

Operating Instructions AV Control Receiver

Model No. **SA-XR50**

Dear customer

Thank you for purchasing this product.
Before connecting, operating or adjusting this product, please read these instructions completely.
Please keep this manual for future reference.

Note:
"EB" on the packaging indicates the United Kingdom.

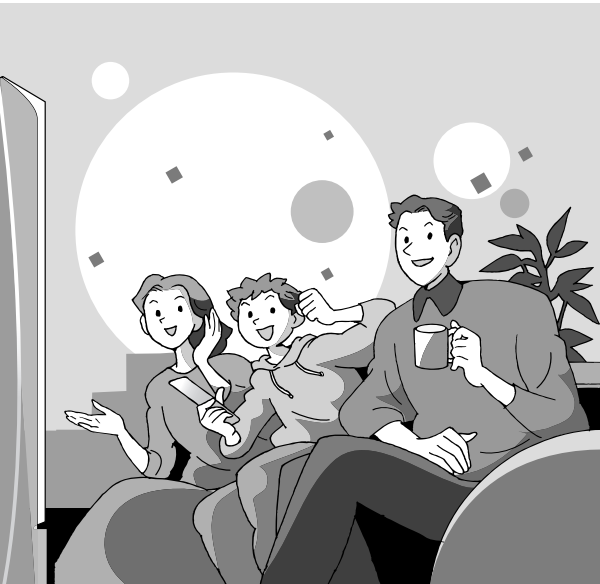


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Caution for AC Mains Lead

Safety precautions

(For United Kingdom) ("EB" area code model only)

For your safety, please read the following text carefully.

This appliance is supplied with a moulded three pin mains plug for your safety and convenience.

A 5-ampere fuse is fitted in this plug.

Should the fuse need to be replaced please ensure that the replacement fuse has a rating of 5-ampere and that it is approved by ASTA or BSI to BS1362.

Check for the ASTA mark  or the BSI mark  on the body of the fuse.

If the plug contains a removable fuse cover you must ensure that it is refitted when the fuse is replaced.

If you lose the fuse cover the plug must not be used until a replacement cover is obtained.

A replacement fuse cover can be purchased from your local dealer.

CAUTION!

IF THE FITTED MOULDED PLUG IS UNSUITABLE FOR THE SOCKET OUTLET IN YOUR HOME THEN THE FUSE SHOULD BE REMOVED AND THE PLUG CUT OFF AND DISPOSED OF SAFELY. THERE IS A DANGER OF SEVERE ELECTRICAL SHOCK IF THE CUT OFF PLUG IS INSERTED INTO ANY 13-AMPERE SOCKET.

If a new plug is to be fitted please observe the wiring code as stated below.

If in any doubt please consult a qualified electrician.

IMPORTANT


The wires in this mains lead are coloured in accordance with the following code:

Blue: Neutral, Brown: Live.

As these colours may not correspond with the coloured markings identifying the terminals in your plug, proceed as follows:

The wire which is coloured Blue must be connected to the terminal which is marked with the letter N or coloured Black or Blue.

The wire which is coloured Brown must be connected to the terminal which is marked with the letter L or coloured Brown or Red.

WARNING: DO NOT CONNECT EITHER WIRE TO THE EARTH TERMINAL WHICH IS MARKED WITH THE LETTER E, BY THE EARTH SYMBOL  OR COLOURED GREEN OR GREEN/YELLOW.

THIS PLUG IS NOT WATERPROOF—KEEP DRY.

Before use

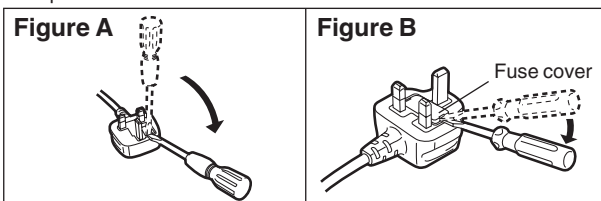
Remove the connector cover.

How to replace the fuse

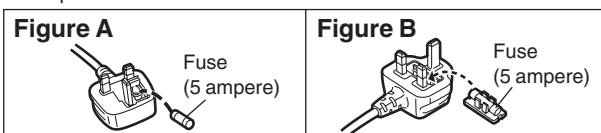
The location of the fuse differ according to the type of AC mains plug (figures A and B). Confirm the AC mains plug fitted and follow the instructions below.

Illustrations may differ from actual AC mains plug.

1. Open the fuse cover with a screwdriver.



2. Replace the fuse and close or attach the fuse cover.



Placement

Set the unit up on an even surface away from direct sunlight, high temperatures, high humidity, and excessive vibration. These conditions can damage the cabinet and other components, thereby shortening the unit's service life.

Do not place heavy items on the unit.

Voltage

Do not use high voltage power sources. This can overload the unit and cause a fire.

Do not use a DC power source. Check the source carefully when setting the unit up on a ship or other place where DC is used.

AC mains lead protection

Ensure the AC mains lead is connected correctly and not damaged. Poor connection and lead damage can cause fire or electric shock. Do not pull, bend, or place heavy items on the lead.

Grasp the plug firmly when unplugging the lead. Pulling the AC mains lead can cause electric shock.

Do not handle the plug with wet hands. This can cause electric shock.

Foreign matter

Do not let metal objects fall inside the unit. This can cause electric shock or malfunction.

Do not let liquids get into the unit. This can cause electric shock or malfunction. If this occurs, immediately disconnect the unit from the power supply and contact your dealer.

Do not spray insecticides onto or into the unit. They contain flammable gases which can ignite if sprayed into the unit.

Service

Do not attempt to repair this unit by yourself. If sound is interrupted, indicators fail to light, smoke appears, or any other problem that is not covered in these operating instructions occurs, disconnect the AC mains lead and contact your dealer or an authorized service center. Electric shock or damage to the unit can occur if the unit is repaired, disassembled or reconstructed by unqualified persons.

Extend operating life by disconnecting the unit from the power source if it is not to be used for a long time.

CAUTION!

Do not place anything on top of this unit or block the heat radiation vents in any way. In particular, do not place tape decks or CD/DVD players on this unit as heat radiated from it can damage your software.

The socket outlet shall be installed near the equipment and easily accessible or the mains plug or an appliance coupler shall remain readily operable.

NORSK

Utstyret bør plasseres i nærheten av AC-stikkkontakten, og støpslet må være lett tilgjengelig hvis det skulle oppstå problemer.

SUOMI

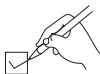
Laite tulee asettaa lähelle verkkopistorasiaa ja pistokkeen täytyy olla sellaisessa asennossa, että siihen on helppo tarttua ongelman sattuessa.

Manufactured under license from Dolby Laboratories.

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

"DTS", "DTS-ES", "Neo:6" and "DTS 96/24" are trademarks of Digital Theater Systems, Inc.

Supplied accessories

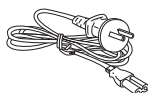


Please check and identify the supplied accessories.

- 1 AC mains lead



For the United Kingdom
(VJA0733)

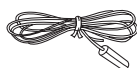


For Australia and New Zealand
(K2CJ2DA00010)

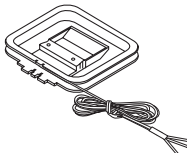


For continental Europe
(K2CQ2CA00002)

- 1 FM indoor antenna
(RSA0007-L)



- 1 AM loop antenna
(RSA0037)



- 1 Antenna plug adapter

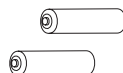


For the United Kingdom
(K1Y20200013)

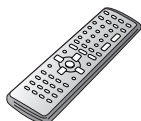


For Australia and New Zealand
(RFE0014)

- 2 Batteries



- 1 Remote control
(EUR7722KC0)



Refer to the separate booklet, "Remote Control Operation Guide", for remote control operation details.

Use the numbers indicated in parentheses when asking for replacement parts.

For the United Kingdom and Republic of Ireland

shop@ **Panasonic**

www.panasonic.co.uk (for UK customers only)

- Order accessory and consumable items for your product with ease and confidence by telephoning our Customer Care Centre Mon-Friday 9:00am- 5:30pm. (Excluding public holidays.)
- Or go on line through our Internet Accessory ordering application.
- Most major credit and debit cards accepted.
- All enquiries transactions and distribution facilities are provided directly by Panasonic UK Ltd.
- It couldn't be simpler!

Customer Care Centre

For UK customers: 08705 357357

For Republic of Ireland customers: 01 289 8333

Technical Support

For UK customers: 0870 1 505610

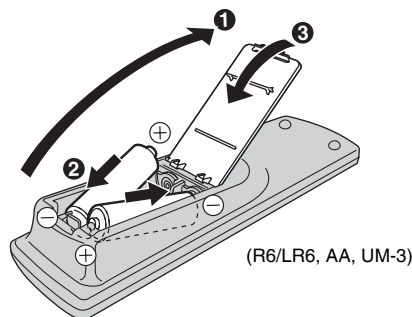
This Technical Support Hot Line number is for Panasonic PC software related products only.

For Republic of Ireland, please use the Customer Care Centre number listed above for all enquiries.

For all other product related enquiries, please use the Customer Care Centre numbers listed above.

The remote control

Batteries



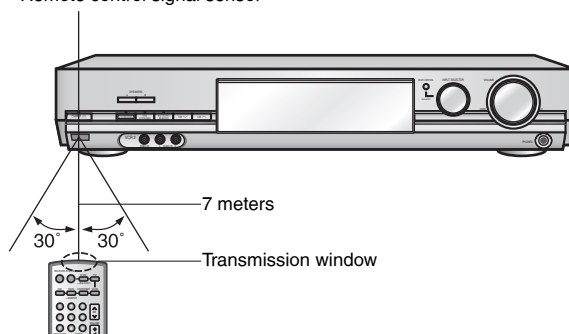
(R6/LR6, AA, UM-3)

- Insert so the poles (+ and -) match those in the remote control.
- Do not use rechargeable type batteries.

Use

Aim at the sensor, avoiding obstacles, at a maximum range of 7 m directly in front of the unit.

Remote control signal sensor



- Keep the transmission window and the unit's sensor free from dust.
- Operation can be affected by strong light sources, such as direct sunlight, and the glass doors on cabinets.

CAUTION!

- **DO NOT INSTALL OR PLACE THIS UNIT IN A BOOKCASE, BUILT-IN CABINET OR IN ANOTHER CONFINED SPACE. ENSURE THE UNIT IS WELL VENTILATED. TO PREVENT RISK OF ELECTRIC SHOCK OR FIRE HAZARD DUE TO OVERHEATING, ENSURE THAT CURTAINS AND ANY OTHER MATERIALS DO NOT OBSTRUCT THE VENTILATION VENTS.**
- **DO NOT OBSTRUCT THE UNIT'S VENTILATION OPENINGS WITH NEWSPAPERS, TABLECLOTHS, CURTAINS, AND SIMILAR ITEMS.**
- **DO NOT PLACE SOURCES OF NAKED FLAMES, SUCH AS LIGHTED CANDLES, ON THE UNIT.**
- **DISPOSE OF BATTERIES IN AN ENVIRONMENTALLY FRIENDLY MANNER.**

WARNING:

TO REDUCE THE RISK OF FIRE, ELECTRIC SHOCK OR PRODUCT DAMAGE, DO NOT EXPOSE THIS APPARATUS TO RAIN, MOISTURE, DRIPPING OR SPLASHING AND THAT NO OBJECTS FILLED WITH LIQUIDS, SUCH AS VASES, SHALL BE PLACED ON THE APPARATUS.

THIS UNIT IS INTENDED FOR USE IN MODERATE CLIMATES.

This product may receive radio interference caused by mobile telephones during use. If such interference is apparent, please increase separation between the product and the mobile telephone.

Step 1

Home Theater connections

DVD player/
TV or monitor

Before connecting

Stereo phono cable



Coaxial cable



Video connection cable



Speaker cable

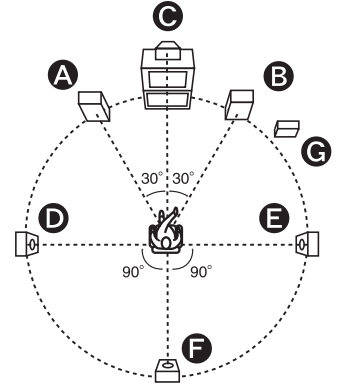


Turn off all components before making any connections.

Note

- Use a digital connection to enjoy Dolby Digital or DTS and record digital sources (⇒ pages 12 and 21).
- Use an analogue connection to enjoy sources that cannot be decoded on this unit and to record analogue sources (⇒ pages 12 and 21).
- Enjoy higher picture quality using the S VIDEO or COMPONENT terminal (⇒ page 7).
- Refer to pages 6 through 9 regarding connections to other equipment.

Placement of speakers



The front, center, and surround speakers should be placed at approximately the same distance from the seating area. The angles in the diagram are approximate.

FOR THE UNITED KINGDOM ONLY

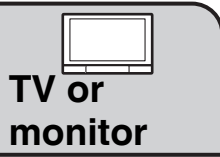
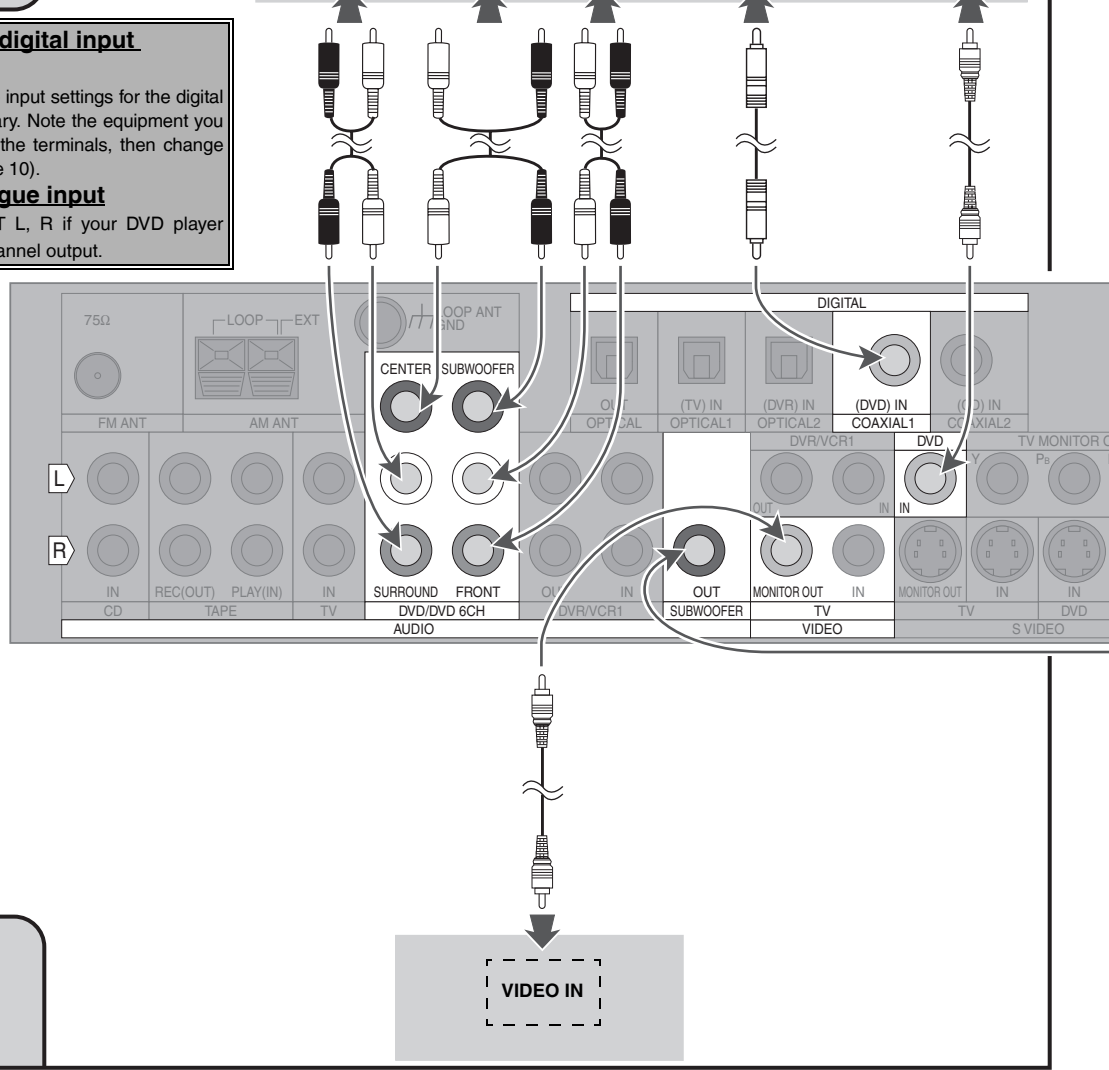
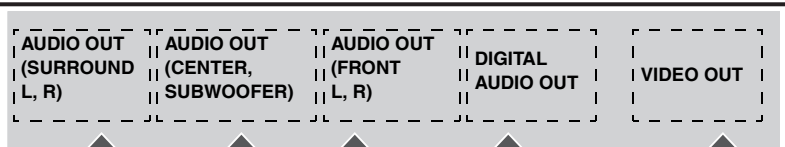
READ THE CAUTION FOR THE AC MAINS LEAD ON PAGE 2 BEFORE CONNECTION.



DVD player

Changing the digital input settings
You can change the input settings for the digital terminals if necessary. Note the equipment you have connected to the terminals, then change the settings (⇒ page 10).

Note on analogue input
Connect to FRONT L, R if your DVD player does not have 6 channel output.



TV or monitor

Speakers/ AC mains lead

Peripheral equipment and cables sold separately unless otherwise indicated.
To connect equipment, refer to the appropriate operating instructions.

Front speakers (A left B right)

Place on the left and right of the TV at seated ear height so that there is good coherency between the picture and sound.

Center speaker (C)

Place underneath or above the center of the TV. Aim the speaker at the seating area.

Surround speakers (D left E right)

Place on the side of or slightly behind the seating area, about one meter higher than ear level.

Surround back speaker (F)

Place behind the seating area, about one meter higher than ear level.

Subwoofer (G)

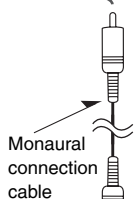
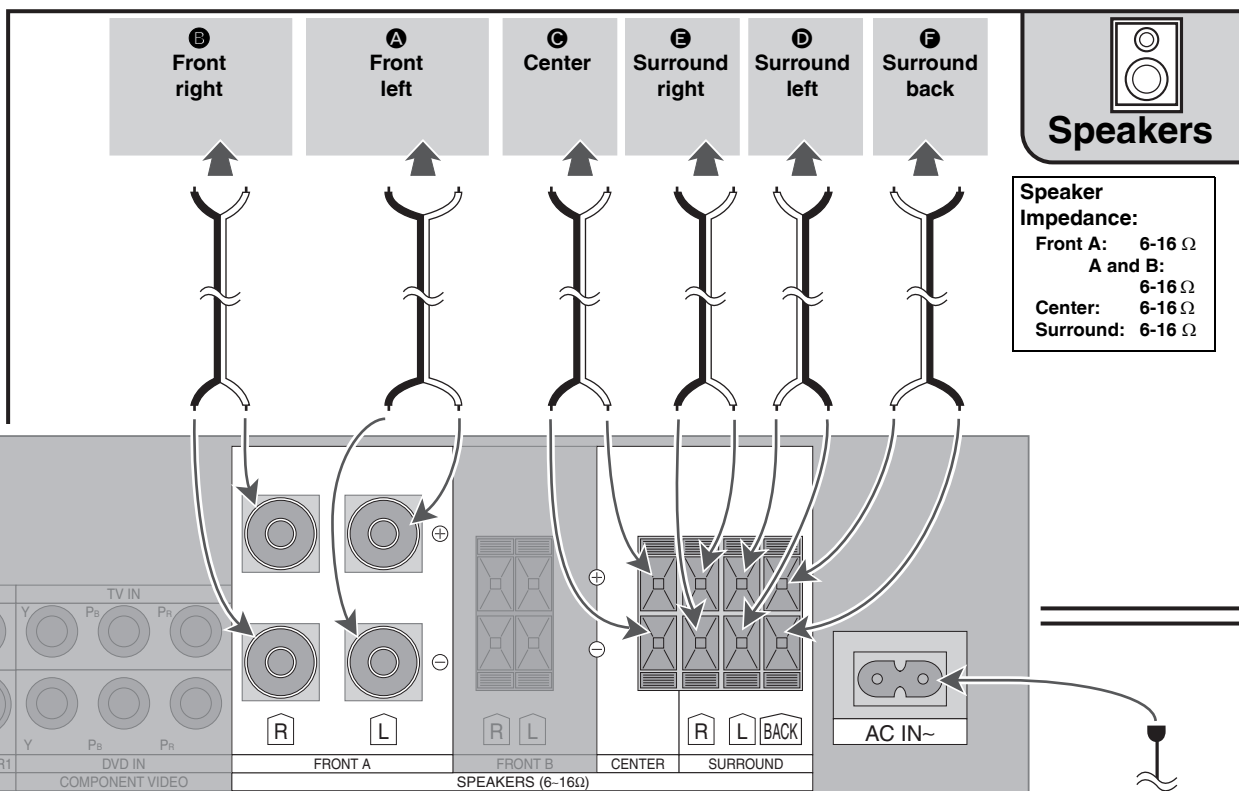
The subwoofer can be placed in any position as long as it is at a reasonable distance from the TV.

Note that some experimentation can yield the smoothest low frequency performance. Placement near a corner can increase the apparent output level, but can result in unnatural bass.

Connecting speakers

Cable	Speaker terminals	
Twist the wire 	FRONT A 	Other terminals
Note		
Do not short-circuit. 		

Step 1



Monaural connection cable

Active subwoofer
G

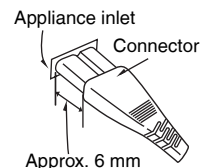
Connect this lead after all other cables and cords are connected.

Note

- The included AC mains lead is for use with this unit only. Do not use it with other equipment.
- If the unit is left unplugged for longer than two weeks, all settings will revert to the factory settings. Do the settings again if this occurs.

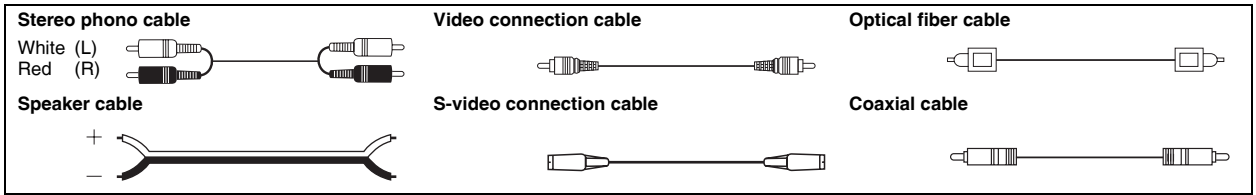
Insertion of connector

Even when the connector is perfectly inserted, depending on the type of inlet used, the front part of the connector may jut out as shown in the drawing. However there is no problem using the unit.



AC mains lead
(included)

Step 2 Other connections



Turn off all components before making any connections.

Note

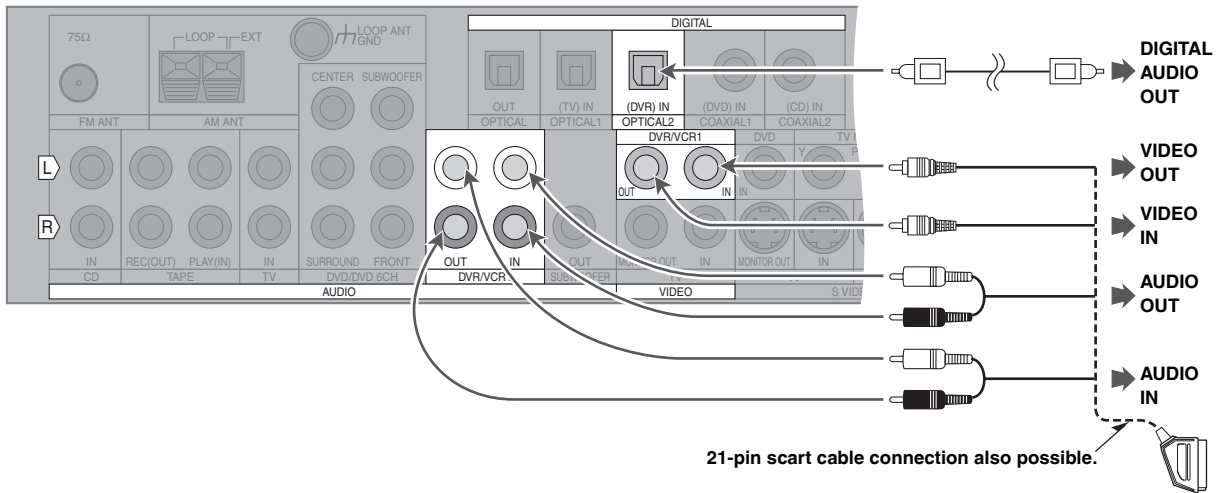
- Do not sharply bend the optical fiber cable.
- Use a digital connection to enjoy Dolby Digital or DTS and record digital source (⇒ pages 12 and 21).
- Use an analogue connection to enjoy sources that cannot be decoded on this unit and to record analogue sources (⇒ pages 12 and 21).

Changing the digital input settings

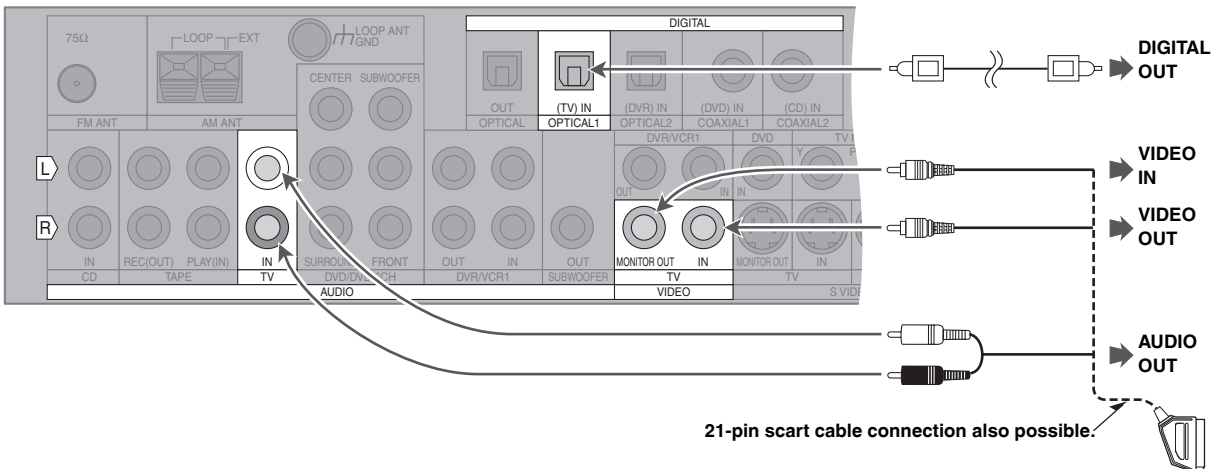
You can change the input settings for the digital terminals if necessary. Note the equipment you have connected to the terminals, then change the settings (⇒ page 10).



DVD recorder/VCR

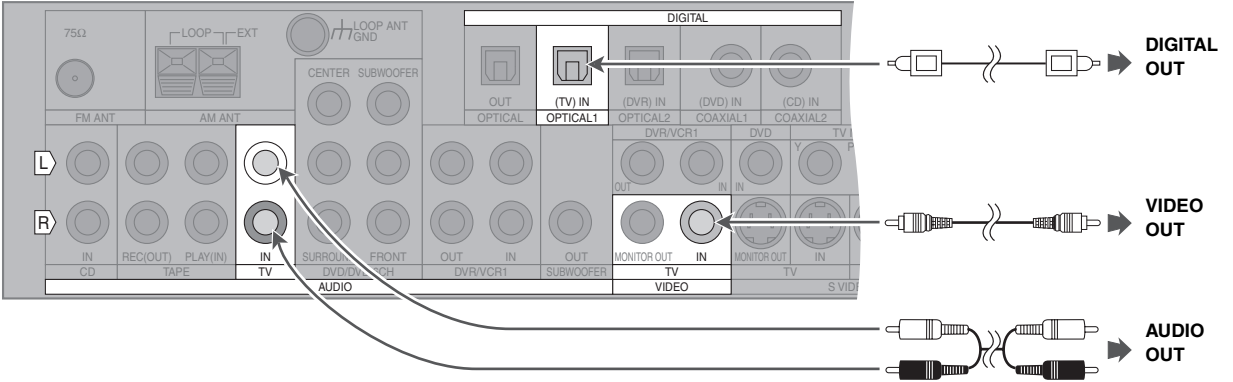


TV or monitor



Peripheral equipment and cables sold separately unless otherwise indicated.
To connect equipment, refer to the appropriate operating instructions.

Cable box or satellite receiver etc.



Enjoy even higher picture quality

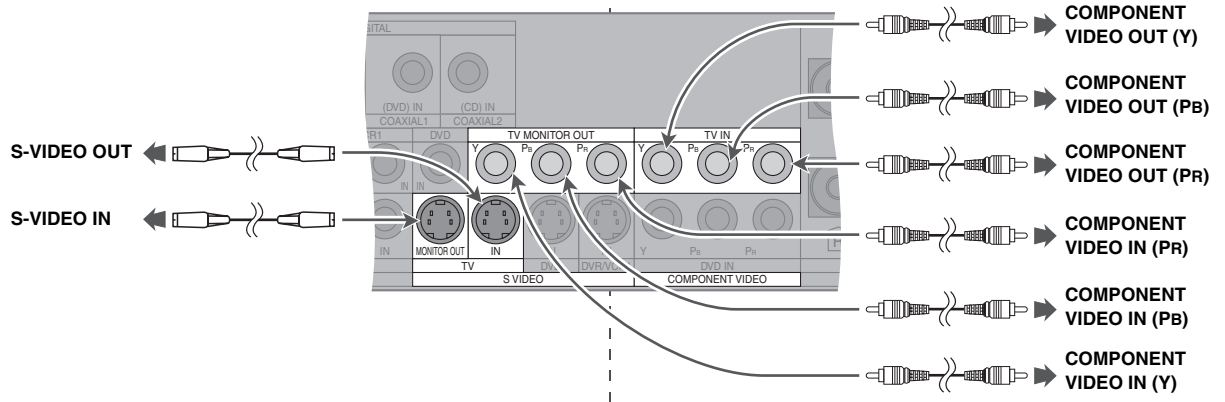
S VIDEO

Use this connection for better picture quality than with the VIDEO terminals.

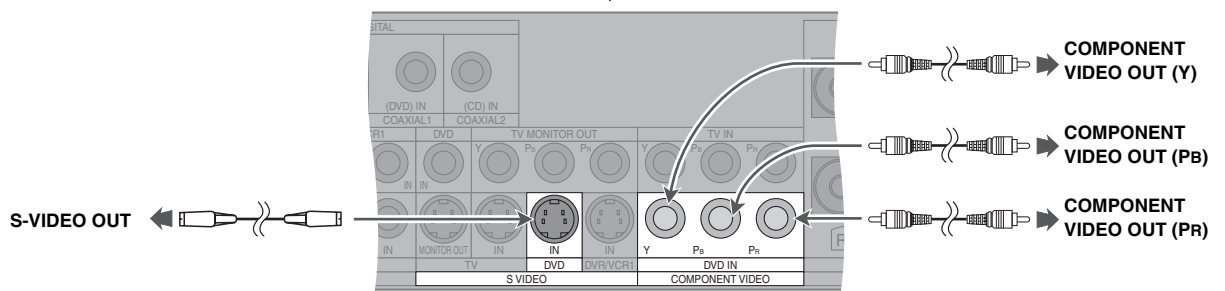
COMPONENT VIDEO

This connection provides high quality pictures by separating the color (PB and PR) and the luminance (Y) signals.

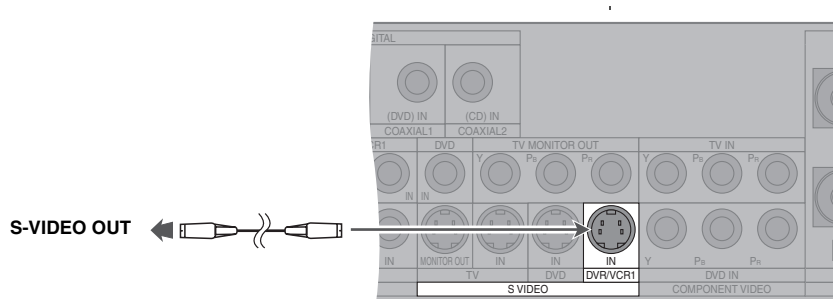
■ TV, monitor, cable box or satellite receiver etc.



■ DVD player



■ DVD recorder/VCR



Note

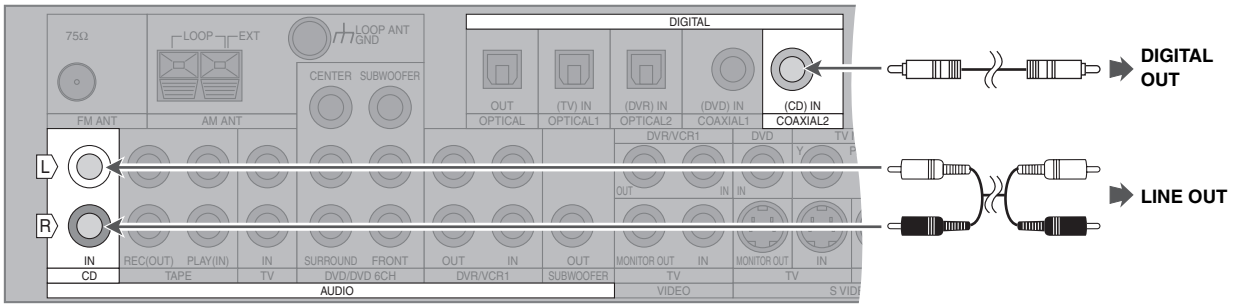
Video input can only be output again through the same type of terminal.

Step 2 Other connections

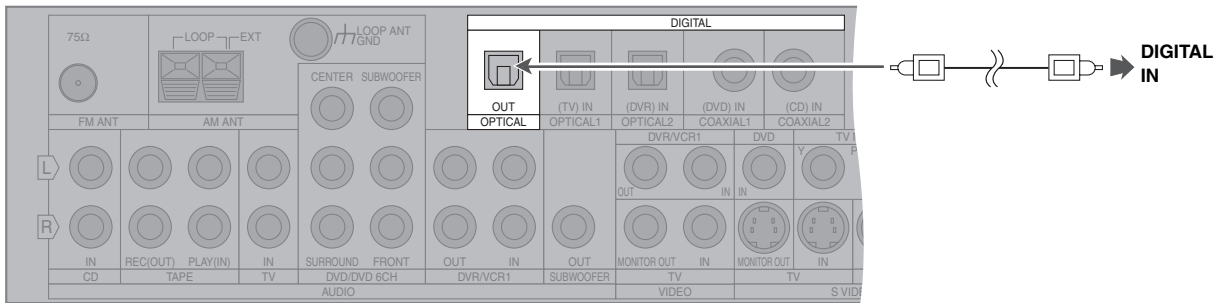
Turn off all components before making any connections.



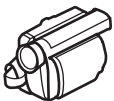
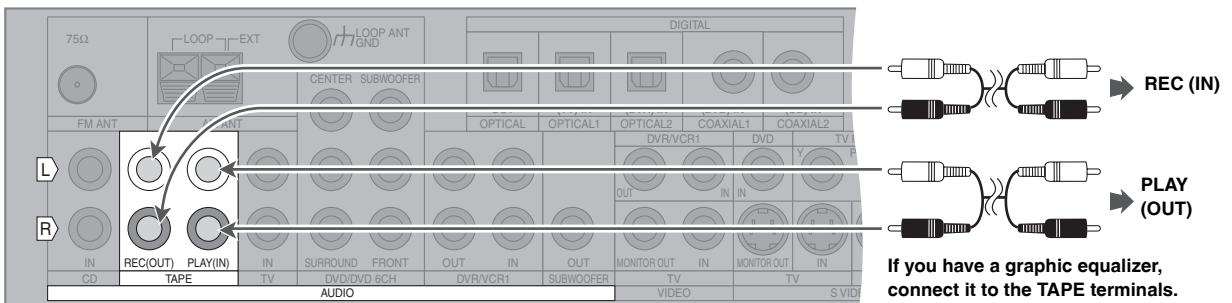
CD player



CD recorder



Tape deck



Video camera etc.



Peripheral equipment and cables sold separately unless otherwise indicated.
To connect equipment, refer to the appropriate operating instructions.

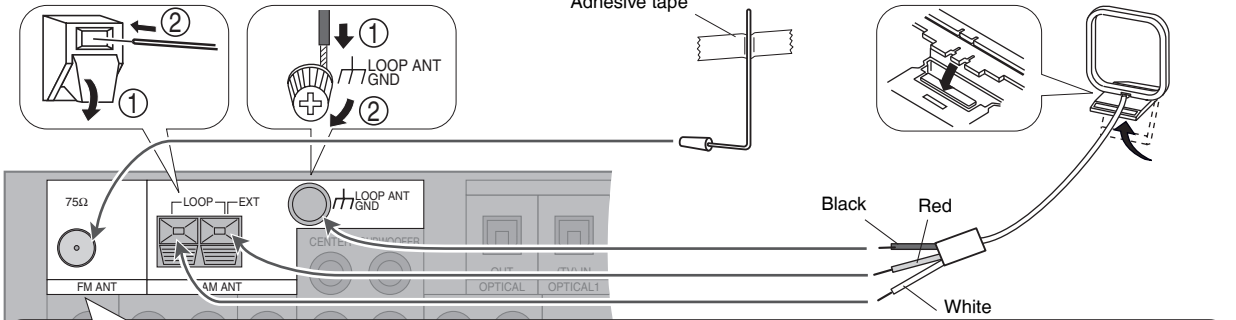


Antennas

FM indoor antenna (included)
Fix the other end of the antenna where reception is best.

AM loop antenna (included)
Keep the antenna cord away from tape decks, DVD players, and other cords.

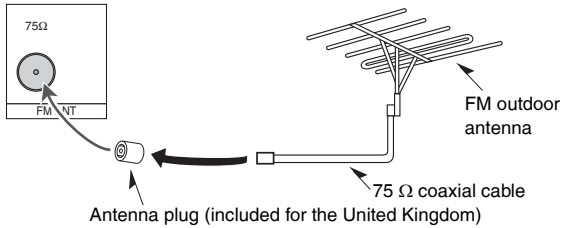
Adhesive tape



FM outdoor antenna

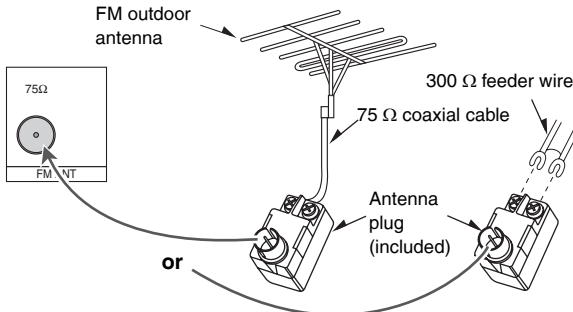
- Disconnect the FM indoor antenna.
- The antenna should be installed by a competent technician.

(For continental Europe and the United Kingdom)



(For Australia and New Zealand)

Two types of wire commonly used for connection from the antenna are 300 Ω parallel feeder wire and 75 Ω coaxial cable. For best resistance to interference, use 75 Ω coaxial cable.

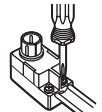


To connect a 75 Ω coaxial cable

- Remove a piece of the outer vinyl insulator.
- Carefully pull the tabs apart to remove the cover.
- Remove the lead wire and clamp it with the plastic bar.
- Install the coaxial cable. Clamp the cable conductor, and wind it on so that it does not contact anything else.
- Attach the cover.

To connect a 300 Ω feeder wire

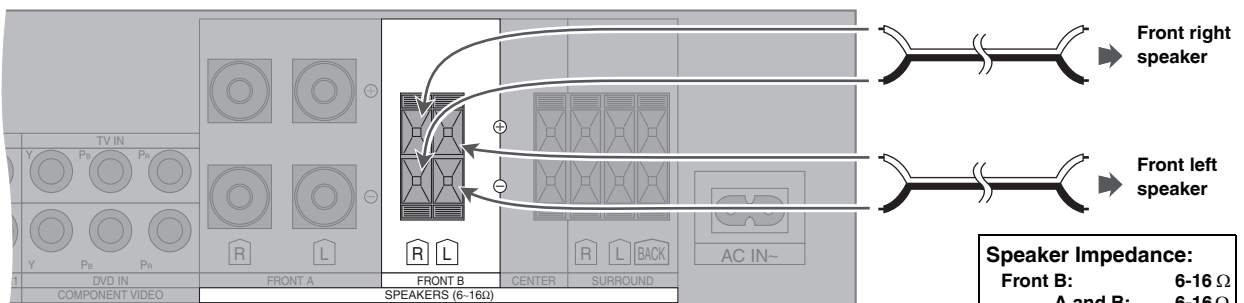
Loosen the screws, connect the wires, and tighten the screws to secure the connection.



Using speaker terminal B

For connection to a second pair of speakers.
Use the A terminals to enjoy multi-channel sound.

Cable	Speaker terminals	Note
Twist the wire		Do not short-circuit.



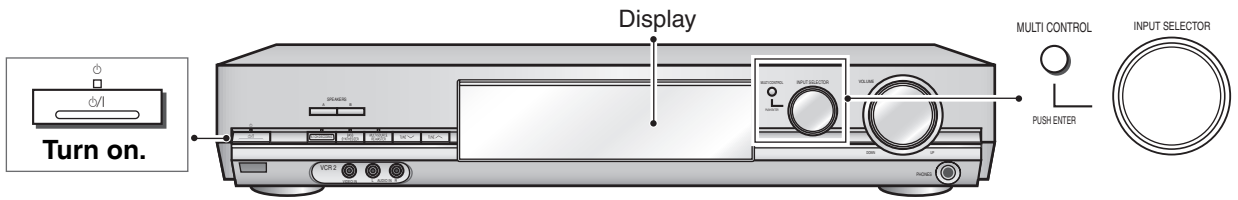
Speaker Impedance:
Front B: 6-16 Ω
A and B: 6-16 Ω

Step 3

Settings

Multi control basic setup settings **MULTI CONTROL**

Change the settings to suit your equipment to the environment in which you are using it. Before making any changes, read the descriptions of the settings, note the factory settings and ranges, and refer to the equipment's instructions.



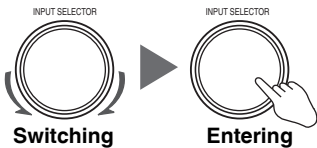
1 Enter Multi control mode.



Main menu is displayed.

(Multi control mode menus and factory settings → back cover)

2 Select "SETUP 1 (BASIC SETUP)".



SETUP 1

3 Change the settings.

- To cancel



To finish settings

1. Press [MULTI CONTROL] several times to select "EXIT".
2. Press [INPUT SELECTOR].

EXIT

SPEAKERS

Set the speaker combination connected to this unit.

- SUBW: Subwoofer
- L R: Front L/R
- C: Center
- S: Surround
- SB: Surround Back

For the subwoofer (SUBW), select YES if you have connected one, or NO if you have not.

- LCR S SB: All speakers connected
- L_R S SB: No center speaker
- LCR S __: No surround back speaker
- L_R S __: No center and surround back speaker
- LCR __ __: No surround speaker
- L_R __ __: Only front speaker

1. Select.



SPEAKERS

D-INPUT (Digital input)

Change these settings to suit the connections you have made to the optical (OPT) and coaxial (COAX) digital input terminals, so that the correct source is selected when you turn [INPUT SELECTOR].

1. Select.



D-INPUT

IN MODE (Input mode)

This unit automatically detects whether input is digital or analogue, but you can fix the input mode.

- AUTO: Automatically detects the input signal and plays
- ANALOG: Fixes the input signal to analogue and plays
- DIGITAL: Fixes the input signal to digital and plays
- PCM FIX: Fixes the input signal to PCM and plays

1. Select.



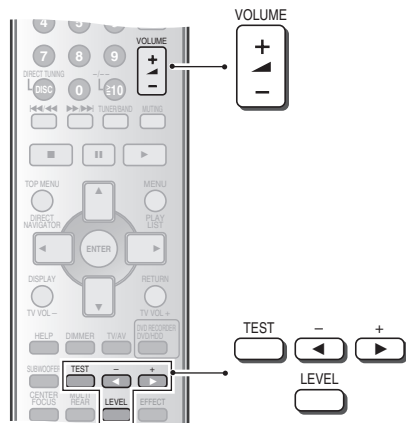
IN MODE

Note regarding PCM FIX mode

In rare cases, the unit may have trouble recognizing the digital signals on discs. With the PCM signals on CDs, this may cause the beginning of a track to be cut off. Engage the PCM FIX mode if this occurs. When PCM FIX mode is on, the unit cannot process other signals. This may cause noise to be output. Select another mode in this case. The PCM FIX mode remains on even if you turn the unit to standby.

Adjusting speaker output level

Adjust the level of the other speakers based on the output of the front speakers. (Output is only from the speakers selected in the **SPEAKERS** settings. Adjust the volume of the front speakers with [VOLUME].)



2. Select.



SUBW YES
YES ← NO

3. Select the speakers.



LCR S SB
LCR S SB,
L_R S SB,
LCR S __,
L_R S __,
LCR __ __,
L_R __ __

2. Select the input position.



TV
TV, DVR, DVD, CD

3. Change the setting.



OPT 1
OPT 1, OPT 2,
COAX 1, COAX 2

2. Select the input position.



TV
TV, DVR, DVD, CD

3. Change the setting.



AUTO
AUTO, ANALOG,
DIGITAL, PCM FIX

For more detailed information on settings refer to “Advanced setup” on page 22.

C (center), RS (right surround), SB (surround back) and LS (left surround) can be adjusted between -10 dB and $+10$ dB, with 0 being the level of the front speakers.

Adjust center, surround and surround back output to the same apparent level of the front speakers.

For SW (subwoofer), you can select “MIN” for minimum output, a level between 1 and 19, or “MAX” for maximum output. Adjust subwoofer output so it is balanced with the front speakers. Subwoofer output is easily influenced by the source. You can also change its level while playing something for better effect (➔ page 19).

Preparation: Press [SPEAKERS A] to turn on SPEAKERS A. (On the main unit)

1 Output the signal.



TEST L
Two seconds each.
L → C → R → RS
↳ SW ← LS ← SB

2 Adjust the main volume.



VOL -50dB
--dB (minimum) 0 dB (maximum)

3 Select the speaker channel.



C 0dB
C, RS, SB, LS, SW

4 Adjust the level.

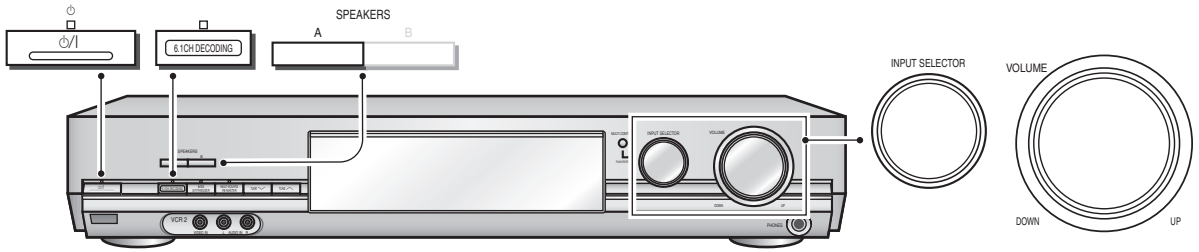


C +4dB
-10 dB +10 dB
MIN, 1 19, MAX

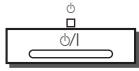
5 Stop the test signal.



Step 4 Basic operations



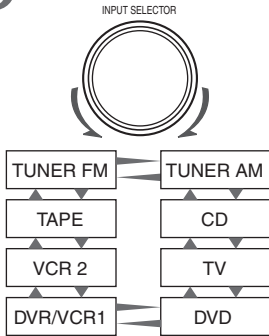
1 Turn on.



2 Turn SPEAKERS A on.



3 Select input.

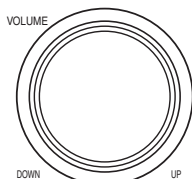


4 Start play of the source.

The unit sets the sound mode (stereo or multi-channel) to suit the input signal.

- Select the desired sound mode (→ right)

5 Adjust the volume.



When you finish listening

Be sure to reduce the volume and press [⏻] to turn the unit to standby.

Notes on digital input

This unit can decode the following signals:

- Dolby Digital, including Dolby Digital Surround EX
- DTS, including DTS-ES or DTS 96/24
- PCM, including PCM with sampling frequencies of 192, 176.4 (COAXIAL1), 96 or 88.2 kHz

It cannot decode:

- Other digital signals, such as MPEG
- Dolby Digital RF signals from a laser disc player

Sound modes

Adding surround effects

Using Dolby Pro Logic II

Dolby Pro Logic II processor works not only on sources recorded with Dolby Surround, but also on any stereo source.

The following modes are available when using Dolby Pro Logic II.



MOVIE

Use this mode when playing movies, especially videotapes, recorded in Dolby Surround.

MUSIC

Adds surround effects to stereo sources.

PANORAMA

Sound is spread out more so you feel like you are surrounded by music.

- To cancel: Press [STEREO/2CH MIX, OFF].

Using DTS NEO:6

Use DTS NEO:6 to play 2-channel sources through multi-channels.

The following modes are available when playing 2-channel sources.



CINEMA

Use this mode when playing movies.

MUSIC

Adds surround effects to stereo sources.

- When the "DTS" or "DIGITAL" indicator is lit, only the CINEMA mode can be selected.
- To cancel: Press [STEREO/2CH MIX, OFF].

Using the Sound Field Control (SFC)

Enjoy an enhanced sound experience with greater presence and spread by using these SFC modes with Dolby Digital, DTS, PCM or analogue stereo sources. Choose from the following modes.



MUSIC

LIVE

Imparts the reflection and spread of a large concert hall.

POP/ROCK

Best suited for dynamic sound such as pop and rock music.

VOCAL

Best suited to enhance vocals.

JAZZ

Recreates natural sound ambience and direction.

DANCE

Enjoy a dance hall like audio effect.

PARTY

This mode uses the front and surround speakers so that sound is in stereo regardless of the direction you are facing.

AV/MOVIE

DRAMA

Best suited for dialogues in drama movies.

ACTION

Best suited for action movies with impact.

SPORTS

Enjoy a feeling like being at a live sporting event.

MUSICAL

Enjoy a feeling like being at a live musical performance.

GAME

Enjoy games with greater audio impact.

MONO

Best suited for older monaural audio movies.

- To cancel: Press [STEREO/2CH MIX, OFF].

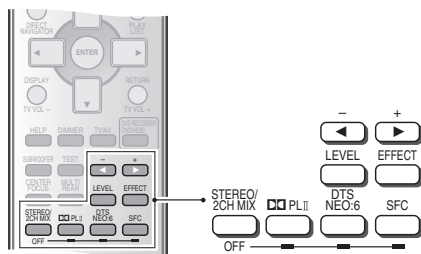
6.1CH DECODING mode

This mode uses the surround back speaker to create a realistic sound field. It is especially effective when playing DTS-ES and Dolby Digital Surround EX, but can be used with other DTS and Dolby Digital sources, as well as Dolby Pro Logic II, DTS NEO:6 and SFC. This mode engages automatically if the disc has a recognition signal for DTS-ES or Dolby Digital Surround EX (you can still turn the mode off).



- To cancel

Press [6.1CH DECODING].



You can adjust the effect of MUSIC and PANORAMA with the center width and dimension controls.

Center Width Control – C-WDTH

This adjustment helps you realize a more natural sound image when listening to music. Move sound out into the front speakers to improve the overall front image, or add sound to the center speaker to fix the center image.

You can choose a level between 0 (the center speaker is dominant) and 7 (center sound is spread out). The default level is 3.



Select "C-WDTH".

Adjust the effect.

Dimension Control – DIMEN

You can make up for differences in the output level of the front and surround speakers. You can choose a level between -3 and +3 - Increase the level to move sound to the front speakers, decrease to move it to the surround speakers. The default is level 0.



Select "DIMEN".

Adjust the effect.

You can adjust the effect of MUSIC with the center image control.

Center Image Control – C-IMG

This adjustment helps you realize a more natural sound image when listening to music. Move sound out into the front speakers to improve the overall front image, or add sound to the center speaker to fix the center image.

You can choose a level between 0 (the center speaker is dominant) and 5 (center sound is spread out). The default level is 3.



Select "C-IMG".

Adjust the effect.

You can adjust the sound field by adjusting the level of the speakers and effect. These adjustments can be made for each SFC mode.

To adjust the speaker level



Select speaker channel.

Adjust the level.

C → RS → LS → SW

C, RS, SB and LS: -10 dB to +10 dB
SW: --- (off) → MIN

↔ 1 - 19 ↔ MAX

When 6.1CH DECODING is on:

C → RS → SB → LS → SW

To adjust SFC effect



Select "EFFECT".

Adjust the effect.

SFC effect can be adjusted between EFFECT 1 (minimum) and EFFECT 10 (maximum). The factory setting is EFFECT 5 for each mode.

- Output is only from the speakers selected in the SPEAKERS settings.

Listening to multi-channel sources in stereo (2CH MIX mode)

When multi-channel sources are played in this mode, the sounds intended for the other speaker channels are played through the front speakers.



OFF

- **To cancel**
Press [STEREO/2CH MIX, OFF]

Notes on sound modes

Dolby Pro Logic II, DTS NEO:6 and SFC modes remain in effect until you change them.

- **To cancel**
Press [STEREO/2CH MIX, OFF].

The 2CH MIX mode remains in effect until you change input mode or turn off the unit.

- **To return to surround sound**
Press [STEREO/2CH MIX, OFF].

When input is PCM with sampling frequencies of 192, 176.4 (COAXIAL1), 96, or 88.2 kHz:

- You cannot add surround effects with Dolby Pro Logic II, DTS NEO:6 or SFC.

When neither the center or surround speakers are selected in the SPEAKERS settings:

- You cannot use Dolby Pro Logic II, DTS NEO:6 or SFC.

When the surround back speaker is not selected in the SPEAKERS settings:

- You cannot use 6.1CH DECODING mode.

If the unit does not automatically recognize Dolby Digital Surround EX or DTS-ES and output is 5.1 channels:

- Press [6.1CH DECODING] to switch the mode on manually. Sound will now come from the surround back speaker.

Control guide

Main unit

Standby indicator [Ⓞ]

When the unit is connected to the AC mains supply, this indicator lights up in standby mode and goes out when the unit is turned on.

Standby/on switch [Ⓞ/I]

Press to switch the unit from on to standby mode or vice versa. In standby mode, the unit is still consuming a small amount of power.

[SPEAKERS, A, B]

For selecting speakers A or B. Turning the speakers off automatically engages the STEREO/2CH MIX mode (when listening through headphones, for example).

[DIGITAL EX, DIGITAL, PL II, DTS 96/24, DTS-ES, DTS, DTS NEO:6]

Lights to indicate the source's input signal and decoding format used.

DIGITAL EX: Dolby Digital Surround EX sources

DIGITAL: Dolby Digital sources

PL II: Dolby Pro Logic II decoder is being used

DTS 96/24: DTS 96/24 sources

DTS-ES: DTS-ES discrete or matrix sources

DTS: DTS sources

DTS NEO:6: DTS NEO:6 matrix decoder is being used

[MULTI CONTROL]

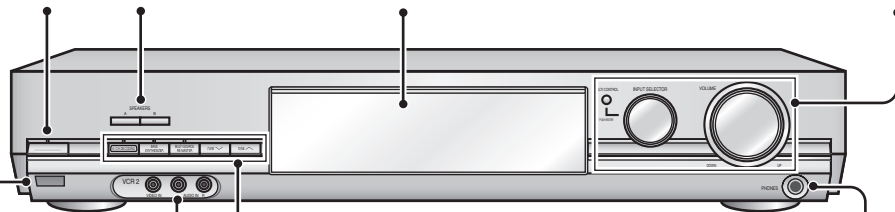
Press to enter Multi control mode, and use [INPUT SELECTOR] to select/enter.

[INPUT SELECTOR]

For selecting input. Selects/Enters each setting in Multi control mode.

[VOLUME]

Volume control.



Remote control signal sensor

[VCR 2]

For a video camera, etc.

[6.1CH DECODING]

For turning on the 6.1 channel decoding mode. When using this mode the indicator lights.

[BASS SYNTHESIZER]

For turning on the bass synthesizer mode. When using this mode the indicator lights.

[MULTI-SOURCE RE-MASTER]

For selecting a re-master mode. When using this mode the indicator lights.

[TUNE ∇, ∆]

For tuning the radio and selecting preset stations.

Press and hold until the frequency starts scrolling to start automatic tuning. Tuning stops when a station is found.

[PHONES]

Headphone jack

Plug type: 6.3 mm stereo

- Avoid listening for prolonged periods of time to prevent hearing damage.
- Turn the speakers off when using the headphones.

Display

- When you turn the dimmer to "ON", the following indicators change to dim.

[– SPEAKERS– A, B]

Speaker indicators

A: Sound is output from speakers connected to the front A, surround, and center terminals.

B: Sound is output only from speakers connected to the front B terminals.

A B: Sound is output from speakers connected to the front A and B terminals.

[TUNED, ST, M, MONO]

Radio indicators

TUNED: A station is tuned.

ST: A stereo FM broadcast is tuned.

M: Flashes during automatic presetting.

MONO: Lights when using the monaural mode.

[SLEEP]

Sleep timer indicator.

[RDS, PS, PTY]

(For continental Europe and the United Kingdom)

RDS: Lights while RDS signals are being received.

PS, PTY: Indicates the current RDS display mode.

[SFC, CENTER FOCUS, 2CH MIX, MULTI REAR]

SFC: Lights when using an SFC mode.

CENTER FOCUS: Lights when using the center focus mode.

2CH MIX: Lights when playing a multi-channel source in 2CH MIX mode.

MULTI REAR: Lights when using the multi rear surround mode.

[<<<MULTI CONTROL>>>]

When you press the [MULTI CONTROL] button and enter the settings the indicator lights.

[–DIGITAL INPUT–, L, C, R, S, LS, SB, RS, LFE]

Program format indicators

Show the channels contained in the digital input signal. They do not light when input is analogue.

L: Front left channel

C: Center channel

R: Front right channel

S: If the surround channel is monaural.

LS: Surround left channel

SB: Surround back channel

RS: Surround right channel

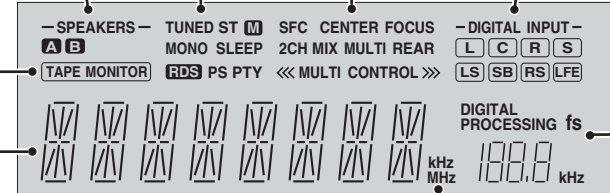
LFE (Low Frequency Effects): Deep-bass effect.

[TAPE MONITOR]

Lights when the tape monitor is on.

General display

Shows the input mode, radio frequency, and other general information.



[DIGITAL PROCESSING fs]

Displays the frequency the unit is processing.

[kHz, MHz]

Frequency unit indicators
kHz: AM, or PCM sampling frequency
MHz: FM

Remote control

Buttons not explained on this page are used only to operate other equipment.

Refer to the separate booklet, "Remote Control Operation Guide", for remote control operation details.

[⏻, RECEIVER]
Standby/on button.

[1, 2, 3, 4, 5, 6, 7, 8, 9, 0]
To enter radio frequencies and channels.
[DISC, DIRECT TUNING]
To enable selection of radio stations by frequency.
[≥ 10, -/- -]
To enter two digit channels.

[TUNER/BAND]
Change the input mode and remote control mode to TUNER.
For switching between FM and AM.

[HELP]
Displays help messages.
Press if an error message appears.
A message offering a possible solution scrolls across the display.

[SUBWOOFER]
For selecting subwoofer level.
[CENTER FOCUS]
For turning on the center focus mode.
[MULTI REAR]
For turning on the multi rear surround mode.

[STEREO/2CH MIX, OFF]
For selecting STEREO or 2CH MIX mode.
To cancel surround effect.
[DOLBY II]
For selecting a Dolby Pro Logic II mode: MOVIE, MUSIC or PANORAMA.
[DTS NEO:6]
For selecting a DTS NEO:6 mode: CINEMA or MUSIC.
[SFC]
For selecting a SFC mode: MUSIC or AV/MOVIE

[DVD -ANALOG 6CH, TV, CD, TAPE -MONITOR, DVD RECORDER, VCR]
Input mode and remote control mode buttons.
DVD -ANALOG 6CH
When DVD mode is selected
• Press and hold:
For switching between analogue 6-channel and 2-channel DVD input.
TAPE -MONITOR
• Press and hold:
For monitoring sound when recording to a 3 head cassette deck. Also used when you have connected a graphic equalizer to the TAPE terminals.

[^, CH, v]
For selecting preset radio channels.

[+, -, VOLUME]
To adjust the volume.

[MUTING]
To mute the volume.

[DIMMER]
For dimming the unit's display.

[TEST]
To start the speaker test signal.
[LEVEL]
Use when adjusting speaker level.
[EFFECT]
Use when adjusting Dolby Pro Logic II, DTS NEO:6 or SFC effects.
[◀, -, ▶, +]
First select EFFECT, LEVEL or SFC, and then press [◀, -] or [▶, +] to complete the setting.

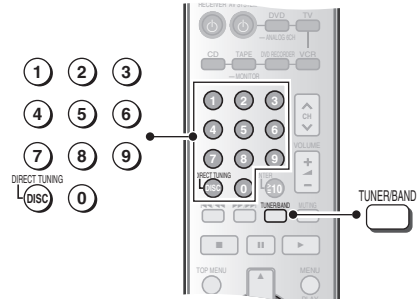
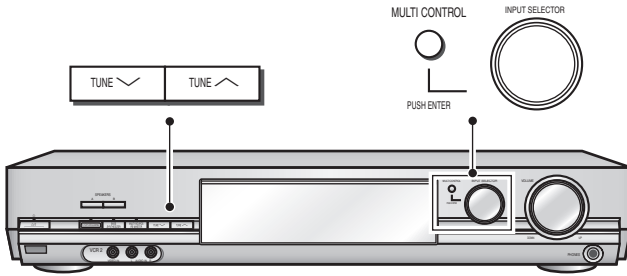
For your reference

- **When playing video sources connected to DVR/VCR1**
The picture remains on the screen even if you select TAPE, CD or TUNER.
- **When SPEAKERS B is on**
The STEREO/2CH MIX mode is engaged automatically.

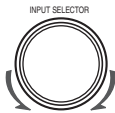
- **When DVD ANALOG 6CH input is on**
Speaker settings are ineffective. Change the settings on the DVD player if necessary.
- **When using a graphic equalizer**
Some distortion may occur, depending on the equalizer's settings.
- **When input is DIGITAL**
The tape monitor cannot be used.
- **When muting is on**
Muting is also canceled when the unit is turned off.

The radio

Manual tuning



1 Select "TUNER FM" or "TUNER AM".



2 Select MANUAL tuning mode.
(⇒ below, "Select MANUAL or PRESET tuning mode")

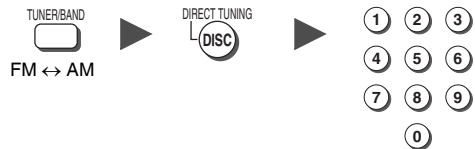
3 Tune to the station.



Automatic tuning

Hold down [TUNE ∨ or ∧] until the frequency begins to scroll. Tuning stops when a station is found. (Tuning may stop if there is interference.)

Direct tuning



e.g. 107.90 MHz, Press [1] → [0] → [7] → [9] → [0]

- If you do not press a button while the cursor is flashing, the display returns to the frequency being received.
- If the frequency has not been input correctly, "ERROR" will be displayed.

Multi control tuner settings MULTI CONTROL

1 Enter Multi control mode.



Main menu is displayed.
(Multi control mode menus and factory settings ⇒ back cover)

2 Change the settings.

• To cancel



Select MANUAL or PRESET tuning mode

MANUAL: To tune the station frequency.
PRESET: To select the preset channel.

1. Select.



TUNER

2. Select.



TUNING

3. Select.



MANUAL
MANUAL ↔ PRESET

FM mode

You can improve FM reception by switching reception to monaural.

1. Select "TUNER".



2. Select "FM MODE".



3. Select "MONO".



- To cancel, select "AUTO".

Beat proof mode

When there is a lot of noise interference with the AM broadcast, try switching to this mode. This may change the volume, but noise will also reduce.

1. Select "OPTION".



2. Select "B PROOF".



3. Select "MODE A" or "MODE B".



AM allocation

To change the AM frequency step.

1. Select "TUNER".



2. Select "AM ALLOC".



3. Select "9 kHz" or "10 kHz".



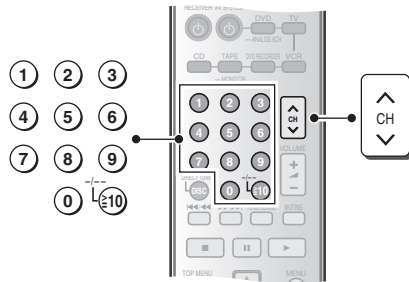
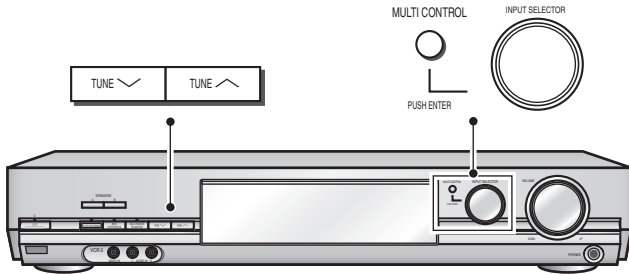
To finish settings

1. Press [MULTI CONTROL] several times to select "EXIT".
2. Press [INPUT SELECTOR].

For your reference

- **Improving reception**
DVD players can interfere with radio reception. Turn the DVD player off or move it further away from the antennas if this occurs.
- **Beat proof mode**
Changing these settings also changes the A/D attenuator settings, which are linked. (⇒ page 20)

Preset tuning



1 Presetting stations.
(→ below, "Automatic presetting" or "Manual presetting")

2 Select PRESET tuning mode.
(→ page 16, "Select MANUAL or PRESET tuning mode")

3 Select the preset channels.

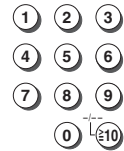


Hold down the button to change channels faster.

Selecting preset channels (On the remote control)



or



When using the numbered buttons

To select a two digit number e.g. 21:
[≥ 10, -/-] → [2] → [1]

Multi control tuner settings MULTI CONTROL

1 Enter Multi control mode.



Main menu is displayed.
(Multi control mode menus and factory settings → back cover)

2 Change the settings.

• To cancel



Automatic presetting

Preparation:

First, set the channel reception:
FM 87.50 MHz,
AM 522 kHz (9 kHz steps),
AM 530 kHz (10 kHz steps)

Preset channels that are automatically assigned by this unit are:

FM: 1 to 30, AM: 21 to 30
(FM stations are replaced if any were preset in these channels.)

Manual presetting

Preparation:

Set the station signal you want to set as a preset.

Preset the stations one at a time.

• FM stations can also be preset in the MONO mode.

1. Select.



TUNER

2. Select.



AUTO MEM

3. Select "START".



START

START ↔ CANCEL
• To cancel, select "CANCEL".

- During automatic presetting, the memory indicator (M) flashes and the frequency scrolls. The memory indicator and channel numbers are displayed for a second when a station is preset.
- The last station to be preset is displayed when presetting finishes.

1. Select.



TUNER

2. Select.



MEMORY

3. Select the channel.



CH 1

CH 1 CH 30

• "STORED" is displayed.

- To continue presetting, press [TUNE ∨ or ∧] to tune another station from step 1.

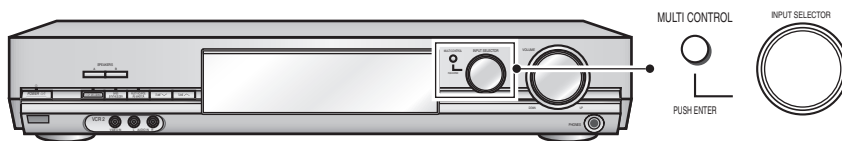
To finish settings

1. Press [MULTI CONTROL] several times to select "EXIT".
2. Press [INPUT SELECTOR].

For your reference

Even if the AC mains lead is disconnected from the household mains socket, the stations remain in memory for approximately two weeks.

RDS broadcasts (For continental Europe and the United Kingdom)



Multi control tuner settings **MULTI CONTROL**

1 Enter Multi control mode.



Main menu is displayed.
(Multi control mode menus and factory settings → back cover)

2 Change the settings.

• To cancel



Change the display

This unit can display the text data transmitted by the radio data system (RDS) available in some areas.

“**RDS**” lights while RDS signals are being received.

FREQ: Frequency display
RDS PS: Program service, the station name
RDS PTY: Program type

• RDS displays may not be available if reception is poor.

1. Select.



TUNER

2. Select.



DISPLAY

3. Select.



FREQ

FREQ, RDS PS,
RDS PTY

To finish settings

1. Press [MULTI CONTROL] several times to select “EXIT”.
2. Press [INPUT SELECTOR].

For your reference

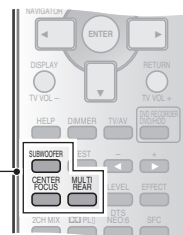
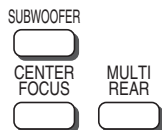
This unit does not have the emergency broadcast system (EBS) that automatically tunes into emergency broadcasts.

PTY displays

NEWS	News
AFFAIRS	Current affairs
INFO	Information
SPORT	Sport
EDUCATE	Education
DRAMA	Drama
CULTURE	Culture
SCIENCE	Science
VARIED	Varied
POP M	Pop music
ROCK M	Rock music
M. O. R. M	Middle-of-the-road Music
LIGHT M	Light classical
CLASSICS	Serious classical
OTHER M	Other music
WEATHER	Weather information

FINANCE	Finance
CHILDREN	Children
SOCIAL A	Social affairs
RELIGION	Religion
PHONE IN	Phone in
TRAVEL	Travel
LEISURE	Leisure
JAZZ	Jazz music
COUNTRY	Country music
NATIONAL	National music
OLDIES	Oldies
FOLK M	Folk music
DOCUMENT	Documentary
TEST	Test broadcast
ALARM	Emergency announcement

Audio settings



Bass synthesizer

Provides depth of bass for audio play with impact.

- When input signal is Dolby digital stereo or DTS stereo, this mode cannot be used.

Multi-source re-master

This original feature boosts the frequencies of the higher harmonics that are lost during recording due to compression.

When re-master is on, the current level appears.

- EFFECT 1: For fast tracks (pop and rock)
- EFFECT 2: For tracks with a variety of tempos (jazz)
- EFFECT 3: For slow tracks (classical)
- EFFECT 4: For compressed audio signals
- OFF: The re-master processing is off.

Subwoofer level

You can adjust the volume of the subwoofer while listening to a source. Select SW --- to stop output. The factory setting is SW 10.

- You cannot adjust the subwoofer level if DVD ANALOG 6CH is selected.
- Sound can be distorted if you raise the volume while the subwoofer level is high. Reduce the subwoofer level if this occurs.

Center focus

You can make the sound of the center speaker seem like it is coming from within the television.

The center focus cannot be used in the following cases:

- When there is no center input signal.
- When the center speaker is not selected in the SPEAKERS settings.

Multi rear surround

This mode makes it seem like sound is coming from the multiple rear surround speakers virtually when connected with surround speakers.

The multi rear surround cannot be used in the following cases:

- When there is no surround input signal.
- When the surround channel is monaural.
- When the surround speaker is not selected in the SPEAKERS settings.

DTS FIX mode

In rare cases, the unit may have trouble recognizing the digital signals on discs.

With DTS, the signals may not be recognized at all. Engage the DTS FIX mode if this occurs.

When DTS FIX mode is on, the unit cannot process other signals. This may cause noise to be output. Turn the setting off in this case.

- When you turn the unit to standby, the DTS FIX mode is canceled.



BASS ON

- To cancel Press [BASS SYNTHESIZER].



EFFECT 1

EFFECT 1, EFFECT 2, EFFECT 3, EFFECT 4, OFF



SW 10

---, MIN, 5, 10, 15, MAX



C.FOCUS

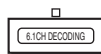
- To cancel Press [CENTER FOCUS].



M.REAR

- To cancel Press [MULTI REAR].

While the input source is selected



DTS FIX

Press and hold at the same time for 2 seconds.

- To cancel, perform the same operation again. "AUTO" is displayed.

For your reference

The bass synthesizer, center focus or multi rear surround cannot be used in the following cases.

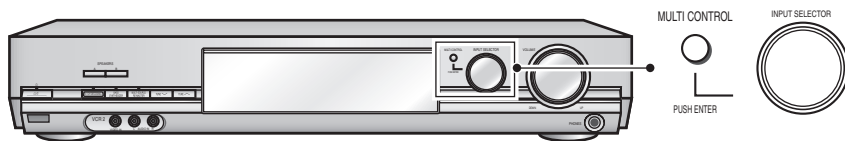
- When input signal is monaural, DTS 96/24, PCM with sampling frequencies of 192, 176.4, 96 or 88.2 kHz.
- When Dolby Pro Logic II, DTS NEO:6, SFC or multi-source re-master is on.

The center focus or multi rear surround cannot be used in the following case.

- When input signal is PCM or analogue stereo.
- When DVD ANALOG 6CH is selected.

When DTS FIX mode is on

- You cannot use 6.1CH DECODING mode. DTS-ES and DTS 96/24 are played as normal DTS (i.e., there is no output from the surround back speaker).



Multi control audio settings **MULTI CONTROL**

1 Enter Multi control mode.



Main menu is displayed.
(Multi control mode menus and factory settings
→ back cover)

2 Change the settings.

• To cancel



To finish settings

1. Press [MULTI CONTROL] several times to select "EXIT".
2. Press [INPUT SELECTOR].

Tone

You can adjust the level of the bass and treble.

- The STEREO mode must be on and input must be either analogue or PCM signals. You cannot adjust the tone if DVD ANALOG 6CH is selected.

1. Select.



TONE

2. Select.



BASS

BASS ↔ TREBLE

3. Adjust the level.



0dB

-10 dB +10 dB

Balance

You can adjust the balance of the front speakers.

1. Select.



BALANCE

2. Adjust the balance.



L | R

Dual program

When the input signal is Dolby Digital and "DUAL" appears in the display, the audio to be output is set.

- MAIN: Main audio output
- SAP: Sub channel audio output
- MAIN+SAP: Main and sub channel audio output

1. Select.



OPTION

2. Select.



DUAL PRG

3. Select.



MAIN

MAIN, SAP, MAIN+SAP

Dynamic range compression

Change this setting to listen to software recorded with Dolby Digital at low volume (such as late at night) maintaining audio clarity. It reduces the peak level in loud scenes without affecting the sound field.

OFF:

The software is played with the original dynamic range.

STANDARD:

The level recommended by the producer of the software for household viewing.

MAX:

The maximum allowable compression (recommended for night viewing).

1. Select.



OPTION

2. Select.



DR COMP

3. Select.



OFF

OFF, STANDARD, MAX

A/D attenuator

Turn the A/D attenuator on if "OVERFLOW" lights frequently when using 2-channel analogue input or DVD ANALOG 6CH input.

1. Select.



OPTION

2. Select.



A/D ATT

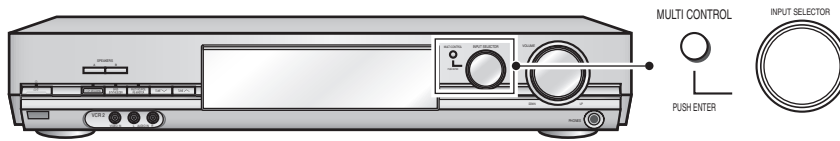
3. Select.



OFF

OFF ↔ ON

Other functions



Other Multi control function settings **MULTI CONTROL**

1 Enter Multi control mode.



Main menu is displayed.
(Multi control mode menus and factory settings
→ back cover)

2 Change the settings.

• To cancel



To finish settings

1. Press [MULTI CONTROL] several times to select "EXIT".
2. Press [INPUT SELECTOR].

Dimmer

Dim the display for better viewing in a darkened room. Choose a level between 1 (bright) and 3 (dim).

1. Select.



DIMMER

2. Select.



ON

OFF ↔ ON

- To cancel, select "OFF"

3. Select.



LEVEL 2

LEVEL 1, LEVEL 2, LEVEL 3

- The brightness changes to show the level.

Sleep timer

The sleep timer can turn the unit off after a set time. It does not control any other components.

1. Select.



SLEEP

2. Select.



OFF

OFF, 30, 60, 90, 120 (in minutes)

- To cancel, select "OFF"

- To check the setting
After setting the time, you can check the remaining time using step 2.
- To change a setting
Repeat the procedure from the beginning.

The RESET function

The operation settings for the unit will be initialized to the settings made at the time of shipment. However, any preset radio stations will not be erased.

1. Select.



OPTION

2. Select.



RESET

3. Select.

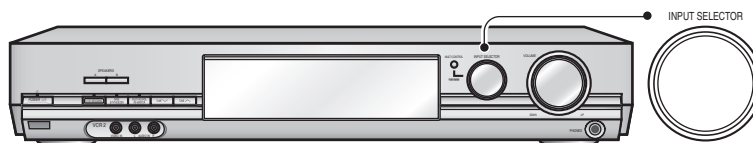


YES

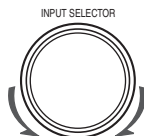
YES ↔ NO

- To cancel, select "NO".

Making a recording



1 Select the source to be recorded.



2 Begin recording.

Follow your recording unit's operating instructions.

3 Start the source to be recorded.

Follow your equipment's operating instructions.

You can record to a tape deck connected to TAPE REC (OUT), a DVD recorder/VCR connected to DVR/VCR1 OUT, or digital recording equipment connected to DIGITAL OPTICAL OUT.

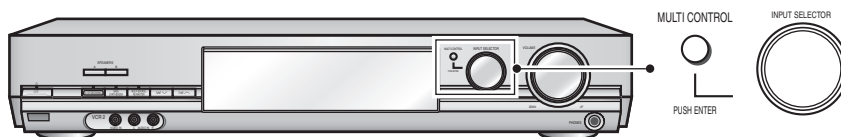
See the recording unit's operating instructions for details on how to prepare it for recording.

Note

- With a tape deck, you can record any analogue source except TAPE.
- With a DVD recorder/VCR, you can record any analogue source except TAPE and DVR/VCR1.
- With digital recording equipment, you can record any digital source without copy protection.
- When you select DVD ANALOG 6CH mode, only sound from the front left and right channels is recorded.
- Some sources do not allow digital recording. Connect through the analogue terminals and select "ANALOG" input.

Advanced setup

You can adjust the settings to match the setup environment and performance of the connected speakers.



Multi control advanced setup settings **MULTI CONTROL**

1 Enter Multi control mode

MULTI CONTROL
PUSH ENTER

Main menu is displayed.
(Multi control mode menus and factory settings → back cover)

2 Select "SETUP 2 (ADVANCE SETUP)".

Switching Entering

SETUP 2

3 Change the settings.

• To cancel

MULTI CONTROL
PUSH ENTER

To finish settings

1. Press [MULTI CONTROL] several times to select "EXIT".
2. Press [INPUT SELECTOR].

SPEAKERS	DISTANCE	FILTER
<p>Set the size to suit your speakers.</p> <p>LARGE: For speakers that can reproduce a full sound range, particularly the bass range below 100 Hz.</p> <p>SMALL: For speakers that cannot adequately reproduce the bass range. This setting is sufficient for most speakers if you are using a subwoofer.</p> <p>NONE: For speakers you haven't connected (center or surround).</p> <p>For the surround back (SUR BACK) and subwoofer (SUB-WFR), select YES if you have connected one, or NO if you have not.</p>	<p>Enter the distance of the front, center and surround speakers from the seating position.</p> <p>By setting the distance between the speaker's position (except the subwoofer) and the listeners seating position, the sound delay time is automatically adjusted so that sound reaches the listener at the same time. You can select distances between 1.0 and 10.0 m at 0.1-meter intervals.</p>	<p>Change the cut-off for bass output from the front speakers.</p> <p>If you set the front speakers to "SMALL", the filter is set to 100 Hz. Raise the cut-off if the bass from the front speakers is unsatisfactory so that this bass is output through the subwoofer. You can raise the cut-off from 100 Hz to either 150 Hz or 200 Hz.</p>
<p>1. Select.</p> <p>2. Select the speaker.</p> <p>3. Change the setting.</p> <p>SPEAKERS FRONT SMALL</p> <p>FRONT, CENTER, SURROUND, SUR BACK, SUB-WFR</p> <p>NONE, SMALL, LARGE NO, YES</p>	<p>1. Select.</p> <p>2. Select the speaker.</p> <p>3. Change the setting.</p> <p>DISTANCE FRONT 3.0 m</p> <p>FRONT, CENTER, SURROUND, SUR BACK</p> <p>1.0 m ----- 10.0 m</p>	<p>1. Select.</p> <p>2. Change the setting.</p> <p>FILTER 100</p> <p>100, 150, 200</p>

Specifications (DIN 45 500)

■ AMPLIFIER SECTION

Power output (at AC 230-240 V)
 DIN 1 kHz (T.H.D. 1%) 2 x 100 W (6 Ω)
 20 Hz-20 kHz continuous power output both channels driven
 2 x 80 W (6 Ω)

Total harmonic distortion
 rated power at 20 Hz-20 kHz 0.09 % (6 Ω)

Power bandwidth
 both channels driven, -3 dB 4 Hz-88 kHz (6 Ω, 0.9 %)

Power output each channel driven (at AC 230-240 V)
 DIN 1 kHz (T.H.D. 1%)
 Front (L/R) 100 W (6 Ω)
 Center 100 W (6 Ω)
 Surround (L/R/BACK) 100 W (6 Ω)

Load impedance
 Front (L/R)
 A or B 6-16 Ω
 A and B 6-16 Ω
 Center 6-16 Ω
 Surround (L/R/BACK) 6-16 Ω

Frequency response
 CD, TV, DVD/DVD 6CH, DVR/VCR1, VCR2, TAPE 4 Hz-88 kHz, ±3 dB

Input sensitivity and impedance
 CD, TV, DVD/DVD 6CH, DVR/VCR1, VCR2, TAPE 200 mV/22 kΩ

S/N at rated power (6 Ω)
 CD, TV, DVD, DVR/VCR1 (DIGITAL INPUT) 90 dB (IHF, A: 103 dB)

Tone controls
 BASS 50 Hz, +10 to -10 dB
 TREBLE 20 kHz, +10 to -10 dB

Output voltage
 TAPE, DVR/VCR1 200 mV

Channel balance (250 Hz-6.3 kHz) ±1 dB

Channel separation 55 dB

Subwoofer frequency response (-6 dB) 7 Hz-200 Hz

Digital input (OPTICAL)	2
(COAXIAL)	2
Digital output (OPTICAL)	1

■ FM TUNER SECTION

Frequency range 87.50-108.00 MHz

Sensitivity
 S/N 30 dB 1.5 μV/75 Ω
 S/N 26 dB 1.3 μV/75 Ω
 S/N 20 dB 1.2 μV/75 Ω

IHF usable sensitivity (IHF '58) 1.5 μV/75 Ω
 IHF 46 dB stereo quieting sensitivity 22 μV/75 Ω

Total harmonic distortion
 MONO 0.2 %
 STEREO 0.3 %

S/N
 MONO 60 dB
 STEREO 58 dB

NORSK

ADVARSEL!

- APPARATET MÅ IKKE PLASSERES I EN BOKHYLLE, ET INNEBYGGET KABINETT ELLER ET ANNET LUKKET STED HVOR VENTILASJONSFORHOLDENE ER UTILSTREKKELIGE. SØRG FOR AT GARDINER ELLER LIGNENDE IKKE FORVERRER VENTILASJONSFORHOLDENE, SÅ RISIKO FOR ELEKTRISK SJOKK ELLER BRANN FORÅRSAKET AV OVERHETING UNNGÅS.
- APPARATETS VENTILASJONSÅPNINGER MÅ IKKE DEKKES TIL MED AVISER, BORDDUKER, GARDINER OG LIGNENDE.
- PLASSER IKKE ÅPEN ILD, SLIK SOM LEVENDE LYS, OPPÅ APPARATET.
- BRUKTE BATTERIER MÅ KASSERES UTEN FARE FOR MILJØET.

ADVARSEL:

FOR Å REDUSERE FAREN FOR BRANN, ELEKTRISK STØT ELLER SKADER PÅ PRODUKTET, MÅ DETTE APPARATET IKKE UTSETTES FOR REGN, FUKTIGHET, VANNDRÅPER ELLER VANNSPRUT. DET MÅ HELLER IKKE PLASSERES GJENSTANDER FYLT MED VANN, SLIK SOM BLOMSTERVASER, OPPÅ APPARATET.

DETTE APPARATET ER BEREGNET TIL BRUK UNDER MODERATE KLIMAFORHOLD.

Frequency response
 20 Hz-15 kHz +1 dB, -2 dB

Alternate channel selectivity
 ±400 kHz 65 dB

Capture ratio 1.5 dB

Image rejection at 98 MHz 40 dB

IF rejection at 98 MHz 70 dB

Spurious response rejection at 98 MHz 70 dB

AM suppression 50 dB

Stereo separation
 1 kHz 40 dB

Carrier leak
 19 kHz -30 dB
 38 kHz -50 dB

Channel balance (250 Hz-6.3 kHz) ±1.5 dB

Limiting point 1.2 μV

Bandwidth
 IF amplifier 180 kHz
 FM demodulator 1000 kHz

Antenna terminal 75 Ω (unbalanced)

■ AM TUNER SECTION

Frequency range 522-1611 kHz (9 kHz steps)
 530-1620 kHz (10 kHz steps)

Sensitivity 20 μV, 330 μV/m

Selectivity (at 999 kHz) 55 dB

IF rejection (at 999 kHz) 50 dB

■ VIDEO SECTION

Output voltage at 1 V input (unbalanced) 1±0.1 Vp-p

Maximum input voltage 1.5 Vp-p

Input/output impedance 75 Ω (unbalanced)
 TV, DVD, DVR/VCR1
 Output TV MONITOR
 Component Video Input TV, DVD
 Output TV MONITOR

■ GENERAL

Power supply AC 230-240 V, 50 Hz

Power consumption 135 W

Dimensions (W x H x D) 430 x 83 x 376 mm

Mass 4.2 kg

Power consumption in standby mode: 1 W

Notes:

1. Specifications are subject to change without notice. Mass and dimensions are approximate.
2. Total harmonic distortion is measured by the digital spectrum analyzer.

Marking sign is located on bottom of the unit.

SUOMI

VAROITUS!

- ÄLÄ ASENNAA TAI LAITA TÄTÄ LAITETTA KABINETTITYYPPISEEN KIRJAKAAPPIIN TAI MUUHUN SULJETTUUN TILAAN, JOTTA TUULETUS ONNISTUISI. VARMISTA, ETTÄ VERHO TAI MIKÄÄN MUU MATERIAALI EI HUONONNA TUULETUSTA, JOTTA VÄLTETTÄISIIN YLIKUUMENEMISESTA JOHTUVA SÄHKÖISKU- TAI TULIPALOVAARA.
- ÄLÄ PEITÄ LAITTEEN TUULETUSAUKKOJA SANOMALEHDELLÄ, PÖYTÄLIINALLA, VERHOLLA TAI MUULLA VASTAAVALLA ESINEELLÄ.
- ÄLÄ ASETA PALAVAA KYNTTILÄÄ TAI MUUTA AVOTULEN LÄHDETTÄ LAITTEEN PÄÄLLE.
- HÄVITÄ PARISTOT LUONTOA VAHINGOITTAMATTOMALLA TAVALLA.

VAROITUS:

TULIPALO-, SÄHKÖISKUVAARAN TAI TUOTETTA KOHTAAVAN MUUN VAHINGON VÄHENTÄMISEKSI EI LAITETTA SAA ALTISTAA SATEELLE, KOSTEUDELLE, VESIPISAROILLE TAI ROISKEELLE, EIKÄ NESTETTÄ SISÄLTÄVIÄ ESINEITÄ, KUTEN ESIMERKIKSI MALJAKOITA, SAA ASETTAA LAITTEEN PÄÄLLE.

TÄMÄ LAITE ON TARKOITETTU KÄYTETTÄVÄKSI LEUDOSSA ILMASTOSSA.

Troubleshooting guide

Before requesting service, make the below checks.

If you can't fix the unit as described or if something not listed here occurs, contact your dealer.

Common problems

		Pages
No power.	• Ensure the AC mains lead is connected.	5
No sound.	• Turn the volume up. • Check connections to speakers and other equipment. • Select the correct source. • Turn on the speakers. • Turn off the tape monitor. • Change the D-INPUT setting to suit the type of connection you have made. • Check that the digital signals can be decoded by this unit. • Turn PCM FIX or DTS FIX off.	12 4-9 12 12 15 10 12 10, 19
Sound stops. "F 76" or "OVERLOAD" appears on the display for about a second, and the unit turns off.	• Determine and correct the cause, then turn the unit on. Causes include: – Shorting (bare wires touching) of positive and negative speaker wires. – Using speakers with an impedance lower than that rated for this unit. – Straining of the speakers through excessive volume or power. – Using the unit in a hot environment without proper ventilation. Consult your dealer if the problem occurs again after switching the unit on.	5, 9 5, 9 – –
"F 70" appears on the display.	• Turn the unit off, disconnect the AC mains lead, and consult your dealer.	–

Sound modes

		Pages
Sound is not heard from the center, surround, or subwoofer speakers.	• Ensure the SPEAKERS settings for your speakers are correct. • Turn 2CH MIX off. • The source may be stereo. Change the sound mode.	10, 22 13 12
Sound is not heard from the surround back speaker.	• Ensure the SPEAKERS settings for your speakers are correct. • Turn 6.1CH DECODING mode on.	10, 22 12
Cannot use Dolby Pro Logic II, DTS NEO:6 or SFC.	• Turn DVD ANALOG 6CH off. • You cannot use Dolby Pro Logic II, DTS NEO:6 or SFC when input is PCM with sampling frequencies of 192, 176.4 (COAXIAL1), 96, or 88.2 kHz.	15 13
There is no DTS audio output. There is Audio output, but the DTS decoder indicator is not lit.	• Check the DVD player's digital output settings.	–

Radio

		Pages
The radio cannot be tuned in or there is a lot of noise and interference.	• Connect the appropriate antenna. (You may need an outdoor antenna or one with more elements.) • Adjust the position of the FM or AM antenna. • Reduce the treble. • Turn off nearby televisions, video decks, DVD players, and satellite receivers. • Separate the antenna from other cables, leads, and appliances.	9 9 20 – –
The correct AM frequency cannot be tuned in.	• Change the frequency step to suit your area when AM is selected.	16

Multi control mode menus and factory settings (Reference pages are shown as black circled numbers ⑩)

Main menu	Sub menu (factory settings)		
TUNER (TUNER mode only)	TUNING	MANUAL	⑩
	FM MODE	AUTO	
	MEMORY	CH 1	⑪
	AUTO MEM	START	
	DISPLAY	FREQ	⑫
	AM ALLOC	9 kHz	⑬
TONE	BASS	0dB	⑭
	TREBLE		⑮
BALANCE	L	R	
DIMMER	OFF		
	ON	LEVEL 2	⑯
SLEEP	OFF		
OPTION	DUAL PRG	MAIN	
	DR COMP	OFF	⑰
	A/D ATT	OFF	

Main menu	Sub menu (factory settings)			
SETUP 1	OPTION	B PROOF	MODE A	⑱
		RESET	YES	⑲
	SPEAKERS	SUBW YES	LCR S SB	⑲
		SUBW NO		
		TV	OPT 1	
		DVR	OPT 2	
	D-INPUT	DVD	COAX 1	⑲
		CD	COAX 2	
		TV		
		IN MODE	AUTO	
IN MODE	DVR		⑲	
	DVD			
	CD			

Main menu	Sub menu (factory settings)			
SETUP 2	SPEAKERS	FRONT	SMALL	⑳
		CENTER		
		SURROUND		
		SUR BACK	YES	
	DISTANCE	SUB-WFR		
		FRONT	3.0 m	
		CENTER		
		SURROUND	1.5 m	
FILTER	SUR BACK			
	100			
EXIT	⇒ Exit the Multi control mode			

Maintenance

To clean this unit, wipe with a soft, dry cloth.

- Never use alcohol, paint thinner or benzene to clean this unit.
- Before using chemically treated cloth, read the instructions that came with the cloth carefully.

Matsushita Electric Industrial Co., Ltd.

Web Site: <http://www.panasonic.co.jp/global/>



RQT7492-B

H0104RF0

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