items are reset or cleared:

- All sound field parameters
- All parameters in the SET UP, LEVEL and TONE menus
- Sound fields memorized for each program source
- Preset stations

Further, the master volume is set to the minimum value.

Setting up and adjusting the speakers

You can perform setup and adjustment of the speakers connected to the receiver by following the procedures below.

- 1 Select the speaker impedance.**
For more information, see “Setting up the speaker impedance” (page 12).
- 2 Select the speaker size and distance.**
For more information, see “Setting up the speaker size and distance” (page 12).
- 3 Adjust the speaker level.**
For more information, see “Adjusting the speaker levels and balance” (page 15).
- 4 Check the connections of the connected component.**
For more information, see “Checking the connections” (page 16).

Setting up the speaker impedance

Set up the impedance value in the SET UP menu depending on the speakers you connected. The initial setting is 8 ohms.

- 1 Press I/⏻ to turn on the system.**
- 2 Press MAIN MENU repeatedly to select “<SET UP>”.**
- 3 Press ⇄/⇄ repeatedly to select “SP IMP”.**
- 4 Use ⇄/⇄ to select “4” or “8” according to the impedance value of the connected speakers.**

Speaker impedance

To enjoy the best possible multi channel surround, connect speakers with a nominal impedance of 8 ohms or higher to the FRONT, CENTER, SURROUND and SURROUND BACK terminals, and set the speaker impedance to “8” in the SET UP menu. Refer to the operating instructions supplied with your speakers if you are not sure of their impedance.

(This information is often on the back of the speaker.)

Alternatively, you may connect speakers with nominal impedances between 4 and 8 ohms to any or all of the speaker terminals. However, be sure to set the speaker impedance to “4” in the SET UP menu, if you connect even one speaker with a nominal impedance between 4 and 8 ohms.

Setting up the speaker size and distance

Use the SET UP menu to set the size and distance of the speakers connected to the receiver. You can select “EASY” (automatic) or “NORM.” (manual) for the speaker size and distance settings.

The initial setting is “EASY”.

- 1 Press I/⏻ to turn on the system.**
- 2 Press MAIN MENU repeatedly to select “<SET UP>”.**
- 3 Press ⇄/⇄ repeatedly to select “XXXX SET”.**
- 4 Use ⇄/⇄ to select “EASY” or “NORM.”.**

• EASY

Selecting “EASY” allows you to set up your speakers automatically by selecting a pre-defined speaker pattern. Check your speaker pattern and perform speaker setup, referring to the supplied “Installation Guide”.

• NORM.

Selecting “NORM.” allows you to adjust the settings of each speaker manually. You can set up the size or the distance of each speaker in the SET UP menu. For more information, see “Speaker setup parameters” below.

Speaker setup parameters

■ (SUB WOOFER) (Subwoofer)

• YES

If you connect a subwoofer, select “YES”.

• NO

If you did not connect a subwoofer, select “NO”. This activates the bass redirection circuitry and outputs the LFE (Low Frequency Effect) signals from other speakers.

When “NO” is selected, the front speakers are automatically set to “LARGE”.

■ (FRONT) (Front speakers)

• LARGE

If you connect large speakers that will effectively reproduce bass frequencies, select “LARGE”. Normally, select “LARGE”.

• SMALL

If sound seems distorted, or you feel a lack of surround effects when using multichannel surround sound, select “SMALL” to activate the bass redirection circuitry and output the front channel bass frequencies from the subwoofer. When the front speakers are set to “SMALL”, the center and surround speakers are also automatically set to “SMALL” (unless previously set to “NO”).

■ (CENTER) (Center speaker)

• LARGE

If you connect a large speaker that will effectively reproduce bass frequencies, select “LARGE”. Normally, select “LARGE”. However, if the front speakers are set to “SMALL”, you cannot set the center speaker to “LARGE”.

• SMALL

If sound seems distorted, or you feel a lack of surround effects when using multichannel surround sound, select “SMALL” to activate the bass redirection circuitry and output the center channel bass frequencies from the front speakers (if set to “LARGE”) or subwoofer.

• NO

If you did not connect a center speaker, select “NO”. The sound of the center channel will be output from the front speakers.

■ (SURROUND) (Surround speakers)

• LARGE

If you connect large speakers that will effectively reproduce bass frequencies, select “LARGE”. Normally, select “LARGE”. However, if the front speakers are set to “SMALL”, you cannot set the surround speakers to “LARGE”.

• SMALL

If the sound is distorted, or you feel a lack of surround effects when using multichannel surround sound, select “SMALL” to activate the bass redirection circuitry and output the surround channel bass frequencies from the subwoofer or other “LARGE” speakers.

• NO

If you did not connect surround speakers, select “NO”.

If the surround speakers are set to “NO”, the surround back speakers are automatically set to “NO”.

■ (SURR BACK) (Surround back speaker)

• YES

If you connect a surround back speaker, select “YES”.

• NO

If you do not connect a surround back speaker, select “NO”.

Tip

The “LARGE” and “SMALL” settings for each speaker determine whether or not the internal sound processor will cut the bass signal from that channel. When the bass is cut from a channel, the bass redirection circuitry sends the corresponding bass frequencies to the subwoofer or other “LARGE” speakers. However, it is best not to cut them, if possible. Therefore, even when using small speakers, you can set speaker settings to “LARGE” if you want to output the bass frequencies from that speaker. On the other hand, if you are using a large speaker, but prefer not to have bass frequencies output from that speaker, set it to “SMALL”.

If the overall sound level is lower than you would prefer, set all speakers to “LARGE”. If there is not enough bass, you can use the equalizer to boost the bass levels. To adjust the bass, see page 27.

■ DIST. XX m (Front speaker distance)

Initial setting: 3.0 m

Lets you set the distance from your listening position to the front speakers (A on page 8). You can adjust from 1.0 m to 7.0 m in 0.1 meter steps.

If both front speakers are not placed an equal distance from your listening position, set this distance to the closest speaker.

■ DIST. XX m (Center speaker distance)

Initial setting: 3.0 m

Lets you set the distance from your listening position to the center speaker. You can adjust from 1.0 m to 7.0 m in 0.1 meter steps.

■ DIST. XX m (Surround speaker distance)

Initial setting: 3.0 m

Lets you set the distance from your listening position to the surround speakers. You can adjust from 1.0 m to 7.0 m in 0.1 meter steps.

If both surround speakers are not placed an equal distance from your listening position, set this distance to the closest speaker.

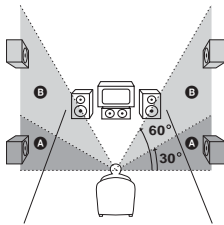
■  **DIST. XX m**
(Surround back speaker distance)

Initial setting: 3.0 m

Lets you set the distance from your listening position to the surround back speaker. You can adjust from 1.0 m to 7.0 m in 0.1 meter steps.

■   **PL.**
(Surround speaker placement)*

Lets you specify the height of your surround speakers for proper implementation of surround effects in the Cinema Studio EX modes (page 24).



- **LOW**
Select if the height of your surround speakers corresponds to section **A**.
- **HIGH**
Select if the height of your surround speakers corresponds to section **B**.

* This setup item is not available when the surround speaker parameter is set to "NO".

Tip

The receiver lets you input speaker positions in terms of distance. However, it is not possible to set the distance of the center speaker further than the front speakers. Also, the center speaker cannot be set more than 1.5 m closer than the front speakers.

Likewise, the surround speakers cannot be set farther away from the listening position than the front speakers, and 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 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 meters 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 surround speakers are too close, setting the surround speaker distance closer (shorter) than the actual distance will create a larger sound stage. Adjusting these parameter while listening to the sound often results in much better surround sound. Give it a try!

Adjusting the speaker levels and balance

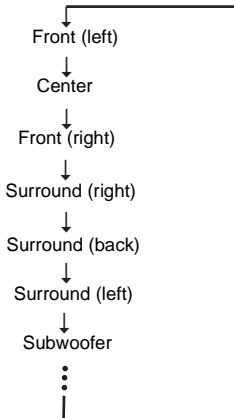
— TEST TONE

Use the remote while seated in your listening position to adjust the level of each speaker.

1 Press **I/⏻** to turn on the receiver.

2 Press **TEST TONE**.

“T.TONE” appears in the display and a test tone is output from each speaker in the following sequence:



3 Adjust the **LEVEL** parameters so that the level of the test tone from each speaker sounds the same when you are in your main listening position.

To adjust the balance and level of speakers, press **MAIN MENU** repeatedly to select **LEVEL** menu, then press **↔/↔** to select the parameter you want to adjust (page 26). Next, press **↔/↔** to select a setting.

4 Press **TEST TONE** again to turn off the test tone.

Tip

You can adjust the level of all speakers at the same time. Press **MASTER VOL +/-** on the remote or rotate **VOLUME** on the receiver.

Notes

- The front balance, center level, surround level, surround back level and subwoofer level are shown in the display during adjustment.
- To enjoy better sound quality, do not turn up the volume of the subwoofer too high.

Checking the connections

After connecting all of your components to the receiver, check that the connections were made correctly as follows.

- 1 Press I/⏻ to turn on the receiver.**
- 2 Press the button for the component (VIDEO, DVD, TV/SAT, HDD/MD, MULTI CH) that you want to check.**

Or rotate INPUT SELECTOR on the receiver.

- 3 Turn on the component and start playback.**

- 4 Press MASTER VOL +/- to adjust the volume.**

Or rotate VOLUME on the receiver.

If you do not obtain normal sound output after performing this procedure, see “Troubleshooting” on page 43 and take the appropriate measures to correct the problem.

Selecting a component

- 1 Press the button for the component (VIDEO, DVD, TV/SAT, HDD/MD, TUNER) that you want to enjoy.**

Or rotate INPUT SELECTOR on the receiver.

The selected input source appears in the display.

To select the	Display
VCR	VIDEO
DVD player	DVD
TV or Satellite tuner	TV/SAT
Hard disc or MD deck	HDD/MD
Built-in tuner	TUNER

- 2 Turn on the component and start playback.**
- 3 Press MASTER VOL +/- to adjust the volume.**

Or rotate VOLUME on the receiver.

To mute the sound

Press MUTING to mute the sound. "MUTING" appears on the display when the sound is muted. To cancel muting, press MUTING again or turn up the volume.

Enjoying multichannel audio

You can select an audio source from the components connected to the MULTI CH IN jacks of the receiver. This enables you to enjoy high quality analog output from sources like Super Audio CD. Surround effects are not activated when using this input method.

Press MULTI CH repeatedly to select "MULTI CH IN".

Receiving broadcasts

Before receiving broadcasts, make sure you have connected the supplied FM and AM antennas to the receiver (page 7).

Automatic tuning

If you do not know the frequency of the station you want, you can let the receiver scan all available stations in your area.

1 Press TUNER to select the FM or AM band.

Or rotate INPUT SELECTOR on the receiver to select “TUNER FM” or “TUNER AM”.

2 Press TUNING MODE repeatedly to select “AUTO T.”.

3 Press TUNING + or TUNING –.

Press TUNING + to scan from a low frequency to a high one; press TUNING – to scan from a high frequency to a low one. The receiver stops scanning whenever a station is received.

When the receiver reaches either end of the band

Scanning is repeated in the same direction.

4 To continue scanning, press TUNING + or TUNING – again.

Manual tuning

You can tune in the station in 50 kHz steps for the FM band and 9 kHz steps for the AM band.

1 Press TUNER to select the FM or AM band.

Or rotate INPUT SELECTOR on the receiver to select “TUNER FM” or “TUNER AM”.

2 Press TUNING MODE repeatedly to select “MANUAL T.”.

3 Press TUNING + or TUNING – repeatedly to tune in the station you want.

Press TUNING + to change the frequency from low to high.

Press TUNING – to change the frequency from high to low.

Tip

If “STEREO” flashes in the display and FM stereo reception is poor, press FM MODE to improve the sound. In this case, the sound switches to monaural reception and you will be unable to enjoy the effects of stereo sound, but the overall sound will be less distorted.

If the system is forced to go into monaural mode by pressing FM MODE, “MONO” appears in the display.

Note

If “STEREO” does not appear at all when an FM broadcast is received normally, press FM MODE to turn on the “STEREO” indication. If the FM reception is weak, “STEREO” will not light up.

Preset tuning

You can preset your favorite FM or AM stations to the receiver. This enables you to tune in the stations directly. Up to 30 FM or AM stations can be preset, and the receiver will scan all of the stations you have preset.

Before tuning in preset stations, be sure to preset them using the steps in “Presetting radio stations”.

Presetting radio stations

1 Press TUNER to select FM or AM band.

Or rotate INPUT SELECTOR on the receiver. The last received station is tuned in.

2 Tune in the station that you want to preset using Automatic tuning (page 18) or Manual tuning (page 18).

3 Press MEMORY.

“MEMORY” appears in the display for a few seconds.

Perform steps 4 to 5 before “MEMORY” goes out.

Note

If the ALT key lights up during the above procedure, press ALT to turn it off (deactivate ALT).

- 4 Press SHIFT to select the memory page and press PRESET/CH + or PRESET/CH – to select a preset number.**

If “MEMORY” goes out before you press the preset number, start again from step 3.

- 5 Press MEMORY again to store the station.**

If “MEMORY” goes out before you can store the station, start again from step 3.

- 6 Repeat steps 2 to 5 to preset another station.**

Tuning to preset stations

- 1 Press TUNER to select the FM or AM band.**

Or rotate INPUT SELECTOR on the receiver to select “TUNER FM” or “TUNER AM”.

- 2 Press SHIFT repeatedly to select a memory page (A, B, C).**

- 3 Press the number button to select a preset station you want.**

The selected preset station in the current memory page is tuned in. Press SHIFT to change the memory page.

Example 2: AM 1,350 kHz

① → ③ → ⑤ → ①

You do not have to enter the last “0” when the tuning step is set to 100 kHz for FM, and 10 kHz for AM.

If you cannot tune in a station and the entered numbers flash

Make sure you’ve entered the right frequency. If not, repeat step 3. If the entered numbers still flash, the frequency is not used in your area.

Direct tuning

You can tune in a station by selecting the frequency directly with the number buttons.

- 1 Press TUNER to select the FM or AM band.**

Or rotate INPUT SELECTOR on the receiver to select “TUNER FM” or “TUNER AM”.

- 2 Press D.TUNING.**

The cursor blinks on the first digit of the frequency.

- 3 Press the number buttons to enter the frequency you want.**

Example 1: FM 102.50 MHz

① → ① → ② → ⑤ → ①

Using the Radio Data System (RDS)

(Models of area code CEK, CEL only)

RDS enables radio stations to send additional information along with regular program signals. This receiver also allows you to use RDS (Radio Data System) and display RDS information.

Receiving RDS broadcasts

Simply select a station on the FM band.

Use “Automatic tuning” (page 18), “Manual tuning” (page 18), or “Preset tuning” (page 18) or “Direct tuning” (page 19).

When you tune in a station that provides RDS data services, the RDS indicator lights up and the program station name appears in the display.

Note

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

Displaying RDS information

While receiving an RDS station, press DISPLAY.

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

PS (Program Service name) or preset station name^{a)} → Frequency^{b)} → PTY (Program Type) indication^{c)} → RT (Radio Text) indication^{d)} → CT (Current Time) indication (in 24-hour system) → Sound field currently applied → Volume level

^{a)} This information appears only when PS data is received or the preset station is indexed.

^{b)} This information also appears for non-RDS FM stations.

^{c)} Type of program being broadcast (see page 20).

^{d)} Text messages sent by the RDS station.

Notes

- If there is an emergency announcement by government authorities, “ALARM” flashes in the display.

- If the message consists of 9 characters or more, the message scrolls across the display.
- If a station does not provide a particular RDS service, “NO XXXX” (such as “NO TEXT”) appears in the display.

Description of program types

Program type indication	Description
NEWS	News programs
AFFAIRS	Topical programs that expand on current news
INFO	Programs offering information on a wide spectrum of subjects, including consumer affairs and medical advice
SPORT	Sports programs
EDUCATE	Educational programs, such as “how-to” and advice programs
DRAMA	Radio plays and serials
CULTURE	Programs about national or regional culture, such as language and social concerns
SCIENCE	Programs about the natural sciences and technology
VARIED	Other types of programs such as celebrity interviews, panel games, and comedy
POP M	Popular music programs
ROCK M	Rock music programs
EASY M	Easy listening
LIGHT M	Instrumental, vocal, and choral music
CLASSICS	Performances of major orchestras, chamber music, opera, etc.
OTHER M	Music that does not fit into any of the above categories, such as Rhythm & Blues and Reggae
WEATHER	Weather information
FINANCE	Stock market reports and trading, etc.
CHILDREN	Programs for children
SOCIAL	Programs about people and the things that affect them
RELIGION	Programs of religious content
PHONE IN	Programs where members of the public express their views via phone or public forum

Program type indication	Description
TRAVEL	Programs about travel. Not for announcements that are located by TP/TA.
LEISURE	Programs on recreational activities such as gardening, fishing, cooking, etc.
JAZZ	Jazz programs
COUNTRY	Country music programs
NATION M	Programs featuring the popular music of the country or region
OLDIES	Programs featuring oldies music
FOLK M	Folk music programs
DOCUMENT	Investigative features
NONE	Any programs not defined above

Changing information in the display

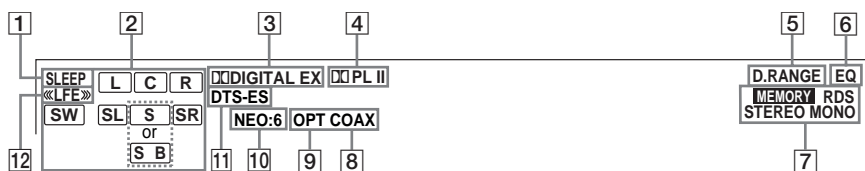
You can check the currently used sound field etc. by changing the information shown in the display.

Press **DISPLAY** repeatedly.

Each time you press **DISPLAY**, the display changes as follows.

- When signals are output from a component other than a tuner:
Input name → Sound field name → Volume level
- When “TUNER FM” or “TUNER AM” is selected:
Frequency → Sound field name → Volume level
- When an RDS station is received:
See “Displaying RDS information” on page 20.

About the indications in the display



- 1 **SLEEP:** Lights up when the sleep timer is activated.
- 2 **Playback channel indicators:** The letters (L, C, R, etc.) indicate the channel(s) being played back. The boxes around the letters vary to show how the receiver downmixes the source sound (based on the speakers settings). Abbreviations: L (Front Left), R (Front Right), C (Center (monaural)), SL (Surround Left), SR (Surround Right), S (Surround (monaural or the surround components obtained by Pro Logic processing)), SB (Surround Back), SW (subwoofer)

Example:
 Recording format (Front/Surround): 3/2
 Output channel: Surround and surround back speakers absent
 Sound Field: A.F.D. (Auto Format Direct) AUTO

L	C	R
SW	SL	SR
- 3 **DIGITAL EX:** Lights up when the receiver is decoding signals recorded in the Dolby Digital format.
- 4 **PL (II):** “PL” lights up when a 2-channel signal is applied with “DOLBY PL” or C.ST.EX A–C. “PL II” lights up when Dolby Pro Logic II processing (“PLII MOV” or “PLII MUS”) is applied. However, this indicator does not light if the center and surround speakers are set to “NO”.
- 5 **D.RANGE:** Lights up when dynamic range compression is activated (page 26).
- 6 **EQ:** Lights up when the equalizer is activated.
- 7 **Tuner indicators:** Lights up when using the receiver to tune in radio stations, etc. See pages 18–20 for tuner operations.
- 8 **COAX:** Lights up when the source signal is a digital signal being input through the COAX IN jack.
- 9 **OPT:** Lights up when the source signal is a digital signal being input through the OPT IN jack.
- 10 **NEO:6:** Lights up when DTS Neo:6 Cinema/Music mode decoding is activated.
- 11 **DTS-ES:** Lights up when DTS-ES signals are being input.
- 12 **«LFE»:** Lights up when the disc being played back contains the LFE channel, and the LFE channel signal is actually being reproduced.

Enjoying Surround Sound

Using only the front speakers

In this mode, the receiver outputs sound from the front L/R speakers only. No sound is output from the subwoofer.

Listening to 2 channel stereo sources (2CH STEREO)

Standard 2 channel stereo sources completely bypass sound field processing and multichannel surround formats are downmixed to 2 channel.

Press 2CH.

Or press SOUND FIELD on the receiver repeatedly. “2CH ST.” appears in the display and the receiver switches to the 2CH STEREO mode.

Note

No sound is output from the subwoofer in the 2CH STEREO mode. To listen to 2 channel stereo sources using the front L/R speakers and a subwoofer, set to “A.F.D. AUTO”.

Listening to sound without any adjustment (DIRECT)

You can listen to sound without adjusting the equalizer or sound field effects.

Press DIRECT.

“DIRECT” appears in the display, and the equalizer and sound field effects are cancelled.

Enjoying higher fidelity sound

The A.F.D. (Auto Format Direct) mode allows you to select the decoding mode you want for your audio sound.

A.F.D. mode (Display)	Decoding mode
A.F.D. AUTO (A.F.D. AUTO)	As encoded
DOLBY PRO LOGIC (DOLBY PL)	Dolby Pro Logic
DOLBY PL II MOVIE (PLII MOV)	Dolby Pro Logic II
DOLBY PL II MUSIC (PLII MUS)	
Neo:6 Cinema (NEO6 CIN)	DTS Neo:6
Neo:6 Music (NEO6 MUS)	

Decoding input audio signals automatically

In this mode, the receiver automatically detects the type of audio signal being input (Dolby Digital, DTS, standard 2 channel stereo, etc.) and performs the proper decoding if necessary. This mode presents the sound as it was recorded/encoded, without adding any surround effects. However, if there are no low frequency signals (Dolby Digital LFE, etc.) it will generate a low frequency signal for output to the subwoofer.

Press A.F.D. repeatedly to select “A.F.D. AUTO”.

Or press SOUND FIELD on the receiver repeatedly.

The receiver automatically detects the type of audio signal being input and performs the proper decoding if necessary.

Enjoying stereo sound in multichannel (2 channel decoding mode)

This mode lets you specify the type of decoding used for 2 channel audio sources. This receiver can reproduce 2 channel sound in 6 channels through DTS Neo:6; 5 channels through Dolby Pro Logic II or 4 channels through Dolby Pro Logic.

However, DTS 2CH sources are not decoded by DTS Neo:6; these sources are output in 2 channels.

Press A.F.D. repeatedly to select the 2 channel decoding mode.

Or press SOUND FIELD on the system repeatedly.

■ DOLBY PRO LOGIC (DOLBY PL)

Performs Dolby Pro Logic decoding. Sources recorded in 2 channel format are decoded into 4.1 channels.

■ DOLBY PL II MOVIE (PLII MOV)

Performs Dolby Pro Logic II Movie mode decoding. This setting is ideal for movies encoded in Dolby Surround. In addition, this mode can reproduce sound in 5.1 channel format when watching videos of overdubbed or old movies.

■ DOLBY PL II MUSIC (PLII MUS)

Performs Dolby Pro Logic II Music mode decoding. This setting is ideal for normal stereo sources such as CDs.

■ Neo:6 Cinema (NEO6 CIN)

Performs DTS Neo:6 Cinema mode decoding.

■ Neo:6 Music (NEO6 MUS)

Performs DTS Neo:6 Music mode decoding. This setting is ideal for normal stereo sources such as CDs.

If you connect a subwoofer

When the audio signal is 2 channel stereo or if the source signal does not include an LFE signal, the receiver generates a low frequency signal for output to the subwoofer. However, the low frequency signal is not output when “Neo:6 Cinema” or “Neo:6 Music” is selected.

Selecting a sound field

You can take advantage of surround sound simply by selecting one of the receiver’s pre-programmed sound fields. They bring the exciting and powerful sound of movie theaters and concert halls into your home.

Selecting a sound field for movies

Press MODE repeatedly to select the sound field you want.

Or press SOUND FIELD on the system repeatedly.

The selected sound field appears in the display.

Sound field	Display
CINEMA STUDIO EX A DCS	C.ST.EX A
CINEMA STUDIO EX B DCS	C.ST.EX B
CINEMA STUDIO EX C DCS	C.ST.EX C

About DCS (Digital Cinema Sound)

Sound fields marked with **DCS** use DCS technology. DCS is the concept name of the surround technology for home theater developed by Sony. DCS uses DSP (Digital Signal Processor) technology to reproduce the sound characteristics of an actual cinema cutting studio in Hollywood. When played at home, DCS will create a powerful theater effect that mimics the artistic combination of sound and action as envisioned by the movie director.

■ C.ST.EX A (CINEMA STUDIO EX A **DCS**)

Reproduces the sound characteristics of the Sony Pictures Entertainment “Cary Grant Theater” cinema production studio. This is a standard mode, great for watching most types of movies.

■ C.ST.EX B (CINEMA STUDIO EX B **DCS**)

Reproduces the sound characteristics of the Sony Pictures Entertainment “Kim Novak Theater” cinema production studio. This mode is ideal for watching science-fiction or action movies with lots of sound effects.

■ C.ST.EX C

(CINEMA STUDIO EX C **DCS**)

Reproduces the sound characteristics of the Sony Pictures Entertainment scoring stage. This mode is ideal for watching musicals or films where orchestra music is featured in the soundtrack.

About CINEMA STUDIO EX modes




CINEMA STUDIO EX modes are suitable for watching motion picture DVDs (etc.), with multichannel surround effects. You can reproduce the sound characteristics of Sony Pictures Entertainment's dubbing studio in your home.

The CINEMA STUDIO EX modes consist of the following three elements.

- Virtual Multi Dimension
Creates 5 sets of virtual speakers from a single pair of actual surround speakers.
- Screen Depth Matching
Creates the sensation that the sound is coming from inside the screen like in theaters.
- Cinema Studio Reverberation
Reproduces the type of reverberation found in theaters.

The CINEMA STUDIO EX modes integrate these three elements simultaneously.

Tips

- The receiver memorizes the last sound field selected for each program source. Whenever you select a program source, the sound field that was last applied is automatically applied again. For example, if you listen to DVD with HALL as the sound field, change to a different program source, then return to DVD, HALL will be applied again.
- You can identify the encoding format of DVD software, etc. by looking at the logo on the package.
 -  : Dolby Digital discs
 -  : Dolby Surround encoded programs
 -  : DTS Digital Surround encoded programs

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 surround speakers.

Selecting a sound field for music

Press MODE repeatedly to select the sound field you want.

Or press SOUND FIELD on the system repeatedly.

The selected sound field appears in the display.

Sound field	Display
HALL	HALL
JAZZ CLUB	JAZZ
LIVE CONCERT	CONCERT

■ HALL (HALL)

Reproduces the acoustics of a classical concert hall.

■ JAZZ (JAZZ CLUB)

Reproduces the acoustics of a jazz club.

■ CONCERT (LIVE CONCERT)

Reproduces the acoustics of a 300-seat live house.

To turn off the surround effect

Press 2CH or A.F.D.

Customizing sound fields

By adjusting the LEVEL menu and TONE menu, you can customize the sound fields to suit your particular listening situation.

Position your speakers and do the procedures described in “Placing speakers” (page 8) and “Checking the connections” (page 16) before you customize a sound field.

Adjusting the LEVEL menu

You can use the LEVEL menu to adjust the balance and level of each speaker. These settings are applied to all sound fields. (Except for the EFCT. parameter. The setting of the EFCT. parameter is stored independently for each sound field.)

- 1 Start playing a source encoded with multichannel surround effects (DVD, etc.).**
- 2 Press MAIN MENU repeatedly to select the LEVEL menu.**
- 3 Press \diamond/\diamond to select the menu item.**
For details, see “LEVEL menu parameters” below.
- 4 While monitoring the sound, press $\triangleleft/\triangleleft$ to adjust the selected parameter.**
- 5 Repeat steps 3 and 4 to adjust other parameters.**

LEVEL menu parameters

■ BAL. XXX (Front speaker balance)

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

- BALANCE (± 0 dB)
- L (+1 dB to +8 dB)
- R (+1 dB to +8 dB)

■ CTR XXX dB (Center speaker level)

■ SUR.L. XXX dB (Surround speaker (L) level)

■ SUR.R. XXX dB (Surround speaker (R) level)

■ SB XXXX dB (Surround back speaker level)

■ S.W. XXX dB (Subwoofer level)

The initial setting is 0 dB.

Lets you adjust the level of the speakers (center, surround left, surround right, surround back) or subwoofer.

You can adjust from -10 dB to $+10$ dB in 1 dB steps.

■ D.RANGE: COMP. (Dynamic range compressor)

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

- OFF
The dynamic range is not compressed.
- STD
The dynamic range is compressed as intended by the recording engineer.
- MAX
The dynamic range is compressed dramatically.

Tip

The dynamic range compressor feature lets you compress the dynamic range of soundtracks based on the dynamic range information included in the Dolby Digital signal. “STD” is the initial setting, but this only enacts light compression.

Therefore, we recommend using the “MAX” setting. This greatly compresses the dynamic range and lets you view movies late at night at low volumes. Unlike analog limiters, the levels are predetermined and provide a very natural-sounding compression.

Note

Dynamic range compression is possible with Dolby Digital sources only.

■ EFCT. XXX (Effect level)

Lets you adjust the size of the current surround effect. This menu item is displayed only when “C.ST.EX A”, “C.ST.EX B”, “C.ST.EX C”, “CONCERT”, “JAZZ”, or “HALL” is selected.

- **STD**
Normal surround effects are applied.
- **MIN**
Decreases the surround effect.
- **MAX**
Increases the surround effect.

Adjusting the TONE menu

You can use TONE menu to adjust the tonal quality (bass and treble level) of the front speakers.

- 1** Start playing a source encoded with a variety of surround effects (DVD, etc.).
- 2** Press MAIN MENU repeatedly to select the TONE menu.
- 3** Press \uparrow/\downarrow to select the menu item you want.
For details, see “TONE menu parameters” below.
- 4** While monitoring the sound, press \leftarrow/\rightarrow to adjust the selected parameter.
- 5** Repeat steps 3 and 4 to adjust other parameters.

Note

You cannot adjust the equalizer when the system is decoding PCM 96 kHz signals, or when DTS 96/24, DTS-ES Matrix or DTS Neo:6 decoding is applied.

TONE menu parameters

■ **BASS XXX dB**
(Front speaker bass level)

■ **TREB. XXX dB**
(Front speaker treble level)

The initial setting is 0 dB.

You can adjust from -6 dB to +6 dB in 1 dB steps.

Switching the audio input mode for DVD playback

You can switch the audio input mode for DVD playback.

- 1 Press DVD to select DVD input.**
- 2 Press INPUT MODE repeatedly to select the audio input mode.**

The selected audio input mode appears in the display.

Audio input modes

- **AUTO IN**
Gives priority to digital audio signals, and specifies analog audio signals input to the analog IN (L/R) jacks when no digital audio signal is present.
- **COAX IN**
Specifies digital audio signals input to the digital COAX IN jack.
- **OPT IN**
Specifies digital audio signals input to the digital OPT IN jacks.
- **ANALOG**
Specifies the analog audio signals input to the analog IN (L/R) jacks.

Selecting the digital audio input decoding priority

You can specify the input mode for digital signals input to the digital input jacks.

- 1 Press the button for the component (DVD, TV/SAT, HDD/MD) that you want to set.**
Or rotate INPUT SELECTOR on the receiver.
- 2 Press MAIN MENU repeatedly to select the SET UP menu.**
- 3 Press $\blacktriangle/\blacktriangledown$ repeatedly to select “DEC. XXXX”.**
- 4 Press $\blacktriangleleft/\blacktriangleright$ to select the setting you want.**

Digital audio input decoding priority

The initial setting is “DEC. AUTO” for TV/SAT, and “DEC. PCM” for DVD and HDD/MD.

- **DEC. AUTO**
Automatically switches the input mode between DTS, Dolby Digital and PCM.
- **DEC. PCM**
PCM signals are given priority (to prevent interruption when playback starts). Even if other signals are input, sound is still output. When set to “AUTO” and output from the digital audio jacks (for CD, etc.) is interrupted after playback starts, set to “DEC. PCM”. Sound may not be output depending on the selected source.

Selecting a bilingual play mode (Dual Mono)

You can select a bilingual play mode to enjoy DVD software etc. in AC-3 format.

Press DUAL MONO repeatedly to select the setting you want.

Or press MAIN MENU repeatedly to select the SET UP menu, then press \triangle/\square to select "DUAL XXX". Press \triangle/\square to select the setting you want.

Multichannel play modes

- M (Main)
Plays back only the main channel.
- S (Sub)
Plays back only the sub channel.
- M+S (Main + Sub)
Mixed playback of the main and sub channels.
- M/S (Main/Sub)
Plays back the main channel from the left speaker, and the sub channel from the right speaker.

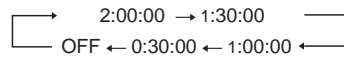
Using the Sleep Timer

You can set the receiver to turn off automatically at a specified time using the remote.

After pressing ALT, press SLEEP repeatedly to select the time you want.

Or press MAIN MENU repeatedly to select the SET UP menu, then press \triangle/\square until the "SLEEP" and "OFF" indications flash in the display. Press \triangle/\square to select the time.

The display changes cyclically as follows:



When Sleep Timer is activated, "SLEEP" lights up in the display.

Tip

To check the time remaining before the receiver turns off, perform the above procedure. The remaining time appears in the display.

Selecting a DTS 96/24 decoding mode

You can select a decoding mode for DTS 96/24 signals.

- 1** Press **MAIN MENU** repeatedly to select the **SET UP** menu.
- 2** Press \leftarrow/\rightarrow to select “96 XXXX”.
- 3** Press \leftarrow/\rightarrow to select the setting you want.

DTS 96/24 decoding modes

- **96 AUTO**
When a DTS 96/24 signal is input, it is played back at a sampling frequency of 96 kHz.
- **96 OFF**
Even when a DTS 96/24 signal is input, it is played back at a sampling frequency of 48 kHz.

Notes

- This parameter is valid only in the A.F.D. mode (page 23). In other sound fields, this parameter is always set to “96 OFF”.
- DTS 96/24 decoding is only valid in the A.F.D. mode (page 23). When the system is set to other sound fields, standard 48 kHz decoding is used.
- Even when a DTS 96/24 signal is input, standard 48 kHz decoding is used if any speakers are set to “SMALL” or if the sub woofer is set to “NO”.

Selecting a surround back decoding mode

This function lets you select the decoding mode for multi channel input stream surround back signals.

By decoding the surround back signal of DVD software (etc.) recorded in Dolby Digital EX, DTS-ES Matrix, or DTS-ES Discrete 6.1 format etc., you can enjoy the surround sound intended by the filmmakers.

Press SURR BACK DECODING on the receiver repeatedly to select the surround back decoding mode.

Or press **MAIN MENU** on the remote repeatedly to select the **SET UP** menu. Then select “SB XXXX” using \leftarrow/\rightarrow .

For details, see “How to select the surround back decoding mode” on page 31.

Note

You can select the surround back decoding mode only when A.F.D. mode is selected.

How to select the surround back decoding mode

You can select the surround back mode you want according to the input stream. The initial setting is “SB AUTO”.

■ When you select “SB AUTO”

When the input stream contains the 6.1 channel decode flag^{a)}, the appropriate decoder is applied to decode the surround back signal.

Input stream	Output channel	Applied surround back decoder
Dolby Digital 5.1	5.1	—
Dolby Digital EX ^{b)}	6.1	Matrix decoder conforms to Dolby Digital EX
DTS 5.1	5.1	—
DTS-ES Matrix 6.1 ^{c)}	6.1	DTS Matrix decoder
DTS-ES Discrete 6.1 ^{d)}	6.1	DTS Discrete decoder

■ When you select “SB MTRX”

Dolby Digital EX is applied to decode the surround back signal regardless of the 6.1 channel decode flag^{a)} in the input stream. This decoder conforms to Dolby Digital EX and functions the same as the decoders^{e)} used in movie theaters.

Input stream	Output channel	Applied surround back decoder
Dolby Digital 5.1	6.1	Matrix decoder conforms to Dolby Digital EX
Dolby Digital EX ^{b)}	6.1	Matrix decoder conforms to Dolby Digital EX
DTS 5.1	6.1	Matrix decoder conforms to Dolby Digital EX
DTS-ES Matrix 6.1 ^{c)}	6.1	Matrix decoder conforms to Dolby Digital EX
DTS-ES Discrete 6.1 ^{d)}	6.1	Matrix decoder conforms to Dolby Digital EX

■ When you select “SB OFF”

Surround back decoding is not performed.

- a) 6.1 channel decode flag is the information recorded in software like DVDs.
- b) Dolby Digital DVD that includes a Surround EX flag. The Dolby Corporation web page can help you distinguish Surround EX films.
- c) Software encoded with a flag to denote it has both Surround EX and 5.1 channel signals.
- d) Software encoded with both 5.1 channel signals and an extension stream designed for returning those signals to 6.1 discrete channels. Discrete 6.1 channel signals are DVD specific signals not used in movie theaters.
- e) This decoder can be used for all 6.1 formats (Dolby Digital EX, DTS-ES Matrix 6.1, DTS-ES Discrete 6.1).

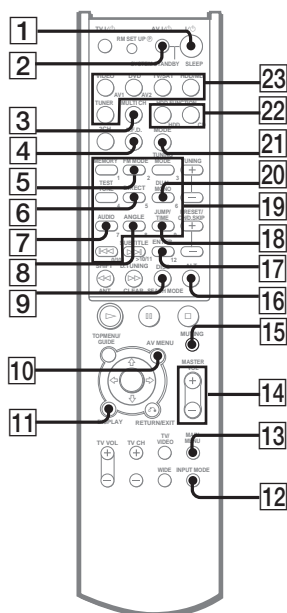
Note

There may be no sound from the surround back speaker in Dolby Digital EX mode. Some discs have no Dolby Digital EX flag even though the packages have Dolby Digital EX logos. In this case, select “SB MTRX”.

Using the supplied remote

Parts description

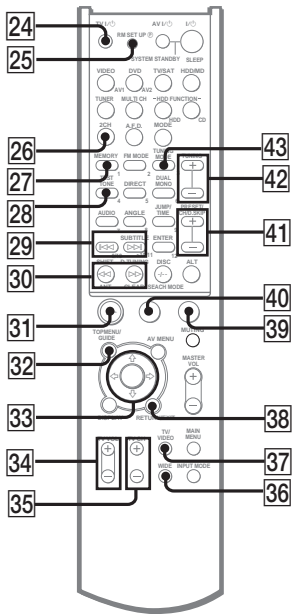
This chapter provides information on the location of buttons on the supplied remote and how to use them to perform basic receiver operations.



Remote button	Function
I/⏻ (power) 1	Press to turn on or off the receiver.
A.F.D. 4	Press to set the receiver to select the decoding mode for the input signal automatically.
ALT 16	Press to change the remote key function to activate the buttons printed in orange.
ANGLE 8	Press to select the angle.
ANT* (After pressing ALT) 30	When operating a VCR, press to select the output signal from antenna terminal; TV signal or VCR program.
AUDIO 7	Changing the sound to multiplex, bilingual or multi-channel TV sound.
AV MENU 10	Press to display the menus of the VCR, satellite tuner or DVD.
AV I/⏻ 2	Press to turn on or off the selected audio and video components. If you press I/⏻ at the same time, it will turn off the receiver and other Sony audio/video components (SYSTEM STANDBY).
	Note The function of AV I/⏻ changes automatically each time you select the input with the input buttons (23). Depending on the component, the above operation may not be possible or may operate differently as described.
AV1 23	Selects the command mode for the remote control.
AV2 23	Selects the command mode for the remote control.
CLEAR* (After pressing ALT) 30	When operating a CD player or DVD player, press to cancel the operation when you press the incorrect number buttons or press to return to the continuous play, etc.
D.TUNING* 30	When operating a tuner, press to select the direct tuning function.
DIRECT 6	Press to select the DIRECT function.





















Remote button	Function
DISC 9	When operating a CD player or video CD player, press to select a disc directly (multi-disc changer only).
DISPLAY 11	Press to select the information displayed on the display of the receiver or TV screen.
DUAL MONO 20	Press to select a bilingual play mode (Dual Mono).
ENTER (After pressing ALT) 17	Press to select a channel, disc or track after a number button has been pressed.
FM MODE 5	Press to select FM monaural or stereo reception.
HDD FUNCTION HDD/CD 22	Press to switch the function of the hard disc audio recorder.
Input buttons 23	<p>Press to select the input. Use AV1 and AV2 to select the command mode of the remote.</p> <p>Note that the inputs are factory-set as described in the table above. If you want to change the factory setting of the buttons to match your particular components, do the procedure in "Programming the remote" (page 38).</p> <p>Inputs are assigned to the components as follows.</p> <p>VIDEO: VCR DVD: DVD player TV/SAT: TV/tuner HDD/MD: Hard disc/MD deck TUNER: Built-in tuner</p> <p>See "Table of buttons used to control each component" on page 36 for information about the buttons that you can use to control each component.</p>
INPUT MODE 12	Press to select the audio input mode.
JUMP/TIME* 18	<p>When operating a TV:</p> <p>Press to switch between the current channel and the previous channel.</p> <p>When operating a CD player, video CD player or DVD player:</p> <p>Press to display the time information.</p>
MAIN MENU 13	Press to select the menu of the receiver.


Remote button	Function
MASTER VOL +/- 14	Press to adjust the volume level of all speakers at the same time.
MEMORY 27	Press to store radio stations.
MODE 21	Press to select a sound field.
MULTI CH 3	Press to select the components connected to the MULTI CH IN jacks of the receiver.
MUTING 15	Press to mute the sound.



Remote button	Function
Number buttons (1-9, 0/10)* (After pressing ALT) 19	When operating a tuner: Press while pressing SHIFT to select the numeric input for the tuner preset station during the direct tuning or memory mode. When operating a CD player, video CD player, DVD player, MD deck or DAT deck: Press to select a track number. To enter 10, press 0/10. When operating a TV, VCR or satellite tuner: Press to select a channel number.

Remote button	Function
PRESET/CH/D.SKIP +/-* 41	When operating a tuner: Press to scan and select preset stations. When operating a TV, VCR or satellite tuner: Press to select preset channels. When operating a CD player, video CD player, DVD player or MD deck: Press to skip discs (multi-disc changer only).
RETURN (↶) /EXIT* 38	After pressing MAIN MENU, AV MENU, or TOP MENU/GUIDE, press to return to the previous menu or exit the menu.
RM SET UP (Ⓟ) 25	Press to set up the remote.
SEARCH MODE* 9	When operating a DVD player, press to select a search mode. Press to select the unit for search (track, index, etc.).
SHIFT* 30	When operating a tuner, press repeatedly to select a memory page for presetting radio stations or tuning to preset stations.
SLEEP (After pressing ALT) 1	Press repeatedly to activate the sleep function and select the duration which the receiver turns off automatically.
SUBTITLE* (After pressing ALT) 29	When operating a DVD player, press to switch the screen between subtitles and no subtitles.
TEST TONE 28	Press to output a test tone.
TOP MENU/ GUIDE* 32	Press to display DVD titles for the DVD player, or guide menus for the tuner.
TUNING MODE 43	Press to switch the tuning mode.
TUNING +/- 42	Press to scan radio stations.
TV CH +/- 35	Press to select preset TV channels.
TV VOL +/- 34	Press to adjust the volume of TV.
TV/VIDEO 37	Press to select the TV to input signal; TV input or video input.
TV I/O 24	Press to turn the TV on or off.

Remote button	Function
WIDE  36	Press to switch the TV to the wide-picture mode (only for SONY TVs that support wide-picture mode).
2CH  26	Press to turn off the sound field and listen to 2 channel stereo sound. Multi channel source is also downmixed to a 2 channel stereo sound.
>10/11* (After pressing ALT)  29	When operating a CD player, video CD player, LD player, MD deck, or tape deck: Press when the track number you want is 10 or above. When operating a TV: Press to select 11th channel.
-/--*  9	When operating a TV, press to select the channel input mode (1-digit or 2-digit).
 /  /  /  , ENTER/ EXECUTE  33	After pressing MAIN MENU, AV MENU, or TOP MENU/GUIDE, use  /  /  /  to make specific settings, then press ENTER/EXECUTE to enter the selection.
 31	Press to start play.
 40	Press to pause play or record, or press to start recording on components set to record standby.
 39	Press to stop play.
 29	Press to skip tracks (forwards or backwards).
 /   30	Press to fast-forward or rewind. Press to search tracks (forwards or backwards).

* The function of these buttons switch automatically each time you select the input (). Depending on the component, the above operation may not be possible or may operate differently than described.

Notes





- The 12 button is not available.
- Some buttons may not be used depending on the component.
- The above explanation is intended to serve as an example only. Therefore, depending on the component the above operation may not be possible or may operate differently than described.
- To activate the buttons printed in orange, press ALT first before pressing the buttons.
- Before you use the  /  /  /  and ENTER/EXECUTE buttons for receiver operation, press MAIN MENU. To operate other components, press TOP MENU/GUIDE or AV MENU after selecting the input.

Table of buttons used to control each component

When you program the remote to control the following Sony or non-Sony components, you can use the buttons on the remote that are marked with circles in the table below.

The supplied remote can control the following components ((1) to (11)). Note that some buttons may not operate your component.

- | | | |
|---------------------|-------------------------------|-------------------------------|
| (1) CD player | (5) LD player | (9) Video CD player |
| (2) DAT deck | (6) VCR | (10) DVD player |
| (3) MD deck | (7) TV | (11) Hard disc audio recorder |
| (4) Tape deck (A/B) | (8) Satellite tuner/Cable box | |

Component	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
Buttons											
ANGLE	-	-	-	-	-	-	-	-	-	●	-
ANT	-	-	-	-	-	●	-	-	-	-	-
AUDIO	-	-	-	-	-	●	●	-	-	●	-
AV MENU	-	-	-	-	-	●	-	●	-	●	-
AV I/⏪	●	●	●	-	●	●	●	●	●	●	●
CLEAR	●	-	-	-	-	-	-	-	-	●	-
DISC*	●	-	-	-	-	-	-	-	●	●	-
DISPLAY	●	-	●	-	●	●	●	●	●	●	-
D.SKIP*/	●	-	●	-	-	-	-	-	●	●	-
PRESET/CH +/-	-	-	-	-	-	●	●	●	-	-	-
D.TUNING	-	-	-	-	-	-	-	●	-	-	-
ENTER	●	●	●	●	●	●	●	●	●	●	-
FM MODE	-	-	-	-	-	-	-	●	-	-	-
HDD FUNCTION HDD/CD	-	-	-	-	-	-	-	-	-	-	●
JUMP/ TIME	-	-	-	-	-	-	●	●	-	-	-
MEMORY	●	-	●	-	-	-	-	-	●	●	-
Number buttons	●	●	●	●	●	●	●	●	●	●	-
RETURN (↩)/ EXIT	-	-	-	-	-	●	-	-	●	●	-
SEARCH MODE	-	-	-	-	-	-	-	●	-	-	-
SHIFT	-	-	-	-	-	-	-	●	-	-	-
SUBTITLE	-	-	-	-	-	-	-	-	-	●	-
SYSTEM STANDBY	●	-	●	●	-	●	●	●	●	●	●
TOP MENU/GUIDE	-	-	-	-	-	-	-	●	-	●	-
TUNING MODE	-	-	-	-	-	-	-	●	-	-	-
TUNING +/-	-	-	-	-	-	-	-	●	-	-	-

Component	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
Buttons											
TV CH +/-, TV VOL +/-, TV/SAT, TV/VIDEO, TV I/⏻, WIDE	-	-	-	-	-	-	●	-	-	-	-
▷	●	●	●	●	●	●	-	-	●	●	●
▢	●	●	●	●	●	●	-	-	●	●	●
□	●	●	●	●	●	●	-	-	●	●	●
⏮/⏪/⏩/⏭	●	●	●	●**	●	●	-	-	●	●	●
<⏪/⏩>	●	●	●	●	●	●	-	-	●	●	●
>10/11	●	-	●	●	●	-	-	●	●	-	-
-/--	-	-	-	-	-	-	●	●	-	-	-
⏶/⏷/⏸/⏹, ENTER/EXECUTE	-	-	-	-	-	●	●	●	●	●	-

* With a multi-disc changer only.

** For B decks only.

Programming the remote

You can program the remote to control non-Sony components. Once the control signals have been memorized, you can use those components as part of your system.

Furthermore, you can also program the remote for Sony components that the remote is unable to control. Note that the remote can only control components that accept infrared wireless control signals.

1 Press AV I/⏻ while holding down RM SET UP Ⓟ.

RM SET UP Ⓟ lights up once.

2 Press one of the input buttons to select the input you want to control.

For example, if you are going to control a DVD player, press DVD.

You can also select TV I/⏻.

3 Press the number buttons to enter the numeric code (or one of the codes if more than one code exists) corresponding to the component and the maker of the component you want to control.

See the tables starting from page 39 for information on the numeric code(s) corresponding to the component and the maker of the component. (The first digit and the last two digits of the numeric code correspond to the category and the maker's code respectively.)

4 Press ENTER.

Once the numeric code has been verified, RM SET UP Ⓟ slowly flashes twice and the remote automatically exits the programming mode.

5 Repeat steps 1 to 4 to control other components.

To cancel programming

Press RM SET UP Ⓟ during any step. The remote automatically exits the programming mode.

To use the programmed input

Press the programmed input buttons.

If programming is unsuccessful, check the following:

- If RM SET UP Ⓟ does not light up in step 1, the batteries are weak. Replace both batteries.
- If RM SET UP Ⓟ flashes 4 times in quick succession while entering the numeric code, an error has occurred. Start again from step 1.
- In step 1, the remote automatically exits the programming mode if 60 seconds has passed after pressing RM SET UP Ⓟ. Start again from step 1.

Notes

- RM SET UP Ⓟ lights up while a valid button is pressed.
- In step 2, if you press the input buttons several times, only the last selected input is valid.
- In step 2, if you press TV I/⏻, only TV VOL +/-, TV CH +/-, TV/SAT, TV/VIDEO and WIDE buttons are reprogrammed.
- In step 3, if you press the input buttons, the new input is selected and the programming procedure returns to the beginning of step 3.
- For the numeric codes, only the first three numbers entered are valid.

To clear the memory of the remote

Press I/⏻, AV I/⏻ and MASTER VOL – at the same time. RM SET UP Ⓟ flashes 3 times, then goes off.

The numeric codes corresponding to the component and the maker of the component

Use the numeric codes in the tables below to control non-Sony components and also Sony components that the remote is normally unable to control. Since the remote signal that a component accepts differs depending on the model and year of the component, more than one numeric code may be assigned to a component. If you fail to program your remote using one of the codes, try using other codes.

Notes

- The numeric codes are based on the latest information available for each brand. There is a chance, however, that your component will not respond to some or all of the codes.
- All of the functions on this remote may not be available when used with your particular component.

To control a tuner

Maker	Code(s)
SONY	002, 003, 004, 005

To control a digital tuner

Maker	Code(s)
SONY	006

To control a CD player

Maker	Code(s)
SONY	101, 102, 103
DENON	104, 123
JVC	105, 106, 107
KENWOOD	108, 109, 110
MAGNAVOX	111, 116
MARANTZ	116
ONKYO	112, 113, 114
PANASONIC	115
PHILIPS	116
PIONEER	117
TECHNICS	115, 118, 119
YAMAHA	120, 121, 122

To control a DAT deck

Maker	Code(s)
SONY	203
PIONEER	219

To control a tape deck

Maker	Code(s)
SONY	201, 202
DENON	204, 205
KENWOOD	206, 207, 208, 209
NAKAMICHI	210
PANASONIC	216
PHILIPS	211, 212
PIONEER	213, 214
TECHNICS	215, 216
YAMAHA	217, 218

To control an MD deck

Maker	Code(s)
SONY	301
DENON	302
JVC	303
KENWOOD	304

To control a hard disc audio recorder

Maker	Code(s)
SONY	305, 306

To control a DVD player

Maker	Code(s)
SONY	401, 402, 403
PANASONIC	406, 408
PHILIPS	407
PIONEER	409
TOSHIBA	404
DENON	405

To control a TV

Maker	Code(s)
SONY	501, 502
DAEWOO	504, 505, 506, 507, 515, 544
FISHER	508
FUJITSU	528
FUNAI	548
GOLDSTAR	503, 512, 515, 517, 534, 544, 556
GRUNDIG	511, 533, 534
HITACHI	513, 514, 515, 544, 557
ITT/NOKIA	521, 522
JVC	516, 552
MAGNAVOX	503, 518, 544
MITSUBISHI/ MGA	503, 519, 527, 544
NEC	503, 520, 544, 554
PANASONIC	509, 524, 553
PHILIPS	515, 518, 557
PIONEER	509, 525, 526, 540, 551, 555
RCA/PROSCAN	510, 523, 529, 544
SAMSUNG	503, 515, 531, 532, 534, 544, 556, 557
SANYO	508, 545, 546
SHARP	535, 550
TELEFUNKEN	537, 538, 547, 549, 558
THOMSON	530, 537, 539, 547, 549, 558
TOSHIBA	535, 539, 540, 541, 551
ZENITH	542, 543

To control an LD player

Maker	Code(s)
SONY	601, 602, 603
PIONEER	606

To control a video CD player

Maker	Code(s)
SONY	605

To control a VCR


Maker	Code(s)
SONY	701, 702, 703, 704, 705, 706
AIWA	710, 750, 757, 758
AKAI	707, 708, 709, 759
BLAUPUNKT	740
EMERSON	711, 712, 713, 714, 715, 716, 750
FISHER	717, 718, 719, 720
GENERAL ELECTRIC	712, 722, 730
GOLDSTAR	723, 753
GRUNDIG	724
HITACHI	722, 725, 729, 741
ITT/NOKIA	717
JVC	726, 727, 728, 736
MAGNAVOX	730, 731, 738
MITSUBISHI/ MGA	732, 733, 734, 735
NEC	736
PANASONIC	729, 730, 737, 738, 739, 740
PHILIPS	729, 730, 731
PIONEER	729
RCA/PROSCAN	722, 729, 730, 731, 741, 747
SAMSUNG	742, 743, 744, 745
SANYO	717, 720, 746
SHARP	748, 749
TELEFUNKEN	751, 752
TOSHIBA	747, 755, 756
ZENITH	754


To control a satellite tuner or cable box

Maker	Code(s)
SONY	801, 802, 803, 804
JERROLD/G.I.	806, 807, 808, 809, 810, 811, 812, 813, 814
PANASONIC	818
RCA	805, 819
S.ATLANTA	815, 816, 817




Selecting the mode of the remote

You can switch the command mode (AV1 or AV2) of the remote. If the command mode of the receiver and the remote is different, you cannot use the remote to operate the receiver.

Press AV1 (or AV2) while holding down RM SET UP .

RM SET UP  lights up once, then the command mode switches.

To reset the remote to factory settings

Press I/, AV I/, and MASTER VOL – at the same time. RM SET UP  lights 3 times, then goes off.

Additional Information

Precautions

On safety

Should any solid object or liquid fall into the cabinet, unplug the receiver and have it checked by qualified personnel before operating it any further.

On power sources

- Before operating the unit, check that the operating voltage is identical with your local power supply. The operating voltage is indicated on the nameplate at the rear of the receiver.
- 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.
- If you are not going to use the receiver for a long time, be sure to disconnect the receiver from the wall outlet. To disconnect the AC power cord, grasp the plug itself; never pull the cord.
- The AC power cord should be changed only at a qualified service shop.

On heat buildup

Although the unit heats up during operation, this is not a malfunction. Further, it is not a malfunction that the upper left corner of the unit heats up while the power is on. If you continuously use this unit at a high volume, the cabinet temperature of the top, sides and bottom will rise considerably. To avoid burning yourself, do not touch the cabinet.

On placement

- Place the receiver in a location with adequate ventilation to prevent heat buildup and prolong the life of the receiver.
- Do not place the receiver near heat sources, or in a place subject to direct sunlight, excessive dust or possible mechanical shock.
- Do not place anything on top of the cabinet that might block the ventilation holes and cause malfunctions.
- Use caution when placing the unit or speakers on surfaces that have been specially treated (with wax, oil, polish, etc.) as staining or discoloration of the surface may result.

On operation

Before connecting other components, be sure to turn off and unplug the receiver.

On cleaning

Clean the cabinet, panel and controls with a soft cloth slightly moistened with a mild detergent solution. Do not use any type of abrasive pad, scouring powder or solvent such as alcohol or benzine.

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

Troubleshooting

If you experience any of the following difficulties while using the receiver, use this troubleshooting guide to help you remedy the problem. Should any problem persist, consult your nearest Sony dealer.

There is no sound no matter which component is selected.

- Check that both the receiver and all components are turned on.
- Check that MASTER VOL +/- is not set to the minimum value.
- Check that all speaker cords are connected correctly (page 9).
- Press MUTING to cancel the muting function.
- When Decode Priority is set to “DEC. PCM”, sound may not be output. In this case, set Decode Priority to “DEC. AUTO”.

There is no sound from a specific component.

- Check that the component is connected correctly to the audio or digital input jacks for that component (page 5, 6).
- Check that the cord(s) used for connection is (are) fully inserted into the jacks on both the receiver and the component.

There is no sound from one of the front speakers.

- Connect a pair of headphones to the PHONES jack to verify that sound is output from the headphones. If only one channel is output from the headphones, the component may not be connected to the receiver correctly. Check that all the cords are fully inserted into the jacks on both the receiver and the component. If both channels are output from the headphones, the front speaker may not be connected to the receiver correctly. Check the connection of the front speaker which is not outputting any sound.

The multichannel surround effects of Dolby Digital or DTS are not obvious.

- Check that the DVD software, etc. is recorded in Dolby Digital or DTS.
- If you connect the DVD player, etc. to the digital input jack on this system, check the audio setting (for digital audio output) of the component.
- Check that the audio track is correctly selected on the DVD player. (Check the audio setting of the DVD menu.)

There is no sound or only a very low-level sound is heard.

- Check that the speakers and components are connected securely (page 9).
- Check that you have selected the correct component on the receiver (page 17).
- Check that the headphones are not connected.
- Press MUTING to cancel the muting function.
- The protection circuitry has been activated. Turn off the receiver, eliminate the short-circuit problem and turn on the power again after about 20 seconds.

There is no sound from analog 2 channel sources.

- Check that INPUT MODE is not set to “COAX IN” nor “OPT IN” (page 28).

There is no sound from digital sources from the COAX IN or OPT IN jack.

- Check that INPUT MODE is not set to “ANALOG” (page 28). Check that INPUT MODE is not set to “COAX IN” for sources from the OPT IN jack, nor set to “OPT IN” for sources from the COAX IN jack.

Sound from the left and right speakers is unbalanced or reversed.

- Check that the speakers and components are connected correctly and securely (page 9).
- Adjust the balance parameters in the LEVEL menu (page 26).

There is a severe humming or noise.

- Check that the speakers and components are connected securely (page 9).
- Check that the connecting cords are away from a transformer or motor, and at least 3 meters away from a TV set or fluorescent light.
- The plugs and jacks are dirty. Wipe them with a cloth slightly moistened with alcohol.

There is no sound from the center speaker.

- Make sure the sound field function is on. Press A.F.D. or MODE on the remote, or SOUND FIELD on the receiver (page 23).
- Select the CINEMA STUDIO EX mode (page 24).
- Adjust the speaker level (page 15).
- Make sure the center speaker is set to either “SMALL” or “LARGE” (page 13).

There is no sound from the surround back speaker.

- Some discs have no Dolby Digital EX flag even though their packaging features a Dolby Digital EX logo. In this case, select “SB DECODING MTRX” in the SET UP menu (page 30).

There is no sound or only a very low-level sound is heard from the surround speakers.

- Make sure the sound field function is on. Press A.F.D. or MODE on the remote, or SOUND FIELD on the receiver (page 23).
- Select a CINEMA STUDIO EX mode (page 24).
- Adjust the speaker level (page 15).
- Make sure the surround speakers are set to either “SMALL” or “LARGE” (page 13).

There is no sound from the active subwoofer.

- Check that “2CH ST.” is not selected (page 23).

The surround effects are not obvious.

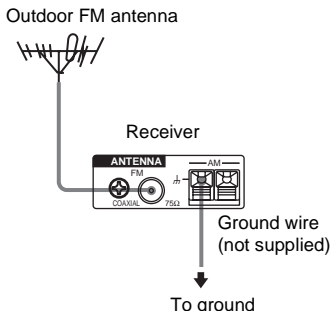
- Make sure the sound field function is on. Press A.F.D. or MODE on the remote, or SOUND FIELD on the receiver (page 23).
- Sound fields do not function for signals with a sampling frequency of more than 48 kHz.

Radio stations cannot be tuned in.

- Check that the antennas are connected securely. Adjust the antennas and connect an external antenna if necessary (page 7).
- The signal strength of the station is too weak (when tuning in with automatic tuning). Use manual tuning (page 18).
- Make sure you set the tuning interval correctly (when tuning in AM stations with manual tuning).
- No stations have been preset or the preset stations have been cleared (when tuning by scanning for preset stations). Preset the stations (page 18).
- Press DISPLAY so that the frequency appears in the display (page 21).

FM reception is poor.

- Use a 75-ohm coaxial cable (not supplied) to connect the receiver to an outdoor FM antenna as shown below. If you connect the receiver to an outdoor antenna, ground it against lightning. To prevent a gas explosion, do not connect the ground wire to a gas pipe.



Radio stations cannot be tuned in.

- Check that the antennas are connected securely. Adjust the antennas and connect an external antenna if necessary (page 7).
- The signal strength of the stations is too weak (when tuning in with automatic tuning). Use direct tuning (page 19).
- Make sure the tuning interval is set correctly (when tuning in AM stations with direct tuning).
- No stations have been preset or the preset stations have been cleared (when tuning by scanning for preset stations). Preset the stations (page 18).
- Press DISPLAY so that the frequency appears in the display.

RDS does not work.

- Make sure that you are tuned to an FM RDS station (page 20).
- Select an FM station with a stronger signal.

The RDS information that you want does not appear.


- Contact the radio station and find out whether they actually provide the service in question. If so, the service may be temporarily out of order.

There is no picture or an unclear picture appears on the TV screen or monitor.

- Select the appropriate input on the receiver (page 17).
- Set your TV to the appropriate input mode.
- Move your TV away from the audio components.

Remote control

The remote does not function.

- Point the remote at the remote sensor () on the receiver.
- Remove any obstacles in the path between the remote and the receiver.
- Replace all the batteries in the remote with new ones, if they are weak (page 11).
- Make sure you select the correct input on the remote.

Error messages

You can check the condition of the receiver by the message. Refer to the following to solve the problem.

DEC. ERROR

Appears when a signal the receiver cannot decode is input and "DEC." is set to "DEC. PCM". In this case, set to "DEC. AUTO" (page 28).

PROTECT

- Irregular current is output from the speakers. Turn off the power and check the speaker connections, then turn on the power again.
 - When the speaker impedance is set to 8 ohms, try setting it to 4 ohms (page 12). Depending on the speaker, the actual impedance level may be less than the nominal impedance (8 ohms). In this case, "PROTECT" is activated at a lower volume level.
 - Turn off the power of the receiver, wait until the internal temperature of the unit cools sufficiently (about 10 minutes), then turn on the power again. The protection circuitry may be activated when the internal temperature of the unit rises.
 - If you cannot solve the problem by following the remedies listed above, consult your nearest Sony dealer.
-

Reference sections for clearing the memory

To clear	See
All memorized settings	page 11

Specifications

Amplifier section**POWER OUTPUT**

Rated power output in stereo mode

(8 ohms, 1 kHz, DIN) 120 W + 120 W

Reference power output

(8 ohms, 20 Hz – 20 kHz, THD 0.7%)

FRONT*: 100 W + 100 W

CENTER*: 100 W

SURROUND*:

100 W + 100 W

SURROUND BACK*:

100 W

* Depending on the sound field settings and source being used, there may be no sound output.

Inputs (Analog) Sensitivity: 500 mV
Impedance: 50 kilohms

Inputs (Digital)
DVD (Coaxial) Impedance: 75 ohms

Outputs
LINE (subwoofer) Voltage: 2 V
Impedance: 1 kilohm

FM tuner section

Tuning range 87.5 – 108.0 MHz

Antenna terminals 75 ohms, unbalanced

Intermediate frequency 10.7 MHz

AM tuner section

Tuning range 531 – 1,602 kHz

Antenna Loop antenna

Intermediate frequency 450 kHz

General**Receiver**

Power requirements 230 V AC, 50/60 Hz

Power consumption 130 W

Dimensions (w/h/d) 430 × 85 × 400 mm
including projecting parts
and controls

Mass (approx.) 6.2 kg

Remote control

Remote control system Infrared control

Power requirements 3 V DC with two R6 (size-AA) batteries

Dimensions 210 × 49 × 25 mm

Mass (approx.) 85 g excluding batteries

Supplied accessories

FM wire antenna (1)

AM loop antenna (1)

Remote commander (1)

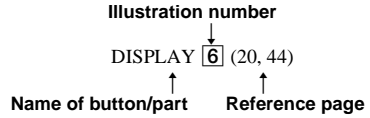
R6 (size AA) batteries (2)

Design and specifications are subject to change without notice.

List of button locations and reference pages

How to use this page

Use this page to find the location of buttons and other parts of the system mentioned in the main text.




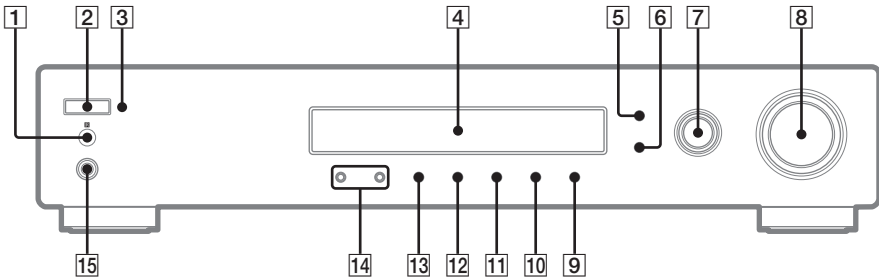
Main unit

ALPHABETICAL ORDER

- DIRECT **11** (23)
- DISPLAY **6** (20, 44)
- Display window **4** (21, 22)
- INPUT MODE **5** (28)
- INPUT SELECTOR **7**
(16, 17, 18, 19)
- MULTI CH IN **12** (17)
- PHONES jack **15** (43)
- POWER (power) switch **2**
(11, 12, 15)
- PRESET TUNING +/- **14** (18)
- SOUND FIELD **10**
(23, 24, 25, 43, 44)
- STANDBY indicator **3**
- SURROUND BACK
DECODING **13** (30)
- VOLUME **8** (15, 17, 43)

NUMBERS AND SYMBOLS

-  (remote sensor) **1** (44)
- 2CH **9** (11, 23, 25)



Remote control

ALPHABETICAL ORDER

A - N

- A.F.D. **4** (23, 24, 25, 32, 43, 44)
- ALT **16** (32)
- ANGLE **8** (32, 36)
- ANT **30** (32, 36)
- AUDIO **7** (32, 36)
- AV MENU **10** (32, 34, 35, 36)
- AV1 **23** (32, 41)
- AV2 **23** (32, 41)
- AV I/⏻ (power) **2**
(32, 36, 38, 41)
- CLEAR **30** (32, 36)
- DIRECT **6** (23, 32)
- DISC **9** (33, 36)
- DISPLAY **11** (20, 21, 33, 36, 44)
- DUAL MONO **20** (29, 33)
- DVD **23** (16, 17, 28, 33)
- D.TUNING **30** (19, 32, 36)
- ENTER **17** (33, 36, 38)
- ENTER/EXECUTE **33** (35, 37)
- FM MODE **5** (18, 33, 36)
- HDD FUNCTION HDD/CD **22**
(33, 36)
- HDD/MD **23** (16, 17, 33)
- INPUT MODE **12** (28, 33)
- JUMP/TIME **18** (33, 36)
- MAIN MENU **13**
(12, 15, 26, 27, 28, 30, 33, 35)
- MASTER VOL +/- **14**
(15, 17, 33, 38, 41)
- MEMORY **27** (18, 19, 33, 36)
- MODE **21** (24, 25, 33, 43, 44)
- MULTI CH **3** (16, 17, 33)
- MUTING **15** (17, 33, 43)
- Number buttons **19**
(19, 34, 36, 38)

P - T

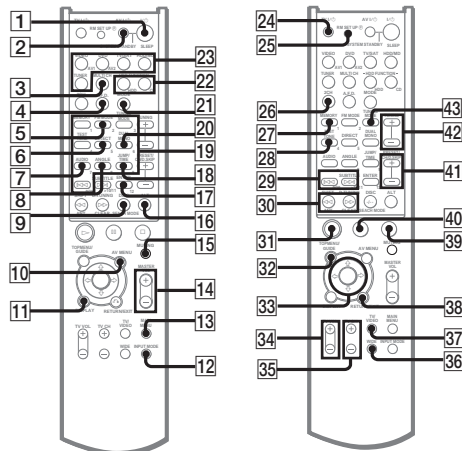
- PRESET/CH/D.SKIP +/- **41**
(19, 34, 36)
- RETURN (↶)/EXIT **38**
(34, 36)
- RM SET UP **25** (34, 38, 41)
- SEARCH MODE **9** (34, 36)
- SHIFT **30** (19, 34, 36)
- SLEEP **1** (29, 34)
- SUBTITLE **29** (34, 36)
- SYSTEM STANDBY **1**
(32, 36)
- TEST TONE **28** (15, 34)
- TOP MENU/GUIDE **32**
(34, 35, 36)
- TUNER **23** (17, 18, 19, 33)
- TUNING +/- **42** (18, 34, 36)
- TUNING MODE **43** (18, 34, 36)
- TV/SAT **23** (16, 17, 33, 37, 38)
- TV CH +/- **35** (34, 37, 38)
- TV VOL +/- **34** (34, 37, 38)
- TV/VIDEO **37** (34, 37, 38)
- TV I/⏻ (power) **24** (34, 37, 38)

V - W

- VIDEO **23** (16, 17, 33)
- WIDE **36** (35, 37, 38)

NUMBERS AND SYMBOLS

- I/⏻ (power) **1**
(11, 12, 15, 32, 38, 41)
- ⏪/⏩/⏴/⏵ **33**
(12, 15, 26, 27, 28, 30, 35, 37)
- ◀◀/▶▶ **30** (35, 37)
- ⏪◀/▶▶⏩ **29** (35, 37)
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- ⏪ **40** (35, 37)
- ◻ **39** (35, 37)
- /-- **9** (35, 37)
- 2CH **26** (11, 23, 25, 35)
- >10/11 **29** (35, 37)



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