

Home Theater System

Operating instructions

HT-K170

WARNING

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

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

Precautions

On safety

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

On power sources

- Before operating the amplifier, 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 amplifier.
- The amplifier is not disconnected from the AC power source (mains) as long as it is connected to the wall outlet, even if the amplifier itself has been turned off.
- If you are not going to use the amplifier for a long time, be sure to disconnect the amplifier from the wall outlet. To disconnect the mains lead, grasp the plug itself; never pull the cord.
- The AC power cord (mains lead) must be changed, at a qualified service shop only.
- The mains switch is located on the front exterior.

On placement

- Do not install the appliance in a confined space, such as a bookcase or built in cabinet.
- Place the amplifier in a location with adequate ventilation to prevent heat buildup and prolong the life of the amplifier.
- Do not place the amplifier near heat sources, or in a place subject to direct sunlight, excessive dust or mechanical shock.
- Do not place anything on top of the cabinet that might block the ventilation holes and cause malfunctions.
- Do not set the speakers in an inclined position.
- Do not place the speakers in locations that are:
 - Extremely hot or cold
 - Dusty or dirty
 - Very humid
 - Subject to vibrations
 - Subject to direct sunlight

On operation

- Before connecting other components, be sure to turn off and unplug the amplifier.
- Do not drive the speaker system with a continuous wattage exceeding the maximum input power of the system.
- If the polarity of the speaker connections are not correct, the bass tones will be weak and the position of the various instruments obscure.
- Contact between bare speaker wires at the speaker terminals may result in a short-circuit.
- The speaker grille cannot be removed. Do not attempt to remove the grille on the speaker system. If you try to remove it, you may damage the speaker.

If you encounter color irregularity on a nearby TV screen

This speaker system is magnetically shielded to allow it to be installed near a TV set. However, color irregularities may still be observed on certain types of TV sets.

If color irregularity is observed...

- Turn off the TV set once, then turn it on again after 15 to 30 minutes.

If color irregularity is observed again...

- Place the speakers further away from the TV set.

If howling occurs

Reposition the speakers or turn down the volume on the amplifier.

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 question or problem concerning your amplifier, please consult your nearest Sony dealer.

About This Manual

Conventions


- The instructions in this manual describe the controls on the amplifier and speakers. You can also use the controls on the remote if they have the same or similar names as those on the amplifier.
- The following icons are used in this manual:



Indicates that you can use only the remote to do the task.



Indicates hints and tips for making the task easier.

This amplifier contains a Dolby Pro Logic Surround decoder. Manufactured under license from Dolby Laboratories. “Dolby”, “AC-3”, “Pro Logic” and the double-D symbol  are trademarks of Dolby Laboratories.

Hold down **I/⏻** and press **CENTER MODE** to change the fan control setup. Each time you do the procedure above, the following setup appears.

Select	To
FAN ON	Turn on the fan at all times.
FAN AUTO	Turn on the fan automatically when there is sufficient speaker output.

TABLE OF CONTENTS

Getting Started

- Unpacking 4
- Hookup Overview 4
- Video Component Hookups 5
- Speaker System Hookups and Setups 6
- AC Hookups 9
- Before You Use Your Amplifier 10

Amplifier Operations

- Selecting a Component 11
- Changing the Factory Setting of a FUNCTION Button 13
- Using the Sleep Timer 14

Using Surround Sound

- Choosing a Sound Field 15
- Getting the Most Out of Dolby Pro Logic Surround Sound 16

Additional Information

- Troubleshooting 18
- Specifications 19
- Glossary 20
- Remote Button Description 21

Index 22


Rear Panel Descriptions 22

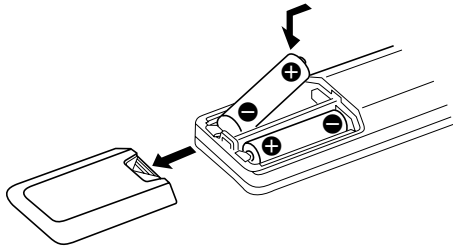
Unpacking

Check that you received the following items with your amplifier:

- Remote commander (remote) (1)
- Size AA (R6) batteries (2)
- Scart adaptor (1)
- Speakers (5)
 - Front speakers (2)
 - Rear speakers (2)
 - Center speaker (1)
- Subwoofer (1)
- Speaker connecting cord, 10 m (2)
- Speaker connecting cord, 2.5 m (3)
- Monaural connecting cord (1 phono to 1 phono) (1)
- Foot pads (20)

Inserting batteries into the remote

Insert two size AA (R6) batteries with the + and – on the battery compartment. When using the remote, point it at the remote sensor  on the amplifier.



When to replace batteries

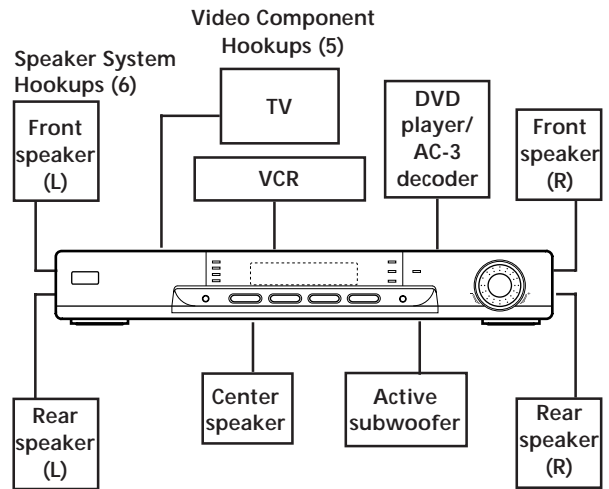
Under normal use, the batteries should last for about 6 months. When the remote no longer operates the amplifier, replace both batteries with new ones.

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 to direct sunlight or lighting apparatuses. Doing so may cause a malfunction.
- If you don't use the remote for an extended period of time, remove the batteries to avoid possible damage from battery leakage and corrosion.

Hookup Overview

The amplifier allows you to connect and control the following video components. Follow the hookup procedures for the components that you want to connect to the amplifier on the pages specified. To learn the locations and names of each jack, see “Rear Panel Descriptions” on page 22.



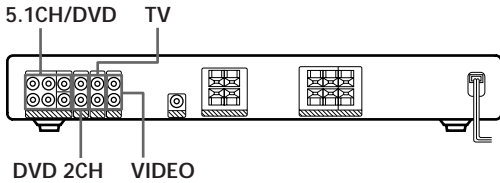
Before you get started

- Turn off the power to all components before making any connections.
- Do not connect the mains lead until all of the connections are completed.
- Be sure to make connections firmly to avoid hum and noise.
- When connecting an audio cable, be sure to match the colour-coded pins to the appropriate jacks on the components: White (left, audio) to White; and Red (right, audio) to Red.

Video Component Hookups

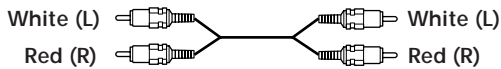
Overview

This section describes how to connect video components to the amplifier. For specific locations of the jacks, see the illustration below.



What cords will I need?

- Scart adaptor (supplied)
- Euro AV cable (not supplied) (1 for each TV or VCR)
- Audio cords (not supplied) (1 for DVD player, 2 for AC-3 decoder's FRONT and REAR jacks)



- Monaural audio cords (not supplied)
(2 for AC-3 decoder's CENTER and WOOFER jacks)

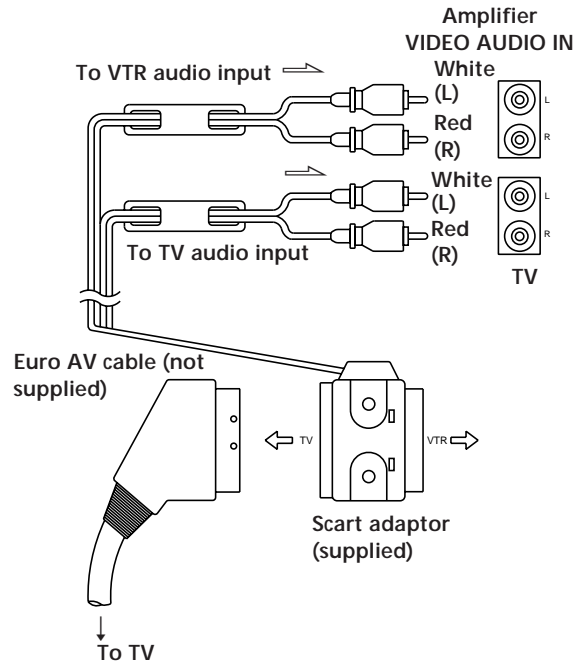


Hookups

The arrow \Rightarrow indicates signal flow.

TV/VCR

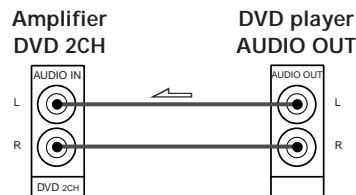
You can listen to the sound from VCR or TV by connecting the audio signal from VCR or TV to the amplifier.



If you have another component, such as a second VCR or LD player, connect it to the DVD 2CH jacks.

DVD Player

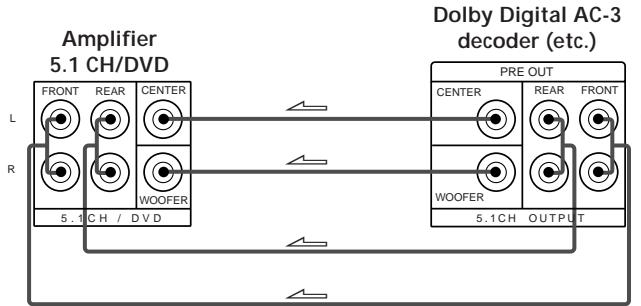
If your DVD player does not have 5.1 CH output, connect the audio output jacks of the DVD player to the DVD 2CH jacks of the amplifier.



(continued)

DVD player with AC-3 decoder

If you have a Dolby Digital (AC-3) decoder or a DVD player with a built-in AC-3 decoder, you can play decoded Dolby Digital (AC-3) soundtracks through the speakers connected to the amplifier. Connect the decoder as follows:

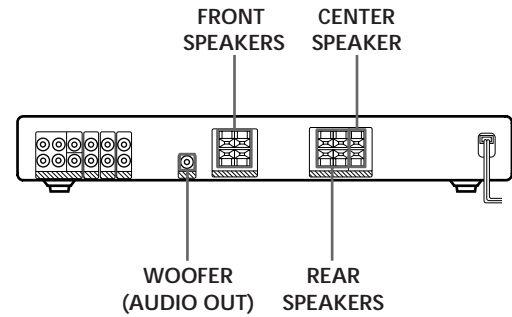


Speaker System Hookups and Setups

Overview

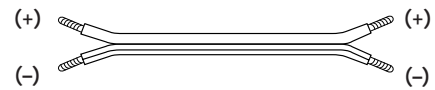
This section describes how to connect the supplied speakers (SS-MS215) to the amplifier. Connecting the active woofer (SA-WMS215) will increase bass response.

For specific locations of the terminals, see the illustration below.



What cords will I need?

- Speaker connecting cord (supplied) (1 for each speaker)

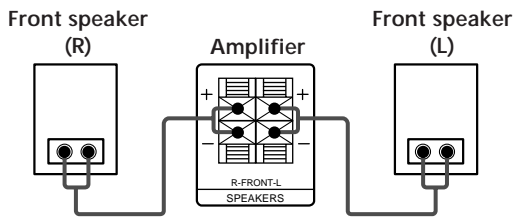


- Monaural connecting cord (supplied)

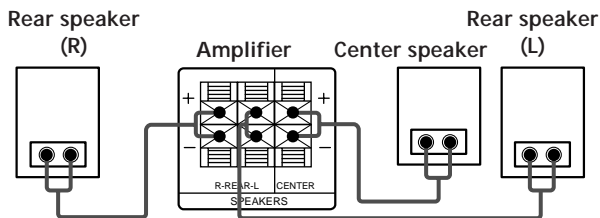


Hookups

Front speakers (SS-MS215)



Rear and center speakers (SS-MS215)



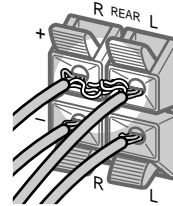
Notes

- Be sure to match the speaker cord to the appropriate terminal on the components: + to + and - to -. If the cords are reversed, the sound will be distorted and will lack bass.
- Make sure all connections are firm. Contact between bare speaker wires at the speaker terminals may cause a short-circuit.

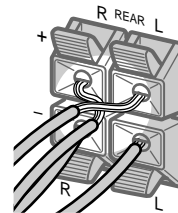
To avoid short-circuiting the speakers

Short-circuiting of the speakers may damage the amplifier. To prevent this, make sure to take the following precautions when connecting the speakers. Make sure the stripped ends of each speaker cord does not touch another speaker terminal or the stripped end of another speaker cord.

Examples of poor conditions of the speaker cord:



Stripped speaker cord is touching another speaker terminal.



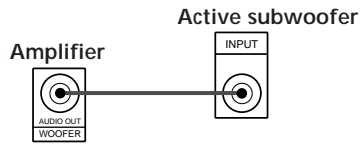
Stripped cords are touching each other due to excessive removal of insulation.

After connecting all the components, speakers, and AC power cord, output a test tone to check that all the speakers are connected correctly. For details on outputting a test tone, refer to “Adjusting the speaker volume” on page 17.

If you have connected rear speakers, be sure to press the 5.1 CH/DVD button on the amplifier before outputting a test tone so that the tone is output individually from the left and right rear speakers.

If no sound is heard from a speaker while outputting a test tone or a test tone is output from a speaker other than the one whose name is currently displayed on the amplifier, the speaker may be short-circuited. If this happens, check the speaker connection again.

Active subwoofer (SA-WMS215)

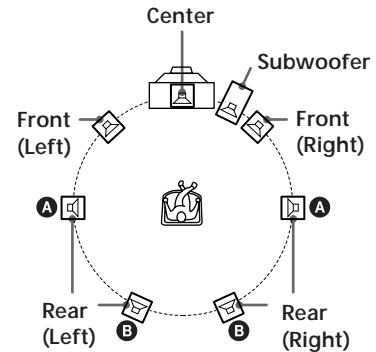


Caution

- The speaker unit of the active subwoofer is located at the bottom of the active subwoofer.
- Avoid contact with the speaker unit as it is without a cover.
- Place the active subwoofer on a flat surface to ensure there is no obstruction to the speaker unit.

Positioning the speakers

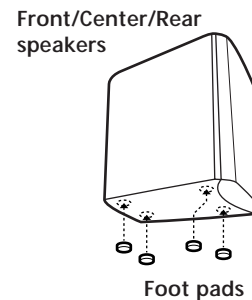
Location of each speaker



Each speaker should face the listening position. Better surround effect will result if all speakers are set at the same distance from the listening position. Place the front speakers at a suitable distance to the left and right of the television. Place the subwoofer on either side of the television. Place the center speaker on the top-center of the TV set. The placement of rear speakers greatly depends on the configuration of the room. The rear speakers may be placed on both sides of the listening position **A** or behind the listening position **B**.

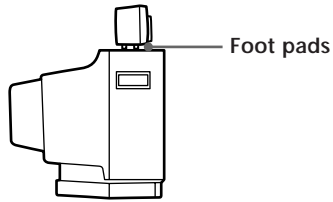
Setting the speakers

To prevent speaker vibration or movement while listening, attach the supplied foot pads to the bottom four corners of the center speaker, front speakers, and rear speakers.



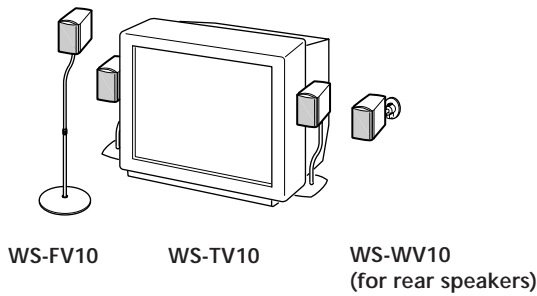
Setting the center speaker

Set the center speaker firmly on top of the TV set, making sure it is completely level.



Setting other speakers

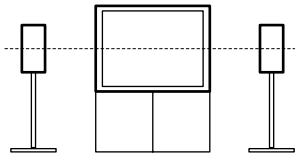
For greater flexibility in the positioning of the speakers, use the optional WS-FV10, WS-TV10, or WS-WV10 speaker stand (available only in certain countries).



Note

You do not need to attach the foot pads if you are using the speaker stand.

Tip



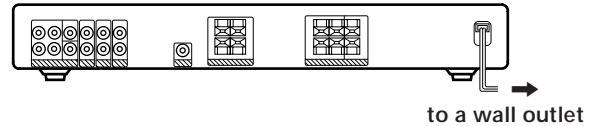
The height of the front speakers should be adjusted to about the center of the TV screen.

AC Hookups

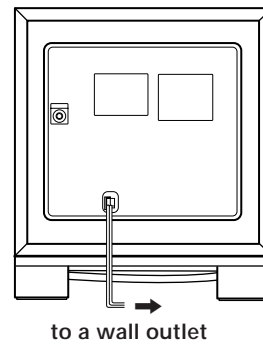
Connecting the mains lead

Connect the mains lead from this amplifier, active subwoofer and from your video components to a wall outlet.

Amplifier

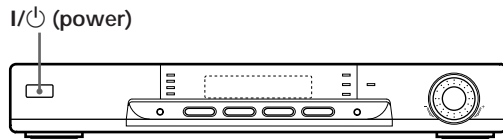


Active subwoofer



Before You Use Your Amplifier

Before you use your amplifier for the first time or when you want to clear the amplifier's memory, do the procedure below:



- 1 Turn off the amplifier.
- 2 Press I/⏻ (power) for more than 4 seconds. "INITIAL" appears in the display and the items including the following are reset or cleared:
 - All sound field parameters are reset to their factory settings.
 - The fan control setup is reset to FAN ON.

Note

If you are using a Sony DVD player together with this home theater system, set your DVD player to the following configuration:

Speakers	Settings
Front	SMALL
Center	SMALL
Rear	SMALL
Subwoofer	YES

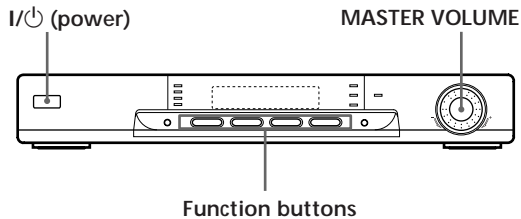
If you are using a non Sony DVD player, refer to the operating instructions supplied with the DVD player for speaker setup.

Selecting a Component

To listen to a connected component, first select the function on the amplifier or with the remote.

Before you begin, make sure you have:

- Connected all components securely and correctly as indicated on pages 5 to 9.



- 1 Press I/⏻ (power) to turn on the amplifier.
- 2 Turn MASTER VOLUME to VOL MIN (indicated on the display) to avoid damaging your speakers.
- 3 Press a function button to select the component you want to use:

To watch	Press	TV input mode
Video tapes	VIDEO	VIDEO
TV programmes	TV	VIDEO
Digital versatile disc (DVD)	DVD 2CH	VIDEO
DVD through AC-3 decoder	5.1 CH/DVD	VIDEO

To operate with the remote

Refer to "Using the remote" on page 12 for details.

- 4 Turn on the component, the VCR for example, and start playback.
- 5 Turn MASTER VOLUME to adjust the volume.

To	Do this
Mute the sound	Press MUTING on the remote. Press again to restore the sound.

Watching video programmes

To take full advantage of the amplifier's surround sound effects, like Dolby Surround, turn off the speakers on your TV before you start. This also lets you use the amplifier's remote to control the sound.

To watch TV programmes, do the following:

- 1 Turn on your TV.
- 2 Turn on the amplifier and press TV.

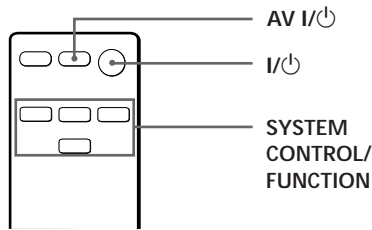
To watch videos or DVDs, do as follows:

- 1 Turn on your TV and set the TV's input to match the video component you watch.
- 2 Turn on the amplifier and press the function button (VIDEO, DVD 2CH or 5.1 CH/DVD) to select the component you want to use.
- 3 Turn on the video component and start playback.

(continued)

Using the remote

The remote lets you operate the amplifier and the Sony components that are connected to it.



- 1 Press one of the SYSTEM CONTROL/FUNCTION buttons to select the component you want to use.

The amplifier and the selected component turn on.

The SYSTEM CONTROL/FUNCTION buttons on the remote are factory-set as follows:

To play	Press
TV programmes	TV
VHS Tapes (VTR-3 mode)	VIDEO
DVD player (for 2-ch playback)	DVD
DVD player/ AC-3 decoder	5.1 CH

If you want to change the factory setting of a button
See “Changing the Factory Setting of a FUNCTION Button” on page 13.

If the component does not turn on

Press the power switch on the component.

- 2 Start playing.
Refer to “Remote Button Descriptions” on page 21 for details.

To turn off the components

Press AV I/⏻ and I/⏻ simultaneously. This will also turn off the Sony video/audio components at the same time. If the components do not turn off, press the power switch on the components.

If you use a Sony TV

- The TV turns on automatically and switches to the appropriate video input when you press VIDEO. If the TV does not switch to the appropriate input automatically, press TV/VIDEO on the remote.
- When you use the TV only, turn on the TV using the TV’s remote.

Changing the Factory Setting of a FUNCTION Button

If the factory settings of the SYSTEM CONTROL/FUNCTION buttons ("Using the remote" on page 12) don't match your system components, you can change them. The following table shows the possibility of alternate function assignment for each button.

Button	Possible assignment
VIDEO	VTR 1, VTR 2, VTR 3
DVD	DVD, LDP, CD

* Initial setting of VIDEO is VTR 3.

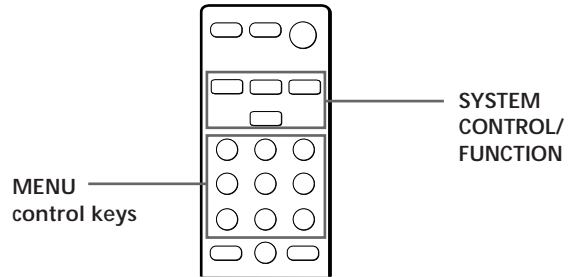
* Sony VCRs are operated with a VTR 1, 2, or 3 setting that corresponds to Beta, 8mm, and VHS, respectively.

Resetting key table for function key VIDEO

VTR 1	CURSOR UP
VTR 2	ENTER/EXECUTE
VTR 3	CURSOR DOWN

Resetting key table for function key DVD

DVD	EXIT/RETURN
LD	DISPLAY
CD	CURSOR RIGHT



For example, if you connect a Sony LD player to the DVD jacks, you can assign the DVD button to set the remote to control the LD player.

- 1 Hold down the SYSTEM CONTROL/FUNCTION button whose function you want to change (DVD, for example).
- 2 Press the corresponding button of the component you want to assign to the SYSTEM CONTROL/FUNCTION button (DISPLAY, LD player, for example).

Now you can use the DVD button to control your Sony LD player.

To reset a button to its factory setting

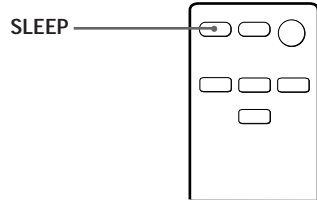
Repeat the above procedure.

To reset all the function buttons to their factory setting

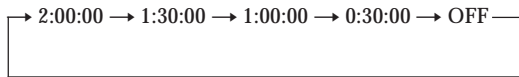
Press I/⏻, AV I/⏻ and MASTER VOL – at the same time.

Using the Sleep Timer


You can set the amplifier to turn off automatically at a time you specify.



Press SLEEP on the remote while the power is on.
Each time you press SLEEP, the time changes as shown below.

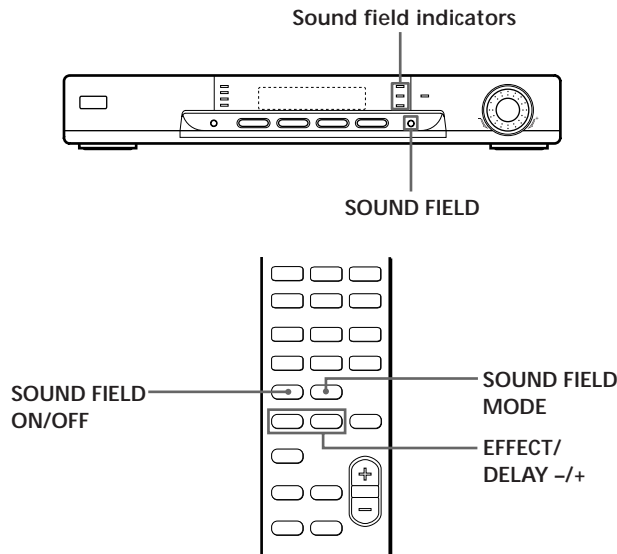


The display dims after you specify the time.

-  You can check the time remaining before the amplifier turns off
Press SLEEP on the remote. The remaining time appears in the display.

Choosing a Sound Field

You can take advantage of surround sound simply by selecting one of the three pre-programmed sound field according to the type of programme you wish to play.



- 1 Press **SOUND FIELD** or **SOUND FIELD ON/OFF** on the remote to turn on the sound field. One of the **SOUND FIELD** indicators lights up in the display.
- 2 Press **SOUND FIELD** or **SOUND FIELD MODE** on the remote repeatedly until the indicator for the sound field you want lights up. Select the appropriate sound field as follows:

Select	To
PRO LOGIC*	Decodes programmes processed with Dolby Pro Logic Surround.
C. STUDIO (Cinema Studio)	Reproduces the sound characteristics of a movie theater. Good for watching standard movies.
SIMULATED	Create a simulated surround sound from monaural sources such as old movies or TV programmes.

* "DOLBY PL" appears on the display.

To turn off sound field

Press **SOUND FIELD ON/OFF** on the remote or press **SOUND FIELD** repeatedly until "SF OFF" appears on the display.

You can find Dolby Surround-encoded software by looking at the packaging. However, some videos and laser discs may use Dolby Surround sound even if it's not indicated on the package.

Note

Surround sound is turned off when you select the 5.1 CH/DVD.

Adjusting the effect level (for C. STUDIO and SIMULATED only)



You can make the surround sound more prominent by increasing the **EFFECT** level. This control lets you adjust the "presence" of the surround effect in six steps (1-6).

- 1 Start playing a programme source.
- 2 Use **EFFECT/DELAY (-/+)** on the remote to select the level you prefer. The effect level is indicated on the display.

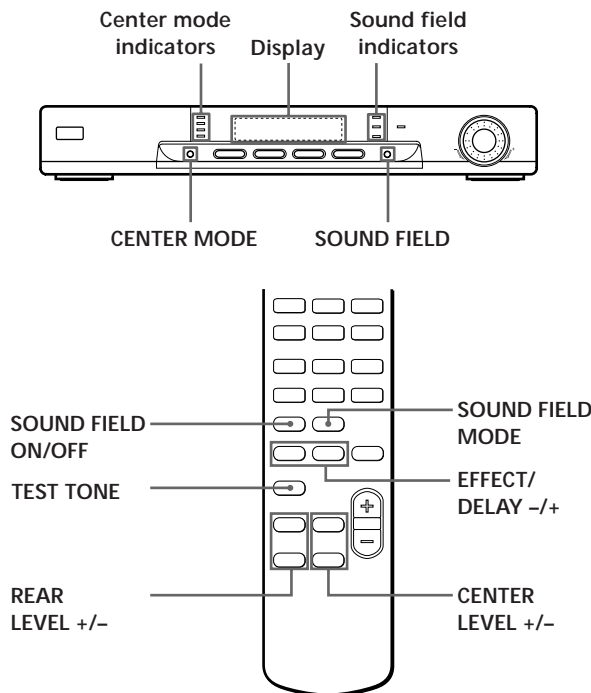
Note

Changing the effect level may not produce major variations in the surround effect when used with certain playback sources.

Getting the Most Out of Dolby Pro Logic Surround Sound

To obtain the best possible Dolby Pro Logic Surround sound, first select the center mode according to the speaker system you have. Then, adjust the volume of each speaker.

Note that you must connect the rear speakers and/or one center speaker to do the following adjustments.



Selecting the center mode

The amplifier offers you four center modes: Phantom, Wide, Normal and 3 Stereo. Each mode is designed for a different speaker configuration.

- 1 Press **SOUND FIELD** repeatedly to select the **PRO LOGIC** sound field.
- 2 Press **CENTER MODE** repeatedly until the indicator for the center mode you want lights in the display. Select the center mode as follows:

If you have	Select	So that
Front and rear speakers, no center speaker	PHANTOM	The sound of the center channel is output from the front speakers.
Front and rear speakers, and a large center speaker	WIDE	The center channel fully reproduces the entire audio spectrum
Front and rear speakers, and a small center speaker	NORMAL	The bass sound of the center channel is output from the front speakers.
Front and center speakers, no rear speaker	3 STEREO (3 Channel Logic)	The sound of the rear channel is output from the front speakers.

Notes

- To match the speaker system that is packed together with this amplifier, we recommend that you set the center mode to **NORMAL** or **WIDE** and turn on the subwoofer.
- If you are using a different speaker system, select the mode that best suits your speaker system's configuration.


Adjusting the speaker volume


The test tone feature lets you set the volume of your speakers to the same level.

Using the controls on the remote lets you test the speaker connection and adjust the volume level from your listening position.

- 1 Press SOUND FIELD repeatedly to select “DOLBY PL” and set the center mode to NORMAL.
- 2 Press TEST TONE on the remote.
You will hear the test tone from each speaker sequentially.
- 3 Adjust the volume level so that the test tone from each speaker is at the same level from your listening position.
 - To adjust the level of center speaker, press CENTER LEVEL + or – on the remote.
 - To adjust the level of rear speakers, press REAR LEVEL + or – on the remote.

The center and rear levels are indicated on the display.
- 4 Press TEST TONE on the remote to turn off the test tone.

 You can adjust all speakers at one time
Adjust MASTER VOL on the remote or MASTER VOLUME on the amplifier.

 You can increase the output level of the rear speakers

The adjustment range of the rear speakers is preset from -10 to +6, but you can shift the range up 3 levels (-7 to +9). Hold down SOUND FIELD on the amplifier while turning on the power until “NORMAL” appears on the display.

The values for the rear level remain fixed at -10 to +6 in the display, but you will be able to hear the difference in the actual output level.

To reset the rear level adjustment range, repeat this procedure to display “GAIN LOW”.

Note

During 5.1 CH/DVD mode, CENTER LEVEL and REAR LEVEL cannot be adjusted.

Adjusting the delay time

You can make the surround sound more effective by delaying the output from the rear speakers (delay time). You can select from three delay times, S (15 mS), M (20 mS), and L (30 mS). For example, if you’ve placed the rear speakers in a large room or apart from your listening position, set the delay time shorter.

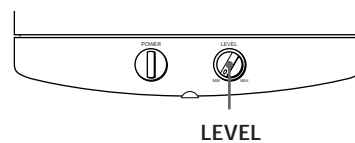
- 1 Start playing a programme source encoded with Dolby Surround sound.
- 2 Press SOUND FIELD repeatedly to select “DOLBY PL” and set the center mode to NORMAL.
- 3 Press EFFECT/DELAY (-/+) on the remote repeatedly to choose the delay time parameter. The current delay time appears in the display, such as “DELAY S,” “DELAY M” or “DELAY L.”

Note

If the AC power cord is disconnected for about one week, amplifier’s surround parameter will be reset to the factory settings.

Adjusting the subwoofer

Slight adjustments to the system can enhance your sound enjoyment.



- 1 Rotate LEVEL to adjust the volume.
Set the volume level to best suit your preference according to the programme source.

Note

To enjoy high-quality sound, do not turn the subwoofer volume too high.

Troubleshooting

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

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

- ➔ Check that the speakers and components are connected securely.
- ➔ Press **MUTING** on the remote if the **MUTING** indicator turns on.
- ➔ Make sure you select the correct component on the amplifier.
- ➔ Check whether or not you used the appropriate AV cables.
- ➔ The protective device on the amplifier has been activated because of a short circuit. ("PROTECT" flashes.) Turn off the amplifier, eliminate the short-circuit problem and turn on the power again.

The left and right sounds are unbalanced or reversed.

- ➔ Check that the speakers and components are connected correctly and securely.

Severe hum or noise is heard.

- ➔ Check that the speakers and components are connected securely.
- ➔ Check that the connecting cords are away from a transformer or motor, and at least 3 meters (10 feet) away from a TV set or fluorescent light.
- ➔ Place your TV away from the audio components.
- ➔ The plugs and jacks are dirty. Wipe them with a cloth slightly moistened with alcohol.

No sound or only a very low-level sound is heard from the rear speakers.

- ➔ Select the appropriate center mode (see page 16).
- ➔ Adjust the speaker volume appropriately (see page 17).
- ➔ Make sure you turn on the sound field surround mode function.

Note

The Dolby Surround effect is dependent on the software and center mode being used.

No sound is heard from the center speaker.

- ➔ Select the appropriate center mode (see page 16).
- ➔ Adjust the speaker volume appropriately (see page 17).

No sound or only a very low-level sound is heard from the subwoofer.

- ➔ Make sure you turn on the subwoofer.
- ➔ Make sure the connection is made correctly.

The sound has suddenly stopped.

- ➔ Make sure all the connections have been correctly made. Contact between bare speaker wires at the speaker terminals may cause a short-circuit.


Surround effect cannot be obtained.

- ➔ Make sure you turn on the sound field function.

No picture or an unclear picture is seen on the TV screen.

- ➔ Select the appropriate input on your TV.
- ➔ Select the appropriate component on the amplifier.

The remote does not function.

- ➔ Point the remote at the remote sensor  on the amplifier.
- ➔ Remove the obstacles in the path of the remote and the amplifier.
- ➔ Replace both batteries in the remote with new ones if they are weak.
- ➔ Make sure you select the correct function on the remote.

Specifications

Amplifier section

Power output

Rated Power (DIN 1 kHz, 8 ohms)
Output at Stereo mode 25 W + 25 W

Reference Power Output (DIN 1 kHz, 8 ohms)
Front: 25 W / ch
Center: 25 W
Rear: 25 W / ch

Frequency response TV, VIDEO, DVD 2CH,
5.1 CH/DVD :
10 Hz - 50 kHz +0.5/-2 dB

Inputs

	Sensitivity	Impedance	S/N (weighting network, input level)
TV, VIDEO, DVD 2CH, 5.1 CH/ DVD	250 mV	50 kilohms	85 dB* (A, 250 mV)

*78 IHF

Outputs WOOFER:
Voltage: 1 V
Impedance: 1 kilohms

Muting Full mute

General

Power requirements 220 - 230 V AC, 50/60 Hz

Power consumption 115 W

Dimensions 430 x 274 x 64.5 mm

Mass (Approx.) 4.6 kg

Speaker section

SS-MS215 Front, center and rear speakers

Speaker system Full range, magnetically shielded

Speaker units 5 cm cone type

Enclosure type Bass reflex

Rated impedance 8 ohms

Power handling capacity (Maximum input power) 60 watts

Sensitivity level 84 dB (1 W, 1m)

Frequency range 150 Hz - 20,000 Hz

Dimensions (w/h/d) Approx. 76 x 100 x 86 mm including front grille

Mass Approx. 425 g

SA-WMS215 Subwoofer

System Active subwoofer,
Speaker system magnetically shielded

Speaker unit Woofer: 16 cm cone type

Enclosure type Acoustically Loaded Bass Reflex

Continuous RMS power output (8 ohms, 20 - 250 Hz) 50 W

Reproduction frequency range 32 Hz - 250 Hz

High frequency cut-off frequency 250 Hz

Input

LINE IN (input pin jack)

General

Power requirements 220 - 230 V AC, 50/60 Hz

Power consumptions 45 W

Dimensions (w/h/d) Approx. 240 x 285 x 355 mm including front panel

Mass Approx. 8 kg

Supplied accessories See page 4.

Design and specifications are subject to change without notice.

Specifications indicated are measured at 230 VAC, 50Hz.

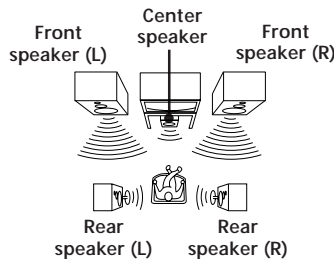
Glossary

Center mode

Setting of speakers to enhance Dolby Pro Logic Surround mode. To obtain the best possible surround sound, select one of the following four center modes according to your speaker system.

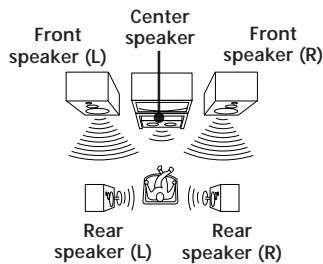
- **NORMAL mode**

Select NORMAL mode if you have front and rear speakers and a small center speaker. Since a small speaker cannot produce enough bass, the bass sound of the center channel is output from the front speakers.



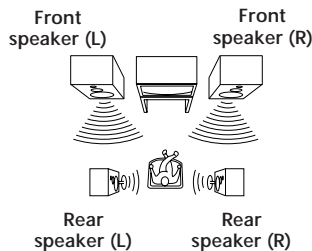
- **WIDE mode**

Select WIDE mode if you have front and rear speakers and a large center speaker. With the WIDE mode, you can take full advantage of Dolby Surround sound.



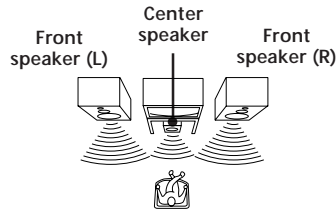
- **PHANTOM mode**

Select PHANTOM mode if you have front and rear speakers but no center speaker. The sound of the center channel is output from the front speakers.



- **3 STEREO (3 CH LOGIC)**

Select 3 STEREO mode if you have front and center speakers but no rear speaker. The sound of the rear channel is output from the front speakers to let you experience some of the surround sound without using rear speakers.



Dolby Pro Logic Surround

Decoding system of Dolby Surround sound standardized in TV programmes and movies. Compared with the former Dolby Surround system, Dolby Pro Logic Surround improves sound image by using four separate channels: off-screen audio effects, on-screen dialog, left-to-right panning, and music. These channels manipulate the sound to be heard and enhance the action as it happens on the screen. To take advantage of Dolby Pro Logic, you should have at least one pair of rear speakers and/or one center speaker. You also need to select the appropriate center mode to enjoy a full effect.

Dolby Digital (AC-3)

This surround format is more advanced than Dolby Pro Logic Surround. In this format, the rear speakers output stereo sound with an expanded frequency range and a subwoofer channel for deep bass is independently provided. This format is also called "5.1" because the subwoofer channel is counted as 0.1 channel (since it functions only when a deep bass effect is needed.)

All six channels in this format are recorded separately to realize superior channel separation. Furthermore, since all the signals are processed digitally, less signal degradation occurs. The name "AC-3" comes from the fact that it is the third audio coding method to be developed by the Dolby Laboratories Licensing Corporation.

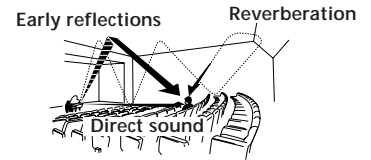
5.1 CH/DVD jacks

These jacks are used to input decoded Dolby Digital (AC-3) audio signals, allowing you to enjoy 5.1 channel surround sound. Use these jacks to connect a Dolby Digital (AC-3) decoder or a DVD player with a built-in AC-3 decoder.

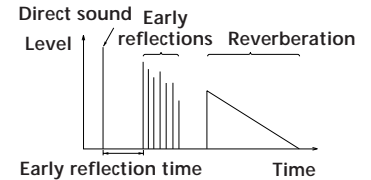
Surround sound

Sound that consists of three elements: direct sound, early reflected sound (early reflections) and reverberative sound (reverberation). The acoustics where you hear the sound affect the way these three sound elements are heard. These sound elements are combined in such a way that you can actually feel the size and the type of a concert hall.

- Types of sound



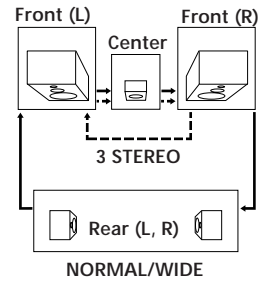
- Transition of sound from rear speakers



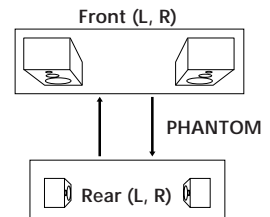
Test tone

Signal given out by the amplifier for adjusting the speaker volume. The test tone will come out as follows:

- In a system with a center speaker (NORMAL/WIDE/3 STEREO modes)
The test tone is output from the front L (left), center, front R (right), and rear speakers in succession.



- In a system without a center speaker (PHANTOM mode)
The test tone is output from the front and the rear speakers alternately.



Remote Button Description

For buttons not described on previous pages and buttons with names different from the buttons on the main unit.

Remote Button	Operates	Function
◀◀/▶▶	VCR/DVD/ CD/LDP	Fast forwards or rewinds.
◀◀/▶▶	DVD/CD/ LDP	Skips tracks.
⏸	VCR/DVD/ CD/LDP	Pauses play.
▶	VCR/DVD/ CD/LDP	Starts play.
■	VCR/DVD/ CD/LDP	Stops play.
AV/ I/⏻	TV/VCR/ DVD/LDP	Turns on or off the power.
ENTER/ EXECUTE	TV/VCR/ DVD	Confirm setting.
ANT TV/ VTR	VCR	Selects output signal from the antenna terminal: TV signal or VCR programme.
MENU	TV/VCR/ DVD	Display menu.
TITLE	DVD	Display current DVD title.
EXIT/ RETURN	TV/DVD	Exit from menu mode or return to previous screen.
DISPLAY	TV/DVD/ LDP	Selects information displayed on the TV screen.
^	TV/VCR/ DVD	To increase a value or move the cursor upwards on the menu screen such as VIDEO CONTROL/AUDIO CONTROL/SET UP/LANGUAGE/DEMO
v	TV/VCR/ DVD	To decrease a value or move the cursor downwards on the menu screen such as VIDEO CONTROL/AUDIO CONTROL/SET UP/LANGUAGE/DEMO
>	TV/VCR/ DVD	To move the cursor to the right side of the menu screen.
<	TV/VCR/ DVD	To move the cursor to the left side of the menu screen.

Remote Button	Operates	Function
VTR CH +/-	VCR	VCR channel selection.
TV CH +/-	TV	TV channel selection.
TV VOL +/-	TV	To adjust the TV volume.

* The MENU control keys may not operate on certain Sony TVs.

Index

A, B

- Adjusting
 - speaker volume 17
 - volume 11

C

- Center mode 16, 20
 - NORMAL mode 16, 20
 - PHANTOM mode 16, 20
 - 3 STEREO mode 16, 20
 - WIDE mode 16, 20
- Connecting. See Hookups

D, E, F, G

- Dolby Digital (AC-3) 20
- Dolby Pro Logic
 - Surround 20
 - getting the most out of 16
- Dolby Surround sound 15, 20
 - center mode 16, 20

H, I, J, K, L, M

- Hookups
 - mains lead 9
 - overview 4
 - speakers 7
 - video component 5

N, O

- NORMAL mode 16, 20

P, Q

- PHANTOM mode 16, 20
- Programme source
 - selecting 11

R

- Rear panel 5, 6, 9, 22
- Remote buttons 12, 13, 21

S

- Selecting a programme source
 - 11
 - using the remote 12
- Sleep timer 14
- Sound field 13, 14
- Speakers
 - connection 7
 - impedance 19
 - placement 8

T

- Test tone 16, 20
- 3 STEREO mode 16, 20
- Troubleshooting 18

U

- Unpacking 4

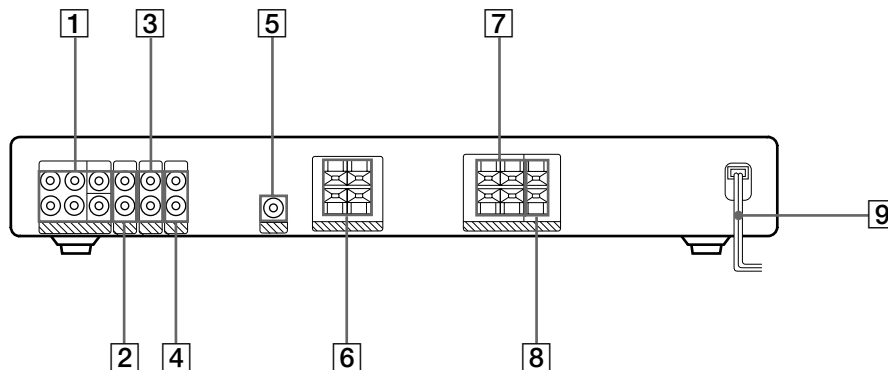
V

- Video Component Hookups 5

W, X, Y, Z

- Watching video programmes
 - 11
- WIDE mode 16, 20

Rear Panel Descriptions



- 1** 5.1 CH/DVD
- 2** DVD 2CH
- 3** TV

- 4** VIDEO
- 5** WOOFER
- 6** FRONT SPEAKERS

- 7** REAR SPEAKERS
- 8** CENTER SPEAKER
- 9** Mains lead

