

USER'S GUIDE

RV-9900

RV-9950



USER

AUDIO/VIDEO RECEIVER

SAFETY INFORMATION

WARNING

RISK OF ELECTRIC SHOCK
DO NOT OPEN

TO REDUCE THE RISK OF ELECTRIC SHOCK,
DO NOT REMOVE COVER (OR BACK). NO
USER SERVICEABLE PARTS INSIDE. REFER
SERVICING TO QUALIFIED SERVICE PERSONNEL.



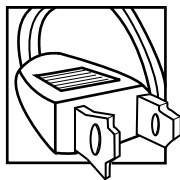
This symbol indicates
"dangerous voltage" inside
the product that presents a
risk of electric shock or
personal injury.



This symbol
indicates important
instructions accompanying
the product.

WARNING

To reduce fire or shock
hazard, do not expose this
product to rain or moisture.



Caution: To reduce the risk of electric shock, match
wide blade of plug to wide slot, fully insert.

Attention: Pour éviter les chocs électriques, introduire
la lame la plus large de la fiche dans la borne
correspondante de la prise et pousser jusqu'au fond.

Operate audio/video receiver only on 120 volts, 60 Hz AC power (normal house power).

FCC Regulations state that unauthorized changes or modifications to this equipment may void the user's authority to operate it.

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FIRST THINGS FIRST

HI, MY NAME IS KIM ...

...and I wrote this user manual along with the help of the engineers, designers and product managers. We worked hard to make sure that you have a rewarding experience using this RCA A/V receiver.

READ THE FIRST FOUR CHAPTERS

The first section of this owner's manual shows you how to use your audio receiver for the first time. The next three sections tell you about using the receiver's controls and programming the remote. Use the last sections of the manual to connect your receiver to other components and as a general reference. If you have a specific question, refer to the table of contents or the index. Call RCA Consumer Relations for further questions. (see back cover)

PLEASE READ THE NOTES IN THE TEXT

The engineers and designers gave me some great tips about this audio/video receiver. When a tip applies to the information on a page, I included it in a note box at the bottom of the page.

1 FIRST THINGS FIRST



2 OPERATING THE RECEIVER



3 TOUR OF THE RECEIVER

4 PROGRAMMING THE REMOTE

READ ME...

Note boxes like this one contain helpful and interesting information about using your audio receiver.

FIRST THINGS FIRST

STEP 1: UNPACK THE RECEIVER

Unpack the receiver and the accessories. The accessories packed with the receiver include the RCA Remote (CRK67A1), 4 AAA cell batteries, an AM loop antenna, an FM "T" antenna, one paired (red/white) stereo cable, one single (yellow) video cable and Important Safeguards.

STEP 2: CONNECT THE RECEIVER

Before you plug in and turn on your audio/video receiver, connect the receiver to the components in your system and connect the speakers.

The next two sections show how to connect the receiver to a TV and a VCR . If you are going to connect the receiver to a laserdisc player or other component, see *Appendix A: Connecting the Receiver*.

For information on connecting your speakers, see *Appendix A: Connecting the Receiver*. For two suggestions on placing your speakers for the best sound, see *Appendix B: Speaker Placement*.

FIRST THINGS FIRST

TV AND VCR CONNECTION

(TV WITHOUT AUDIO OUTPUT JACKS)

THIS CONNECTION PROVIDES

- stereo or surround sound from TV programs broadcast in stereo
- stereo, surround sound or mono sound from a VCR
- viewing one channel on TV while recording another channel

TO USE THIS CONNECTION, YOU MUST HAVE

- (1) paired (red/white) stereo cable
- (2) coaxial cables

TO CONNECT

1. Connect the cables as shown in the diagram to the right.

USING THIS CONNECTION

To watch TV programs

1. Turn off the VCR.
2. Press TV and tune to a channel.

To watch or play a tape on the VCR

1. Press VCR1 on your remote
2. Press PLAY.

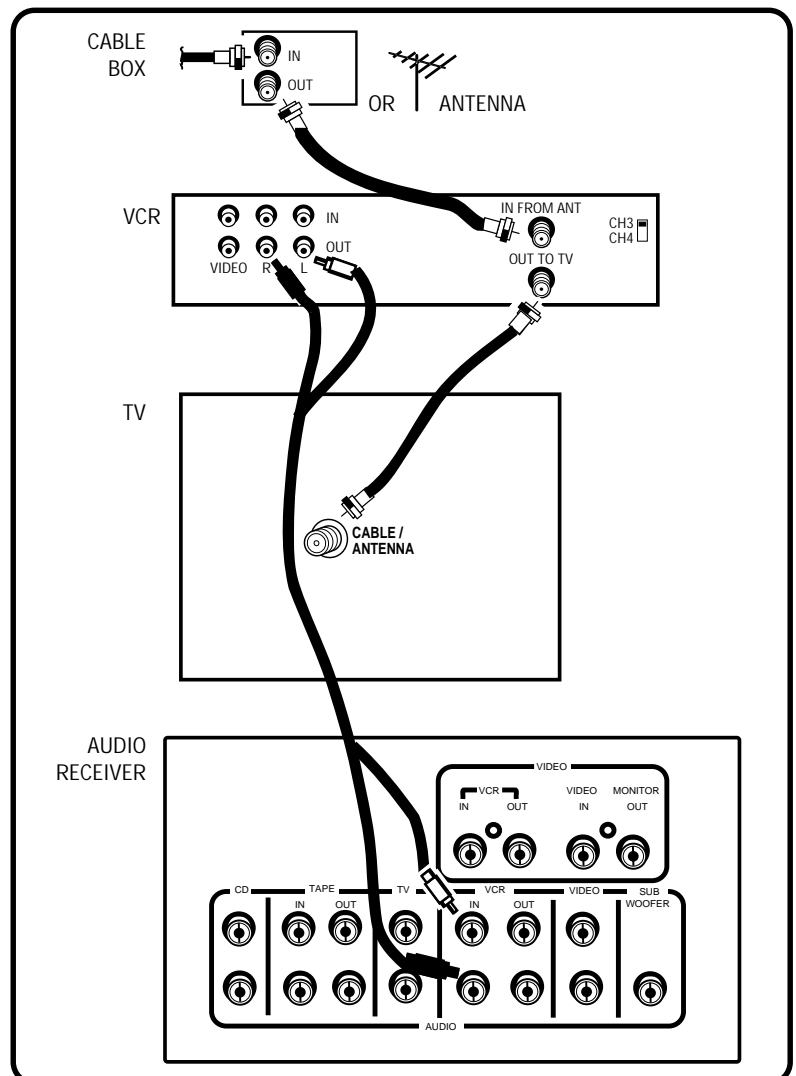
To record one program and watch another

1. Press VCR1 on your remote and tune to a channel.
2. Begin recording.
3. Make sure TV/VCR switch on the VCR is set to TV.
4. Press TV and tune to a channel.

If your TV has more than one video input, make sure the VCR and VIDEO buttons tune the TV to the same channel that the receiver monitor out is plugged into.

Refer to the TV's user's guide for more information.

For additional video device connections, refer to *Appendix A*.



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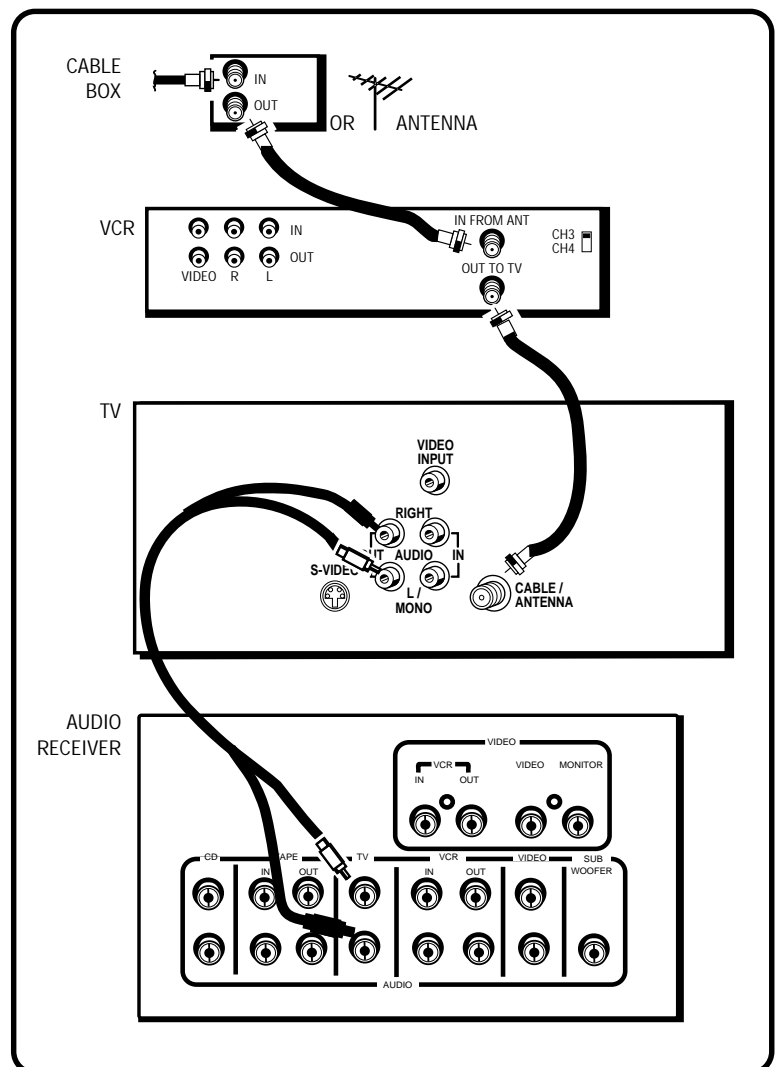
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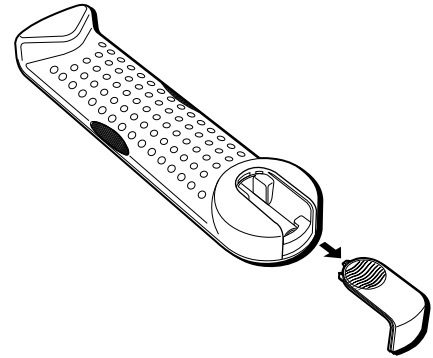
For additional video device connections, refer to *Appendix A*.



FIRST THINGS FIRST

STEP 3: PUT BATTERIES IN THE REMOTE

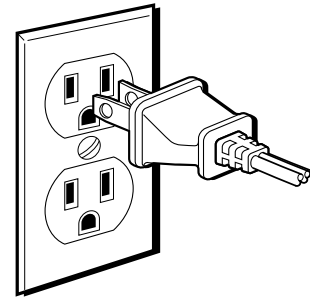
1. Slide the battery compartment cover off the back of the remote.
2. Insert the 4 AAA batteries, matching the + and - ends of each battery with the symbols in the compartment.
3. Replace the cover.



STEP 4: PLUG IN THE RECEIVER

Before you plug in the receiver, connect the other components and speakers.

Plug the power cord in the wall outlet, matching the wide blade of the plug with the wide slot in the outlet. Be sure to insert the plug completely.



STEP 5: TURN ON THE RECEIVER

Press the POWER button on the receiver, the POWER button on the remote or any device button on the remote.

Read on...

The next section tells you how to operate the receiver. Then, read the section that takes you on a tour of the receiver and remote control.

OPERATING THE RECEIVER

IF YOU HAVE QUESTIONS ...

...about the front panel or remote control buttons as you go through this section, refer to *Chapter 3, Tour of the Receiver*.

1 FIRST THINGS FIRST



2 OPERATING THE RECEIVER



3 TOUR OF THE RECEIVER



4 PROGRAMMING THE REMOTE

Important:

In order to safeguard your hearing, turn the volume down before turning on your receiver.

Also, unless otherwise specified, the buttons mentioned in this chapter are on the remote control.

OPERATING THE RECEIVER

TUNING THE RECEIVER

1. Push the FM/AM button on the receiver (or the AM•FM button on the remote) to activate the tuner.
2. Press the FM/AM button on the receiver (or the AM•FM button on the remote) again to select the FM or AM band.

TUNING

Press the FF on your remote button to move up the AM or FM band.

Press the REW button on your remote to move down the AM or FM band.

AUTO TUNING

Use the AUTO feature to automatically search for stations of sufficient strength.

Press AUTO on your receiver (or the INPUT•SEEK button on your remote) to put the receiver into AUTO mode. "AUTO" appears in the display. Press TUNING up or down button on the receiver to search. The tuner finds and stops on the next station whose frequency is strong enough to be received. To continue the search, press TUNING up or down button again.

STORING STATIONS IN MEMORY

You can store up to 30 AM and FM stations. These stations can be stored in random order.

To Store a Station

1. Press the FM/AM button on the receiver (or the AM•FM button on the remote) to turn on the receiver.
2. Select the band—FM or AM.
3. Select the station you want to store in memory using the methods described above.
4. Press the PROGRAM button on the remote. "MEMORY" blinks in the display. While "MEMORY" is blinking, press number buttons on the remote for the station.

For stations 1, 2 or 3 press 0, then press 1, 2, or 3. For stations 4 through 30, press the numbers directly.

If the Memory indicator on the display turns off before you preset your station selection, press PROGRAM again.

If the receiver is disconnected from its power source, the preset stations are maintained in memory for up to 7 days.

OPERATING THE RECEIVER

To Play a Preset Station

Press the appropriate Preset Stations number. For stations 1, 2 or 3 press 0, then press 1, 2, or 3. For stations 4 through 30, press the numbers directly.

Or, press CHAN UP on your remote to tune to the next preset station or CHAN DOWN to tune to the previous preset station.

PRESET SCANNING

Use the PRESET SCAN button on the receiver's front panel to review the preset stations stored in the tuner's memory.

"PRESET" and the station's location in memory appear in the display. The tuner automatically scans all preset stations in order, pausing at each one for approximately 5 seconds.

When the tuner reaches the station you want, press PRESET SCAN to stop the scanning. If the scan is not interrupted, the tuner reviews all preset stations in order, stopping at the point where the scan began.

OPERATING THE RECEIVER

BALANCING THE SPEAKER SYSTEM

To reproduce sound effects as they were intended, the speakers must be correctly balanced.

To balance the speakers using the test tone, all speakers must be connected to your receiver. Your receiver must be in the Dolby Pro Logic Surround or Dolby 3 Stereo Mode.

TO BALANCE THE SPEAKERS


1. Press the TEST TONE button on the receiver front panel. The front panel displays show the current settings as the receiver generates "pink noise" and applies it automatically at 2-second intervals to the left main channel, center channel, right main channel, and left and right rear channels (simultaneously), in that order.
2. As the pink noise is generated, go to the spot in the room where you are most likely to be when listening to your system. The rear Surround sound and center speaker should be adjusted to equal the level of output from the left and right main speakers.
3. Make adjustments by pressing the REAR•CENTER button, and then the + or - button on your remote control. The output from the selected speaker(s) is adjusted accordingly. The adjustments will be indicated on the receiver's display as they are made.

Each time you press the + or - button on your remote control to adjust a channel, the receiver provides you with 2 more seconds of pink noise to that channel before moving on to the next. Also, the front panel displays reflect your adjustments.

4. Press the TEST TONE button again to end the test.

You may not need to check or adjust these levels again unless you move your system, rearrange the speakers, or change your preferred seating location in the room.

*Manufactured under license from Dolby Laboratories Licensing Corporation.

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

Fine tuning is best performed with the remote control so that adjustments can be made from the viewing or listening area.

OPERATING THE RECEIVER

USING SWAP AUDIO

Swap audio lets you change the sound from the large picture to the small picture when you are watching TV and using picture-in-picture (PIP) with an external video source.

TO USE SWAP AUDIO

When you are watching TV and turn on PIP, you can turn on another video source and swap the sound from the large picture coming from the TV to the small picture coming from the other video source.

1. Press TV on the remote to turn on the TV and put the receiver in TV mode.
2. Press the PIP button. The empty PIP appears on the screen.
3. Activate a video source for the PIP. The picture from the video source appears in the PIP.
4. Press TV.
5. Change to the TV channel you want to watch on the large screen.
6. Press SWAP AUDIO to swap the sound between the large picture and the small picture.
7. To swap the video between the large picture and the small picture, use the SWAP PIP button on the remote.

If you swap the TV picture to the PIP and the other video source to the large picture, you may not be able to swap the audio.

TO CHANGE THE VIDEO SOURCE AND SWAP THE AUDIO

If you want to change the video source for the PIP and want to be able to use SWAP AUDIO:

1. Turn off PIP.
2. Change the video source to another video component connected to the receiver.
3. Press TV to watch the TV.
4. Press PIP. The video source appears in the PIP. The video from the TV appears in the large picture.
5. Press SWAP AUDIO to swap the audio as you want.

The Swap Audio feature may not work with all TV brands with the PIP feature.

If your TV has a PIP feature, see the TV's user's guide for instructions for using it.

TOUR OF THE RECEIVER

BUTTONS AND CONNECTIONS

This section describes the receiver's controls and connections, including:

- The front panel
- The front panel display
- The remote control
- The back panel

1 FIRST THINGS FIRST



2 OPERATING THE RECEIVER



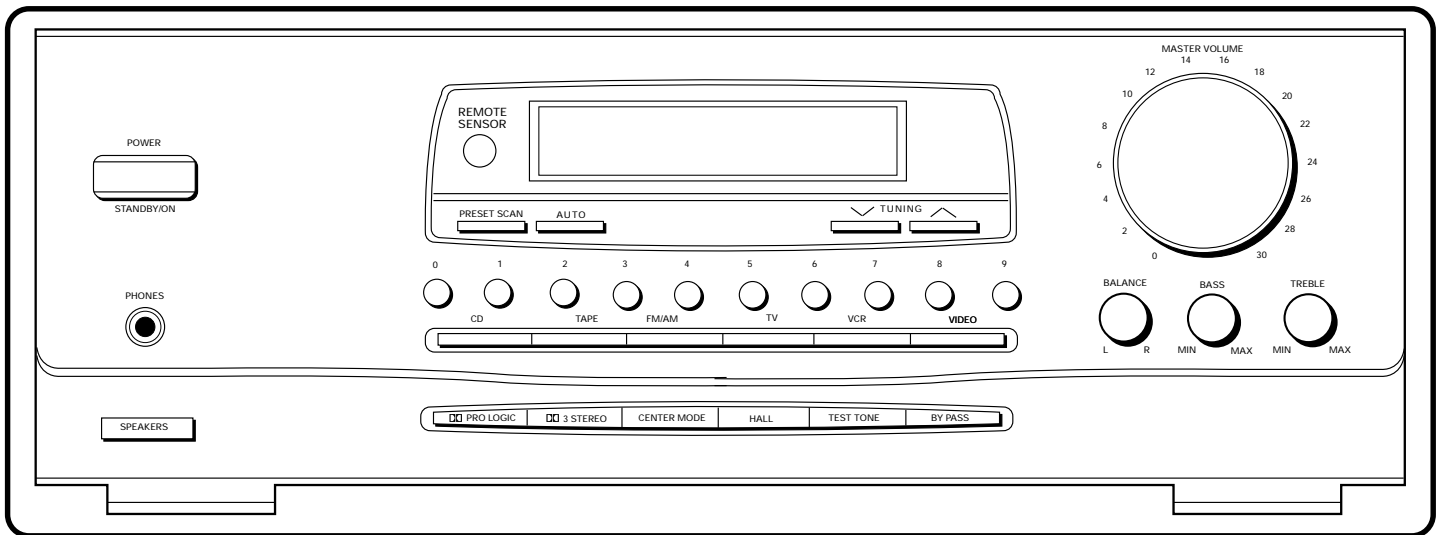
3 TOUR OF THE RECEIVER



4 PROGRAMMING THE REMOTE

As you operate the receiver, use the displays on the receiver's front panel and the on-screen displays as references when you select options and adjust the sound to your satisfaction.

TOUR OF THE RECEIVER



FRONT PANEL

AUTO Selects auto tuning mode or manual tuning mode.

BALANCE Adjusts the sound from the left and right speakers.

BASS Adjusts the bass listening level.

BYPASS Turns off the Surround circuitry. Sound is generated without effects—conventional stereo.

CD Selects the CD player input.

CENTER MODE Lets you select a center mode when using Dolby Pro Logic or Dolby 3 Stereo:

Normal Select if you are using a small center speaker. This is the recommended mode.

Wide Select if the center speaker is large or the same as the left and right speakers. The full range of Center Channel is routed to the center speaker.

Phantom Select when there is no center speaker. The signal intended for the center speaker is divided equally between the left and right main speakers. Phantom mode is not available in 3 Stereo mode.

3 STEREO Turns on Dolby Pro Logic surround sound without Surround sound speakers and is suggested for video, home theater, TV and some music. Recommended mode if not using surround speakers.

PRO LOGIC Turns on Dolby Pro Logic surround sound with Surround sound speakers and is suggested for video, home theater, TV and some music. This is the recommended mode if you have all speakers.

TOUR OF THE RECEIVER

FM/AM Activates the tuner and selects the band.

HALL Turns on Sound system without a center speaker and is suggested for classical music, jazz and other music.

MASTER VOLUME Increases or decreases the volume.

PHONES Provides a connection for headphones.

POWER Turns the receiver on or off.

PRESET SCAN Lets you review the preset stations.

SPEAKERS Turns the speakers on and off.

TAPE Selects the tape player as input.

TEST TONE Turns on “pink” noise so that you can balance the speakers. Press again to turn off.

TREBLE Adjusts the treble listening level.

TUNING DOWN Moves down the selected FM/AM band.

TUNING UP Moves up the selected FM/AM band.

TV Selects the TV as input.

VCR Selects VCR as input.

VIDEO Selects the video equipment input (satellite, camcorder, etc.)

TOUR OF THE RECEIVER



FRONT PANEL DISPLAYS

The receiver's display panel shows the current status of the receiver and choices for some commands.

STATUS INDICATORS

AUTO Searches for AM or FM stations of sufficient signal strength.

□□ DOLBY 3 STEREO Dolby 3 Stereo mode is turned on.

□□ DOLBY PRO LOGIC SURROUND Dolby Pro Logic Surround mode is turned on.

CENTER LEVEL

DELAY TIME

HALL Hall mode is turned on.

KHz An AM station is selected.

MEMORY The receiver is memorizing the frequency of the selected station.

MHz An FM station is selected.

MUTE The sound is muted. The MUTE symbol turns on in the front panel display when the sound is muted.

NORMAL Normal mode is turned on.

PHANTOM Phantom mode is turned on.

PRESET A preset channel is channel selected.

REAR LEVEL

SPEAKERS OFF The speakers are turned off.

STEREO An FM stereo signal is being received.

TUNED The tuner had found a strong frequency in a search.

WIDE Wide mode is turned on.

TOUR OF THE RECEIVER

REMOTE CONTROL

Your RCA Remote Control is capable of operating most RCA audio and video equipment. To use the remote control effectively, always aim it directly at your receiver.

The remote control operates on 4 AAA batteries, included with your system. Install them before attempting to operate the remote. Be sure to match the + and - ends of each battery to the symbols shown in the remote's battery compartment.

BASIC CONTROLS

MUTE Turns off the receiver's sound. Press again to restore the sound.

POWER Turns the AM/FM receiver off with two presses. If you have multiple components turned on and not the AM/FM receiver, pressing POWER once turns off the last component turned on. Pressing POWER again turns off all components.

VOL UP and DOWN Increases or decreases the volume.

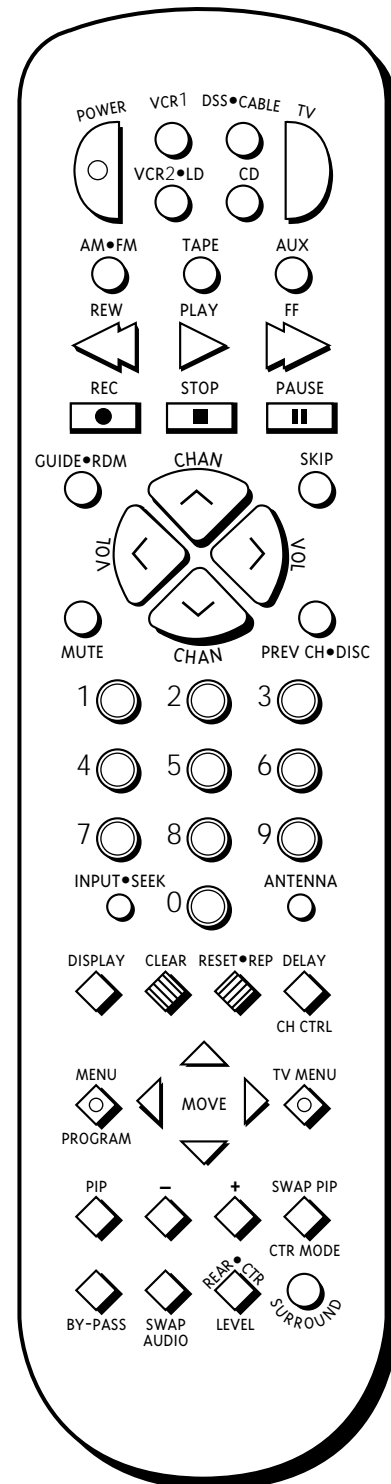
RECEIVER CONTROLS

AM•FM Activates the tuner and toggles between the AM band and the FM band.

CTR MODE Changes the Center mode when using Dolby Pro-Logic Surround or Dolby 3 Stereo surround modes. Press once and the current mode appears. Press again to change the mode.

DELAY/CH CTRL Selects the amount of Surround Sound delay between the main and rear speakers. When using Dolby Pro Logic Surround mode, choose from 15, 20 or 30 milliseconds. Press once and the current setting appears. Press again to change the setting.

SURROUND Lets you select a Surround Mode: Dolby Pro Logic Surround, Dolby 3-Stereo or Hall. Press once and the current mode appears. Press again to change the mode.



TOUR OF THE RECEIVER

SWAP AUDIO Swaps the audio only from the large picture to the small picture when you are watching TV and using picture-in-picture (PIP).

SURROUND SOUND LEVEL CONTROLS

- + Increases the volume in rear and center speakers.
- Decreases the volume in rear and center speaker.

BY-PASS Turns on ByPass mode, which cancels all Surround sound modes. Sound is generated without effects.

REAR•CTR LEVEL Adjusts the balance level of the rear and center speakers. Press once for Center. Press again for Rear.

RECEIVER/TUNER CONTROLS

CHAN UP and DOWN Tunes the receiver to the next or previous preset station stored in the receiver's memory.

FF Lets you manually move up the AM/FM band.

INPUT•SEEK Selects auto tuning or manual tuning mode.

MENU/PROGRAM Stores the selected station in the receiver's memory.

Number Buttons Let you enter numbers when needed.

REW Lets you manually move down the AM/FM band.

TV CONTROLS

- + On some RCA TV models, used to adjust menu controls.
- On some RCA TV models, used to adjust menu controls.

ANTENNA Changes the antenna input.

DELAY/CH CTRL In some RCA TV models, lets you control the channel that appears in the PIP window.

CHAN UP and DOWN Tunes the TV channel up and down.

CLEAR Removes any menu from the screen.

DISPLAY Displays channel information.

GUIDE•RDM For some models, brings up 12 small pictures (previews of the next 12 channels in the channel list). Press again to turn off channel guide.

INPUT•SEEK For some TV models, toggles through the available input sources.

You can program the remote to operate many other brands of audio and video components. See Chapter 4, Programming the Remote for details.

TOUR OF THE RECEIVER

MENU/PROGRAM For some models, stores channels in the TV's memory.

MOVE arrows In some models, when using PIP, moves the small picture to another corner of the screen. Also, used for menu navigation in some TV models.

Number Buttons Let you enter channel numbers and time settings when needed.

PIP Turns on and off picture-in-picture on most RCA TV models with PIP.

POWER Turns the TV off.

PREV CH•DISC Returns to the previous channel.

RESET•REP Returns picture quality controls to their original settings.

SKIP Press once before changing channels and the TV waits 30 seconds before returning to the original channel. Press repeatedly to increase the time.

SWAP PIP Swaps the main picture in the PIP window.

TV Turns on the TV and puts the remote in TV mode.

TV MENU Displays the TV's on-screen menus.

VCR CONTROLS

CHAN up and down Tunes to the next or previous channel when watching TV through the VCR.

CLEAR Resets the tape counter and corrects entries when programming the menus.

DISPLAY Displays channel, time and counter information on the screen.

FF Fast forwards a tape. Also, searches forward while a tape is playing.

INPUT•SEEK For some VCR models, selects line input or tuner.

MENU/PROGRAM Displays the on-screen programming menus.

Number Buttons Let you enter numbers when needed.

PAUSE Pauses a tape.

PLAY Plays a tape.

POWER Turns the VCR off.

PREV CH•DISC Returns to the previous channel.

REC Records a tape.

If you have questions about the use of the remote buttons with another component, refer to the component's user's guide.

TOUR OF THE RECEIVER

REW Rewinds a tape. Also, searches backward while a tape is playing.

SKIP Press once before changing channels and the TV waits 30 seconds before returning to the original channel. Press repeatedly to increase the time.

STOP Stops a tape.

VCR1 Turns on the VCR and puts the remote in VCR1 mode.

VCR2•LD For some VCR models, if programmed, turns on a second VCR and puts the remote in VCR2 mode.

LASERDISC PLAYER CONTROLS

AUX If programmed, turns on another laserdisc player brand and puts the remote in laserdisc mode.

CHAN up and down Changes to the next higher or lower track on the laserdisc.

FF Scans forward on the laserdisc.

Number Buttons Let you change to a specific track.

PAUSE Pauses the laserdisc.

PLAY Plays a laserdisc.

POWER Turns the laserdisc player off.

REW Scans backward on the laserdisc.

STOP Stops the laserdisc.

VCR2•LD For some laserdisc models, if programmed, turns on the laserdisc player and puts the remote in laserdisc mode.

CD PLAYER CONTROLS

AUX If programmed, turns on another CD player brand and puts the remote in CD mode.

CD Turns on the CD player and puts the remote in CD mode.

CLEAR Clears an entry when programming the CD player.

DISPLAY In some CD models, lets you switch between the number track information and time information.

GUIDE•RDM Activates the Random function, which plays a random selection of tracks from one or all CDs.

FF Moves forward through the CD one track at a time.

MENU/PROGRAM Programs the CD Changer to play up to 32 tracks in any order you choose.

TOUR OF THE RECEIVER

Number Buttons Let you enter numbers when needed.

PAUSE Pauses the CD.

PLAY Plays the CD.

PREV CH•DISC Selects a disc to be played. Press PREV CH•DISC and then the CD number using the number buttons.

RESET•REP Repeats a track, a CD or an entire program. Press once to repeat the currently playing track, twice for the CD or program, and three times to turn the function off.

REW Moves backward through the CD one track at a time.

STOP Stops the CD from playing.

TAPE DECK CONTROLS

AUX If programmed, turns on another tape deck brand and puts the remote in tape deck mode.

FF Fast forwards the tape.

Number Buttons Let you enter numbers when needed.

PAUSE Pauses the tape.

PLAY Plays the tape.

POWER Turns the tape player off.

REW Rewinds the tape.

SATELLITE RECEIVER CONTROLS

AUX If programmed, turns on another satellite receiver brand and puts the remote in satellite receiver mode.

CHAN up and down Tunes to the next or previous channel when watching TV through the satellite receiver.

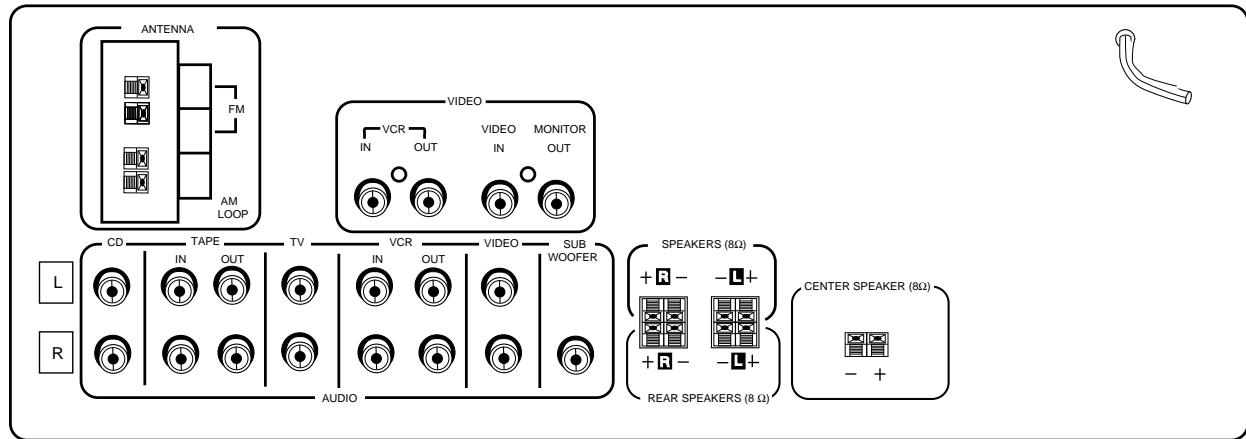
Number Buttons Let you enter numbers when needed.

POWER Turns the satellite receiver off.

TROUBLESHOOTING GUIDE

Before referring to the checklist below, make sure you have correctly followed the connecting and operating procedures. If you have any questions that this booklet cannot answer, please call your nearest RCA dealer.

TOUR OF THE RECEIVER



BACK PANEL

AUDIO Connections Provides audio connections for components such as a VCR, TV, CD player, laserdisc player or tape player.

IN Provides audio input from another component.

OUT Sends audio output to another component, such as a minidisc, tape player or VCR. Sends a signal to the subwoofer.

VIDEO Connections Provides video connections for the video portion of another component such as a VCR, TV or satellite receiver.

IN Provides video input from another video component.

OUT Sends video output to another video component such as a VCR.

Monitor Out Sends video output to the TV.

REAR SPEAKERS Provides connection for the rear Surround Sound speakers.

CENTER SPEAKER Provides connection to the center speaker.

FM Provides connection for an FM antenna.

AM LOOP Provides connection for an AM antenna.

PROGRAMMING THE REMOTE

IF YOU WANT TO USE THE REMOTE WITH YOUR TV OR OTHER COMPONENT...

The remote already works with most other RCA, GE and ProScan TVs and VCRs. However, you can program the remote to control most brands of remote controllable TVs, VCRs, cable boxes, satellite receivers, and audio equipment.

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4 PROGRAMMING THE REMOTE

PROGRAMMING THE REMOTE

PROGRAMMING THE REMOTE

You can program the remote to control most brands of remote controllable TVs, VCRs and cable boxes. If you have an RCA, GE or ProScan VCR, you may not need to program the remote at all. Other manufacturer's brands need to be programmed.

PROGRAMMING THE REMOTE TO CONTROL A TV

To determine whether you need to program the remote, turn on the TV, point the remote at the TV's remote sensor and press TV. Then, press the POWER, or CHAN UP or DOWN button to see if the TV responds to the remote commands. If not, you need to program the remote.

Follow these steps to program your remote to control your TV:

1. Turn on the TV.
2. Look up your TV brand and code number(s) in the code list on the next page or on the code sheet packed with your remote.
3. Press and hold the TV button on the remote.
4. Enter the three-digit code from the code list.
5. Release the TV button, then press POWER to see if the TV responds to the remote commands. If not, try pressing TV then POWER.
6. Repeat steps 3 through 5 using the next code listed for your TV brand until the TV responds to the remote commands.

This remote may not operate all models of the brands shown.

If a battery is removed from the battery compartment of the remote control, all control key functions will return to the original mode.

PROGRAMMING THE REMOTE

REMOTE TV CODES

Admiral 005	JC Penney 000, 008, 011, 019, 027, 040, 068, 077, 086, 088	Radio Shack 000, 021, 025, 036, 037, 059, 064, 078
Amtron 064	Jensen 011, 027	RCA 000, 006, 011, 019, 027, 034, 038, 044, 046, 088, 100, 101, 109
Akai 002, 103	JVC 012, 024, 036, 037, 040, 048, 051, 074	Realistic 021
A-Mark 102	Kawasho 002, 011, 027	Sampo 011, 027
Anam 104, 105	Kenwood 006, 011, 014, 027	Samsung 006, 011, 014, 015, 019, 027, 036, 037, 077, 110
Anam National 038, 106	Kloss Novabeam 035, 043	Sanyo .. 017, 021, 039, 056, 057, 058
AOC 011, 019, 027, 088, 107	KTV 078	Scott 028, 037, 064
Bell & Howell 005	Loewe 013	Sears 000, 006, 011, 014, 017, 018, 021, 023, 027, 039, 040, 041, 051, 071, 083, 095
Candle 011, 027, 033	Luxman 011, 027	Sharp 011, 020, 025, 027, 037, 052, 053, 059, 060, 108
Citizen 011, 027, 033, 064	LXI 000, 013, 018, 021, 023, 054	Signature 005, 094
Colortyme 011, 027, 084	Magnavox 006, 007, 010, 011, 013, 016, 027, 033, 035, 043, 049, 066, 087, 089	Sony 002
Concerto 011, 027	Marants 013	Soundesign 011, 027, 033
Contec/Cony 036, 037, 040, 042, 064	Marantz 011, 013, 027, 069	Sylvania 006, 007, 010, 011, 013, 016, 027, 033, 035, 043, 049, 066, 087, 089
Craig 064	Memorex 005	Symphonic 064, 076
Curtis Mathes 000, 011, 015, 027, 037	MGA 006, 011, 014, 019, 022, 027, 041, 056, 061, 068	Tatung 038
CXC 064	Mitsubishi 006, 011, 014, 019, 022, 027, 041, 055, 056, 061, 068	Technics 012
Daewoo 011, 019, 027, 112	MTC 011, 019, 027	Techwood 011, 027
Daytron 011, 027	Multivision 081	Teknika 011, 019, 027, 033, 036, 037, 040, 066
Dimensia 000	NAD 018, 023	Telecaption 090
Electrohome 006, 011, 014, 027, 038, 061, 068	NEC 011, 014, 019, 027, 038, 084	TMK 011, 027
Emerson 011, 026, 027, 028, 029, 030, 031, 032, 037, 042, 053, 064, 065, 067, 075, 076, 078, 079, 094, 095, 096	Panasonic ... 012, 013, 038, 086, 111	Toshiba 018, 021, 023, 040, 071, 077, 085, 090
Envision 011, 027	Philco 006, 007, 010, 011, 013, 016, 019, 027, 033, 035, 037, 038, 043, 087, 089 008, 009
Fisher 017, 021, 039, 041	Philips 002, 006, 007, 010, 011, 013, 016, 033, 035, 037, 038, 043, 066, 073	Victor 051
Funai 064	Pioneer 011, 027, 045, 062, 093	Vidtech 019, 027
GE 000, 008, 009, 011, 012, 027, 038, 068, 086, 089, 091	Portland 011, 019, 027, 037	Wards 000, 005, 006, 007, 008, 009, 010, 011, 013, 019, 025, 027, 028, 035, 043, 059, 066, 076, 082, 089
Goldstar 003, 004, 006, 011, 019, 027, 037, 050	ProScan 000	Yamaha 006, 014, 019, 027
Hallmark 011, 027	Proton 011, 027, 037, 072	Zenith 001, 099
Hitachi 009, 011, 027, 036, 037, 040, 047, 048, 063, 080, 094, 097, 098	Quasar 012, 038, 092	
Infinity 013		
JBL 013		

PROGRAMMING THE REMOTE

PROGRAMMING THE REMOTE TO CONTROL A VCR

To determine whether you need to program the remote, turn on the VCR, point the remote at the VCR's remote sensor, and press VCR1. Then, press the POWER or CHAN UP or DOWN button to see if the VCR responds to the remote commands. If not, you need to program the remote.

Follow these steps to program your remote to control your VCR:

1. Turn on the VCR.
2. Look up your VCR brand and code number(s) in the code list on the next page or on the code sheet packed with your remote.
3. Press and hold the VCR1 button on the remote.
4. Enter the three-digit code from the code list.
5. Release the VCR1 button, then press POWER to see if the VCR responds to the remote commands. If not, try pressing VCR1 then POWER.
6. Repeat steps 3 through 5 using the next code listed for your VCR brand until the VCR responds to the remote commands.

This remote may not operate all models of the brands shown.

To program the VCR2•LD button to control a second VCR, follow these steps but use the VCR2•LD button instead of the VCR1 button.

PROGRAMMING THE REMOTE

REMOTE VCR CODES

Admiral 006	Kenwood 002, 014, 016, 030, 044, 046	Sanyo 002, 012
Aiwa 015	KLH 073	Scott 004, 013, 041, 049, 068
Akai 003, 017, 022, 023, 063, 066	Lloyd's 015	Sears 002, 005, 009, 012, 018, 019, 035, 043, 048
Audio Dynamics 014, 016	Logik 031	Sharp 006, 024, 027, 039, 045
Bell & Howell 002	Magnavox 008, 029, 053, 056	Shintom 017, 026, 031, 055
Broksonic 010	Marantz 002, 008, 014, 016, 029, 030, 044, 046, 061	Signature 015
Candle 007, 009, 013, 044, 045, 046, 052	Marta 009	Sony 017, 026, 038
Canon 008, 053	MEI 008	Sylvania 008, 015, 029, 053, 056
Capehart 001	Memorex 008, 009, 012, 015	Symphonic 015
Citizen 007, 009, 013, 044, 045, 046, 052	MGA 004, 027	Tandy 002, 015
Colortyme 014	Midland 032	Tashiko 009
Craig 007, 012	Minolta 005, 035	Tatung 030
Curtis Mathes .. 000, 007, 008, 014, 015, 044, 046, 053, 064, 067	Mitsubishi 004, 005, 027, 035, 040	Teac 015, 030, 069
Daewoo 013, 045, 052, 076	Montgomery Ward 006	Technics 008
dbx 014, 016	MTC 007, 015	Teknika 008, 009, 015, 021
Dimensia 000	Multitech 007, 015, 031, 032	TMK 067
Dynatech 015	NEC 002, 014, 016, 030, 044, 046, 059, 061, 064	Toshiba 005, 013, 019, 048, 049
Electrohome 027	Panasonic 008, 053, 075, 077	Totevision 007, 009
Emerson 008, 009, 010, 013, 015, 020, 023, 027, 034, 041, 042, 047, 049, 057, 062, 065, 067, 068, 070	Pentax 005, 035, 044	Unitech 007
Fisher 002, 012, 018, 019, 043, 048, 058	Pentex Research + 046	Vector Research 014, 016, 044
Funai 015	Philco 008, 029, 053, 056	Victor 016
GE 000, 007, 008, 032, 037, 053	Philips 008, 029	Video Concepts 014, 016, 044
Goldstar 009, 014, 046, 060	Pioneer 005, 016, 050	Videosonic 007
Harman Kardon 014	Portland 044, 045, 052	Wards 005, 006, 007, 008, 009, 012, 013, 015, 025, 027, 031, 035
Hitachi 005, 015, 035, 036	ProScan 000	Yamaha 002, 014, 016, 030, 046
Instant Replay 008	Quartz 002	Zenith 011, 017, 026, 072
JCL 008	Quasar 008, 053	
JC Penney 002, 005, 007, 008, 014, 016, 030, 035, 051, 053	RCA 000, 005, 007, 008, 028, 035, 037, 054, 069	
JVC 002, 014, 016, 030, 046, 074	Radio Shack/Realistic 002, 006, 008, 009, 012, 015, 019, 027, 043, 053	
	Samsung 007, 013, 022, 032, 042	
	Sansui 016, 071	

PROGRAMMING THE REMOTE

PROGRAMMING THE REMOTE TO CONTROL AN AUDIO COMPONENT

To program the remote for a remote-controllable audio component, point the remote at the component and press the correct component button: CD for a CD player, TAPE for a tape player, etc. Then, press POWER or CHAN UP or DOWN. If the component doesn't respond, the remote needs to be programmed. Use the codes in the code list on the next page or on the sheet packed with your remote.

Follow these steps to program your remote to control your audio component:

1. Turn on the component to be programmed.
2. Look up the brand and corresponding code number in the code list on the next page or on the code sheet packed with your remote.
3. Press and hold the component button on the remote.
4. Enter the three-digit code from the code list.
5. Release the component button, then press POWER to see if the component responds to the remote commands. If it doesn't, try pressing the component button, then POWER again.
6. Repeat steps 3 through 5 using the next code listed for the brand of your component until the component responds to the remote commands.

This remote may not operate all models of the brands shown.

PROGRAMMING THE REMOTE

AUDIO CODES

ads:	AMP	001	RCA:	AMP	024
Aiwa:	CD	060		AM/FM.....	003
Akai:	AMP	002, 008		CD	007, 043, 044
Denon:	CD	057		TAPE	006
Dynamic Bass:	AM/FM.....	029		PHONO	005
	CD	025	Realistic:	AUX	004, 054
	TAPE	026, 027		CD	063, 066
	PHONO	028	Sansui:	CD	045
Emerson:	CD	066	Scott:	CD	066
Fisher	AMP	023		TAPE	055, 056
	CD	067	Sherwood:	AMP	011, 013
Hitachi:	CD	063	Sony:	AMP	021
JVC:	AMP	016, 058		AM/FM.....	049
	AM/FM.....	030, 035		CD	046
	CD	032		TAPE	048, 053
	TAPE	033, 034		PHONO	047
	AUX	031	Teac:	AMP	010
Kenwood:	AMP	017, 074		CD	069
	AM/FM.....	074	Technics:	AM/FM.....	052
	CD	067, 070, 077		CD	050
	TAPE	071, 072		TAPE	051
	PHONO	073	Yamaha:	AMP	018, 019
Kyocera:	AMP	009			
Lotte (NEC):	CD	075			
Magnavox:	AMP	065			
	AM/FM.....	065			
	CD	061			
Marantz:	AMP	022, 076			
	AM/FM.....	076			
	CD	068			
Mitsubishi:	AMP	015, 059			
	AM/FM.....	059			
Nakamichi:	AMP	020			
Onkyo:	AM/FM.....	082			
	CD	078			
	TAPE	080, 081			
	PHONO	079			
Panasonic:	AMP	012			
	AM/FM.....	038			
	CD	036, 083			
	TAPE	037			
Phillips:	AMP	062			
	AM/FM.....	062			
	CD	061			
Pioneer:	AMP	014			
	AM/FM.....	042			
	CD	039			
	TAPE	040, 041			

PROGRAMMING THE REMOTE

PROGRAMMING THE REMOTE TO CONTROL A CABLE BOX

Refer to the cable box connection page or contact your cable company to hook up your cable box. You may be able to program the remote for your remote controllable cable box. Use the codes in the code list on the right or on the sheet packed with your remote.

1. Turn on the cable box.
2. Look up the cable box brand and its code number(s) in the code list on the next page or on the code sheet packed with the remote.
3. Press and hold the DSS•CABLE button on the remote.
4. Enter the three-digit code from the code list.
5. Release the DSS•CABLE button, then press POWER or CHAN UP or DOWN to see if the cable box responds to the remote commands. If not, try pressing DSS•CABLE, then POWER again to see if the cable box responds.
6. Repeat steps 3 through 5 using the next code listed for the brand of your cable box until the cable box responds to the remote commands.

This remote may not operate all models of the brands shown.

PROGRAMMING THE REMOTE

REMOTE CONTROLLABLE CABLE BOX CODES

ABC	022, 046, 053, 054	Tocom	017, 021, 049, 050, 055
Anvision	007, 008	Unika	031, 032, 041
Cablestar	007, 008	051, 052, 060
Diamond	056	Viewstar	007, 008, 019, 021, 026, 028, 029, 032, 033, 040, 041
Eagle.....	007, 008	Warner Amex	044
Eastern International.....	002	Zenith	014, 042, 057, 061
General Instrument	046		
GI 400	004, 005, 015, 023, 024, 025, 030, 036		
Hamlin.....	003, 012, 013, 034, 048		
Hitachi	037, 043, 046		
Jerrold	004, 005, 015, 023, 024, 025, 030, 036, 045, 046, 047, 062, 065		
Macom	037, 043		
Magnavox	007, 008, 019, 021, 026, 028, 029, 032, 033, 040, 041		
NSC	009		
Oak	001, 016, 038		
Oak Sigma	016		
Panasonic	003, 027, 039, 061		
Philips	007, 008, 019, 021, 026, 028, 029, 032, 033, 040, 041		
Pioneer	018, 020, 044		
Randtek.....	007, 008		
RCA	000, 027		
Regal	003, 012, 013		
Regency.....	002, 033		
Samsung.....	044		
Scientific Atlanta	003, 022, 035, 063, 064		
Signature	046		
Sprucer	027		
Starcom	046		
Stargate 2000	058		
Sylvania	011, 059		
Teknika.....	006		
Texscan	010, 011, 059		

PROGRAMMING THE REMOTE

PROGRAMMING THE REMOTE TO CONTROL A LASERDISC PLAYER

You may be able to program your remote to control a laserdisc player. Use the codes shown to the right or on the sheet packed with your remote.

Follow these steps to program your remote to control your laserdisc player:

1. Turn on the laserdisc player.
2. Look up the brand and its code number(s) in the code list.
3. Press and hold the VCR2•LD button on the remote.
4. Enter the three-digit code from the code list.
5. Release the VCR2•LD button, then press POWER to see if the laserdisc player responds to the remote commands. If it doesn't, try pressing VCR2•LD, then POWER again.
6. Repeat steps 3 through 5 using the next code listed for your brand until the laserdisc player responds to the remote commands.

LASERDISC PLAYER CODES

Pioneer	033, 037
ProScan	033, 037
RCA	033, 037

This remote may not operate all models of the brands shown.

PROGRAMMING THE REMOTE

PROGRAMMING THE REMOTE TO CONTROL A SATELLITE RECEIVER

1. Turn on the satellite receiver.
2. Look up the satellite receiver brand and corresponding code number(s) in the code list on the right.
3. Press and hold the DSS•CABLE button on the remote.
4. Enter the three-digit code from the code list.
5. Release the DSS•CABLE button, then press POWER or CHAN UP or DOWN to see if the receiver responds to the remote's commands. If it doesn't, try pressing DSS•CABLE, then POWER again.
6. Repeat steps 3 through 5 using the next code listed for the brand of your receiver until the receiver responds to the remote commands.

PROGRAMMING THE AUX BUTTON ON THE REMOTE

You can program the AUX button on the remote to control another component. The AUX button can be used to control other brands of audio components, TVs, cable boxes, satellite receivers, and VCRs.

To program the AUX button, follow these steps:

1. Turn on the component you want to program.
2. Look up the brand and corresponding code number(s) in one of the code lists on the previous pages.
3. Press and hold the AUX button on the remote. Then, press the other component button—AM/FM, TAPE, CD, DSS•CABLE, etc.
4. Release the component button, but **not** the AUX button.
5. Enter the three-digit code from the code list.
6. Release the AUX button, then press POWER or CHAN UP or DOWN to see if the component responds to the remote commands. If it doesn't, press AUX, then POWER again.
7. Repeat steps 3 through 6 using the next code listed for the brand of your component until it responds to the remote commands.

SATELLITE RECEIVER CODES

Chaparral	080, 081
Cheyenne	081
Drake	082, 083
RCA DSS® System	000
General Instruments .	092, 093, 094
RCA	000
Realistic	084
Sierra I,II,III	081
STS1	085
STS2	086
STS3	087
STS4	088
Toshiba	089
Uniden	090
Video Cipher II	091

This remote may not operate all models of the brands shown.

APPENDIX A: CONNECTING THE RECEIVER

THINGS TO KNOW BEFORE CONNECTING THE COMPONENTS

- Protect components from power surges.
- Connect all components before plugging any power cords into the wall outlet.
- Always turn off the receiver and/or components before you connect or disconnect any cables.
- Always make sure the color-coded plugs match the color of the terminals in which they are inserted. The connection cable plugs and jacks are color-coded as follows:

Speaker Terminals Red for positive (+) terminals. Black for negative (-) terminals.

RCA Phono Type Terminals Red for the right (R) channel. White for the left (L) channel. Yellow for the video (V). Black for the subwoofer. (Not Included)

- Some units may be supplied with connection plugs that are color coded red and black instead of red and white. In this case, the black plug takes the place of the white plug.
- Contact Consumer Relations if you have questions concerning the connections of components.

1 FIRST THINGS FIRST



2 OPERATING THE RECEIVER



3 TOUR OF THE RECEIVER



4 PROGRAMMING THE REMOTE

APPENDIX A: CONNECTING THE RECEIVER

POSITION CABLES CORRECTLY TO AVOID AUDIO HUM OR INTERFERENCE

- Insert all cable plugs firmly into their jacks.
- Place audio/video cables to the sides of the receiver's back panel instead of straight down the middle after you connect the components.
- Try not to coil any power cables and keep them away from the audio/video cables as much as possible.
- Make sure all antennas and cables are properly grounded. Refer to the Safety Tips sheet packed with your receiver.

PROTECT YOUR COMPONENTS | FROM OVERHEATING

- Do not block ventilation holes in any component. Arrange the components so that air can circulate freely.
- Do not stack components directly on top of each other.
- Allow adequate ventilation when placing your components in a stand.
- Place an amplifier near the top shelf of the stand so heating air rising from it will not flow around other components. If you have a satellite receiver, you should place it on the top shelf.

APPENDIX A: CONNECTING THE RECEIVER

TV AND VCR

THIS CONNECTION PROVIDES

- stereo or surround sound from TV programs broadcast in stereo
- stereo, surround sound or mono sound from a VCR
- viewing one channel on TV while recording another channel

TO USE THIS CONNECTION, YOU MUST HAVE

- (1) paired (red/white) stereo cables
- (3) single (yellow) video cables
- (2) coaxial cables

TO CONNECT

1. Connect the cables as shown in the diagram below.

USING THIS CONNECTION

To watch TV programs

1. Turn off the VCR.
2. Press TV and tune to a channel.

To watch or play a tape on the VCR

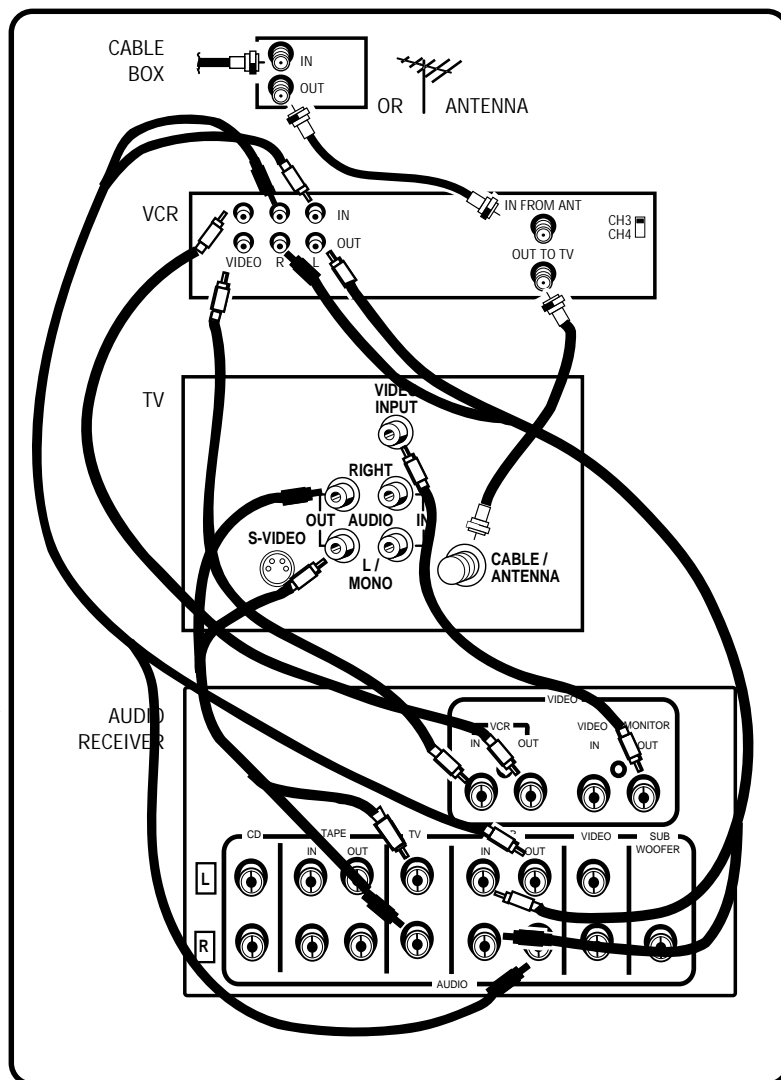
1. Press VCR1.
2. Press PLAY.

To record one program and watch another

1. Press VCR1 and tune to a channel.
2. Begin recording.
3. Make sure TV/VCR switch on the VCR is set to TV.
4. Press TV and tune to a channel.

If your TV has more than one video input, make sure the VCR1 and VIDEO buttons tune the TV to the same channel that the receiver monitor out is plugged into.

Refer to the TV's user's guide for more information.



APPENDIX A: CONNECTING THE RECEIVER

SATELLITE RECEIVER

THIS CONNECTION PROVIDES

- stereo or surround sound from programs broadcast in stereo
- stereo sound from the satellite receiver

TO USE THIS CONNECTION, YOU MUST HAVE

- (1) paired (red/white) stereo cable
- (1) single (yellow) video cable
- (2) coaxial cables

TO CONNECT

1. Connect the cables as shown in the diagram below.

USING THIS CONNECTION

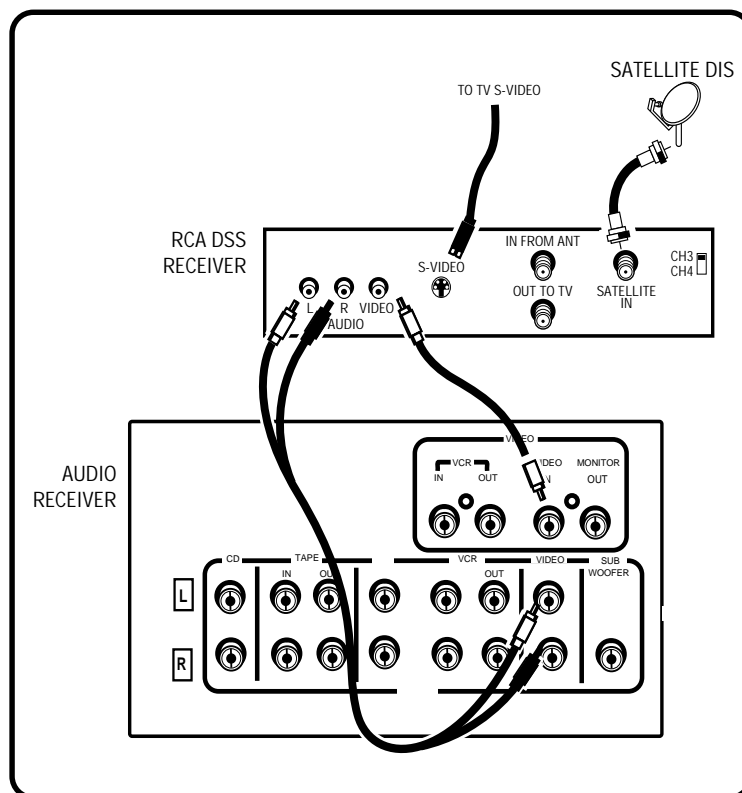
To watch TV programs in stereo

1. Press TV and tune to a channel.

To watch DSS programming

1. Press DSS•CABLE.
2. Tune to a channel.
3. Follow the instructions in the satellite receiver User's Guide.

Do not stack electronic components or other objects on top of the satellite receiver. The slots on top of the receiver must be left uncovered to allow proper airflow to the unit. Blocking the airflow to the unit could impair performance or damage your receiver and other components. Also, do not stack the satellite receiver on top of a "hot component" such as an audio power amplifier.



APPENDIX A: CONNECTING THE RECEIVER

LASERDISC PLAYER

You can connect a laserdisc or a second VCR to the VIDEO connection. Using this connection, you can play a laserdisc in stereo, surround sound.

THIS CONNECTION PROVIDES

- stereo or surround sound from the laserdisc

TO USE THIS CONNECTION, YOU MUST HAVE

- (1) paired (red/white) stereo cable
- (1) single (yellow) video cables

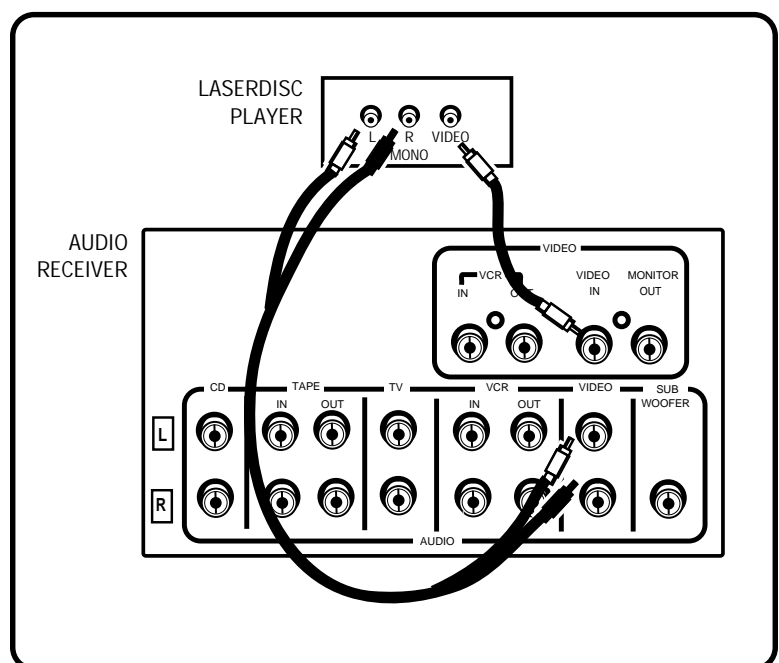
TO CONNECT

1. Connect the cables as shown in the diagram below.

USING THIS CONNECTION

To play the laserdisc

1. Press VCR2•LD.
2. Press PLAY.



APPENDIX A: CONNECTING THE RECEIVER

SECOND VCR

Using this connection enables you to play a video tape but not record a tape.

THIS CONNECTION PROVIDES

- stereo, surround sound, or mono on the VCR
- VCR playback only

TO USE THIS CONNECTION, YOU MUST HAVE

- (1) paired (red/white) stereo cable
- (2) single (yellow) video cable

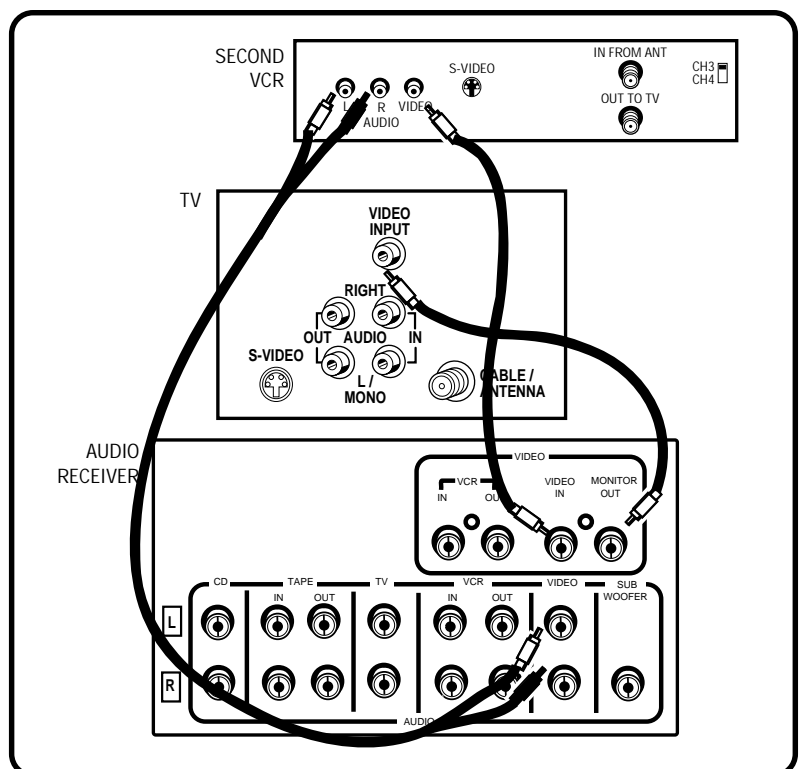
TO CONNECT

1. Connect the cables as shown in the diagram below.

USING THIS CONNECTION

To play a tape on the second VCR

1. Press VCR2•LD.
2. Press PLAY.



APPENDIX A: CONNECTING THE RECEIVER

CAMCORDER OR VIDEO CAMERA

If your camcorder or video camera does not have an RCA type terminal for audio/video, you can purchase an adapter from an RCA dealer or electronics parts store.

THIS CONNECTION PROVIDES

- stereo sound if the camcorder records or plays in stereo

TO USE THIS CONNECTION, YOU MUST HAVE

- (1) paired (red/white) stereo cable
- (2) single (yellow) video cable

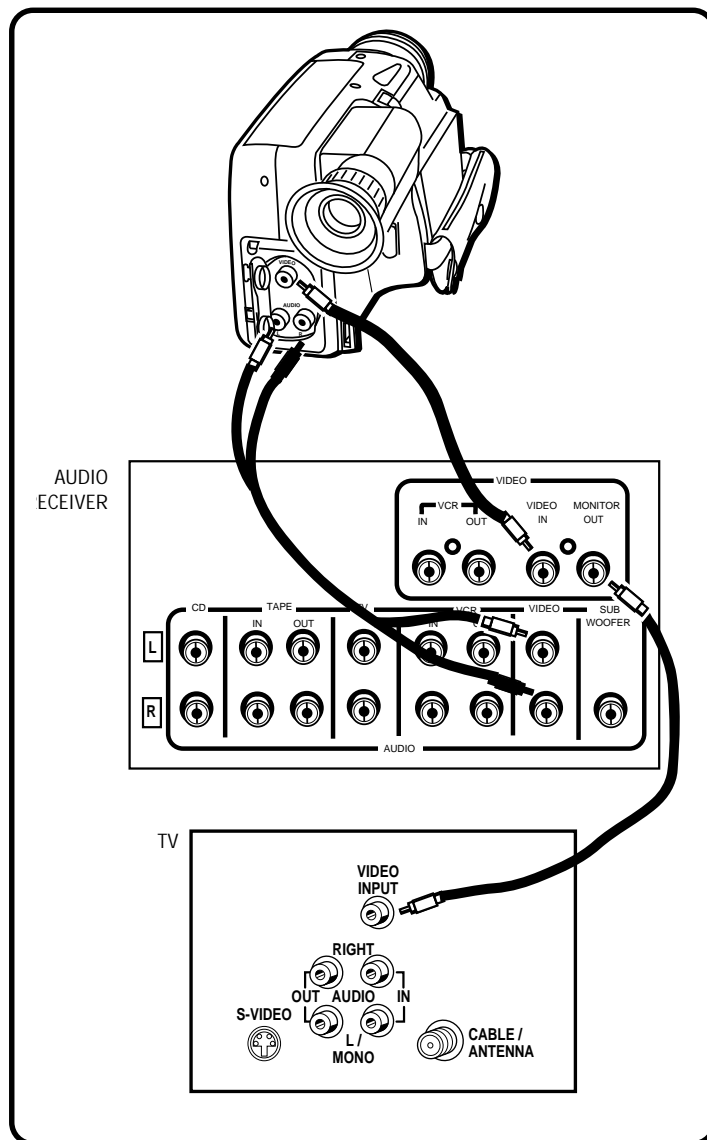
TO CONNECT

1. Connect the cables as shown in the diagram below.
If the VIDEO connection is being used, connect the camcorder or video camera to any other available video input.

USING THIS CONNECTION

To play the camcorder

1. Turn on the camcorder or video camera.
2. Press VCR2•LD.
3. Press PLAY on the camcorder or video camera.



APPENDIX A: CONNECTING THE RECEIVER

COMPACT DISC PLAYER

THIS CONNECTION PROVIDES

- Stereo or surround sound, if available

TO USE THIS CONNECTION, YOU MUST HAVE

- (1) paired (red/white) stereo cable

TO CONNECT

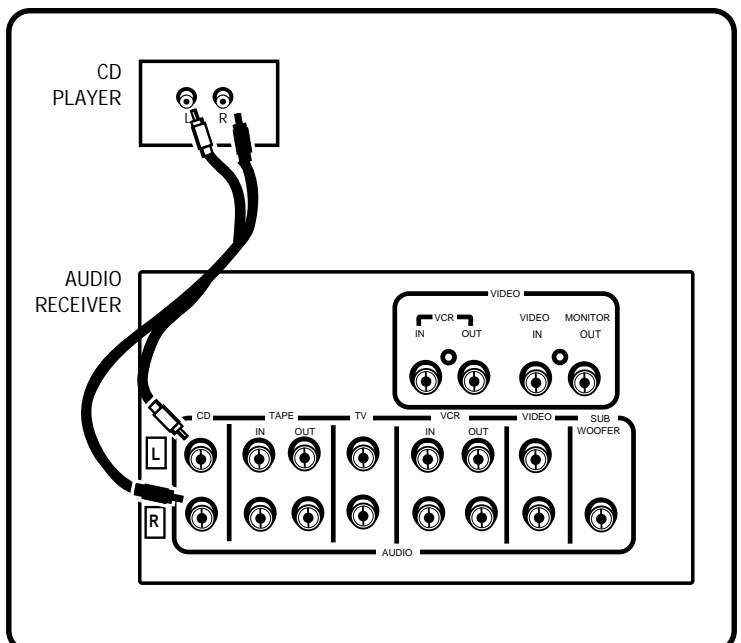
1. Connect the cables as shown in the diagram below.

USING THIS CONNECTION

To play a CD

1. Turn on the CD player, if the remote is not programmed to control the CD player.
2. Press CD to put the receiver in CD mode.
3. Press PLAY.

The **AUDIO SOURCE** connection can be used as input for any stereo audio signal.



APPENDIX A: CONNECTING THE RECEIVER

TAPE DECK OR MINIDISC PLAYER

THIS CONNECTION PROVIDES

- Stereo or surround sound, if available

TO USE THIS CONNECTION, YOU MUST HAVE

- (2) paired (red/white) stereo cables

TO CONNECT

1. Connect the cables as shown in the diagram below.

USING THIS CONNECTION

To play a tape

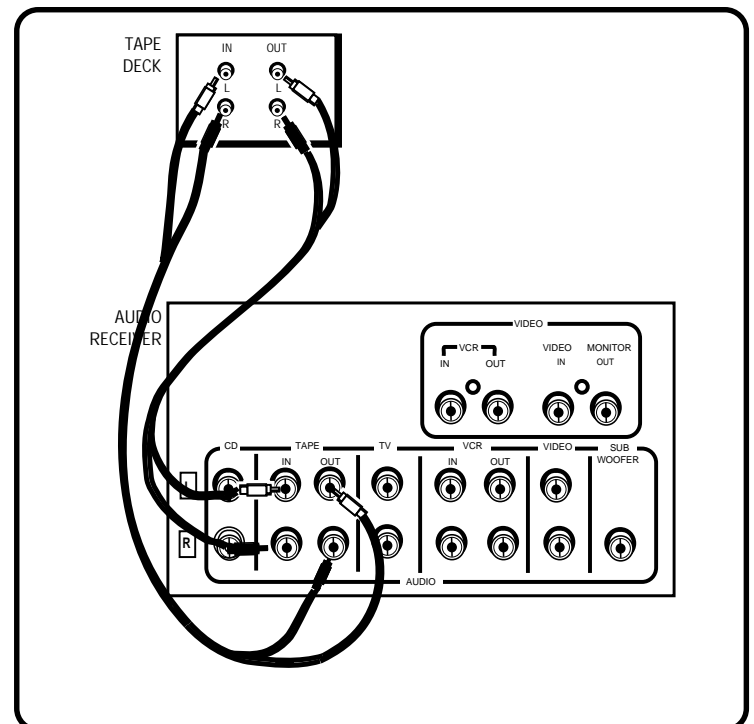
1. Press TAPE.
2. Press PLAY.

To record a tape

1. Turn on the audio source you want to record.
2. Press RECORD on the tape player.

To play a minidisc

1. Press TAPE.
2. Press PLAY.



APPENDIX A: CONNECTING THE RECEIVER

ANTENNAS

Extend the FM antenna to its full length and adjust it for the best reception.

After you adjust the AM antenna, place it on a level surface or attach it to a wall using the holes in the antenna's base.

THIS CONNECTION PROVIDES

- stereo sound from FM stations
- mono sound from AM stations

TO USE THIS CONNECTION, YOU MUST HAVE

- (1) FM "T" antenna
- (1) AM loop antenna

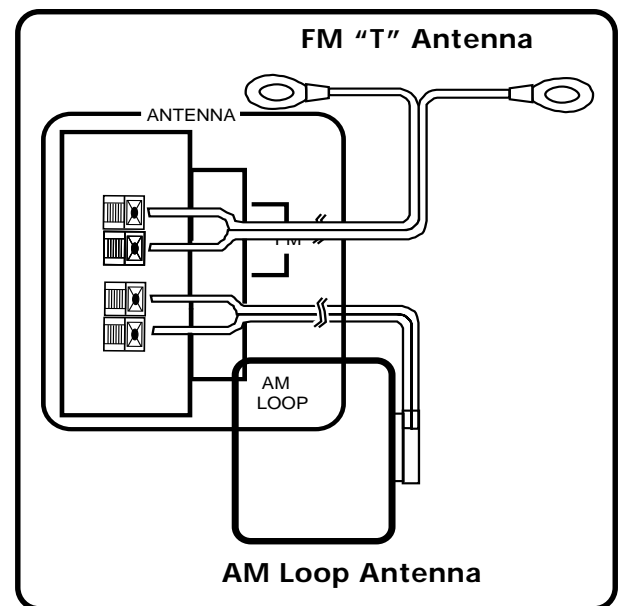
TO CONNECT

1. Connect the cables as shown in the diagram below.

USING THIS CONNECTION

To listen to the radio

1. Turn on the receiver.
2. Select a band (AM/FM).
3. Turn to the desired frequency.
4. Adjust the position of the antenna as needed.



APPENDIX A: CONNECTING THE RECEIVER

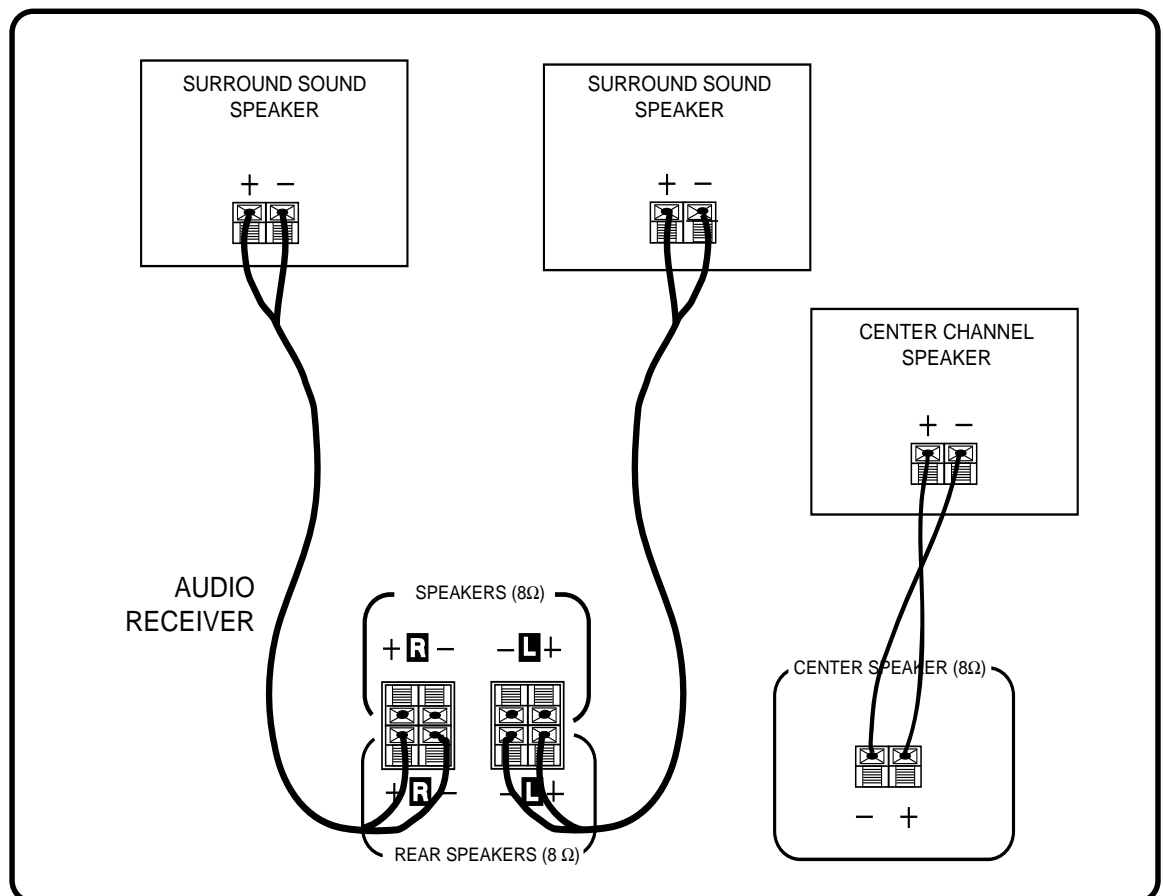
CENTER AND SURROUND SPEAKERS

CONNECTING SPEAKERS TO THE RECEIVER

1. If necessary, remove the vinyl covering from the ends of the speaker wire and twist the wire.
2. Press down and hold the lever on the speaker terminal.
3. Insert the wire in the hole. Be sure to connect the (+) to (+) and the (-) to (-). Otherwise, the speakers will not be "in phase", causing reduction in bass frequencies.
4. Release the lever. Pull gently on the wire to make sure it is secure.

TO CONNECT

1. Connect the cables as shown in the diagram below.



APPENDIX A: CONNECTING THE RECEIVER

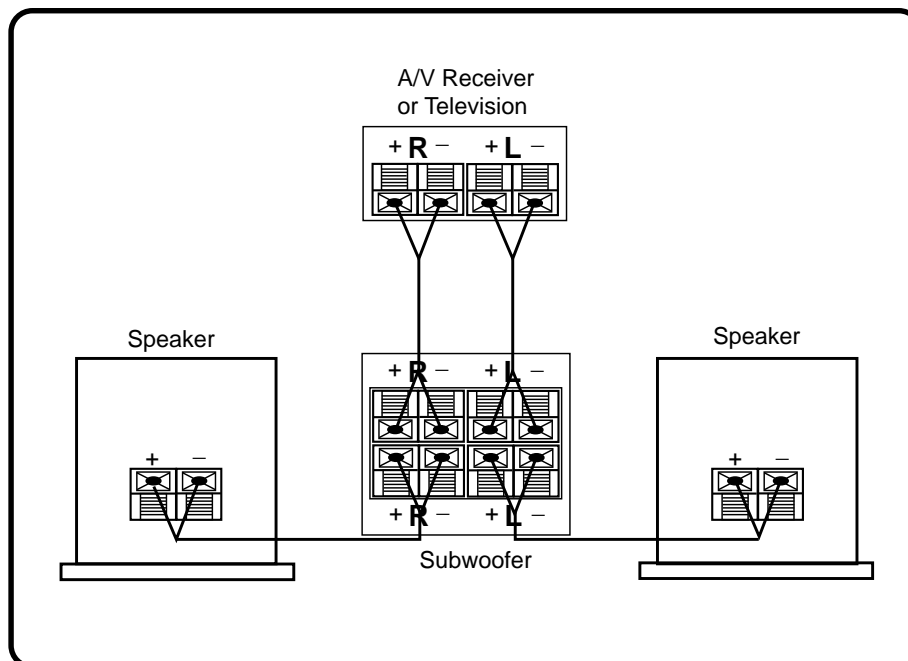
PASSIVE SUBWOOFER

CONNECTING SPEAKERS TO THE RECEIVER

1. If necessary, remove the vinyl covering from the ends of the speaker wire and twist the wire.
2. Press down and hold the lever on the speaker terminal.
3. Insert the wire in the hole. Be sure to connect the (+) to (+) and the (-) to (-). Otherwise, the speakers will not be "in phase", causing reduction in bass frequencies.
4. Release the lever. Pull gently on the wire to make sure it is secure.

TO CONNECT

1. Connect the cables as shown in the diagram below.



APPENDIX A: CONNECTING THE RECEIVER

POWERED SUBWOOFER

CONNECTING SPEAKERS TO THE RECEIVER

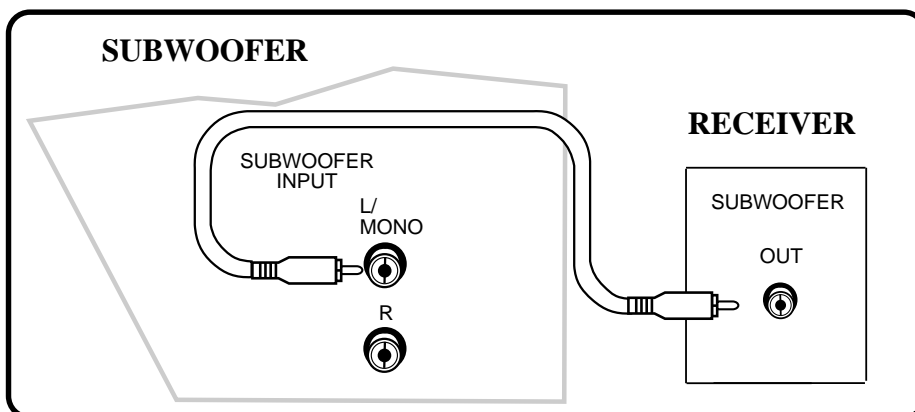
1. If necessary, remove the vinyl covering from the ends of the speaker wire and twist the wire.
2. Press down and hold the lever on the speaker terminal.
3. Insert the wire in the hole. Be sure to connect the (+) to (+) and the (-) to (-). Otherwise, the speakers will not be "in phase", causing reduction in bass frequencies.
4. Release the lever. Pull gently on the wire to make sure it is secure.

TO USE THIS CONNECTION, YOU MUST HAVE

- (1) paired (red/white) stereo cable
- (4) speaker wires (Only if your receiver does not have a subwoofer output jack)

TO CONNECT

1. If your receiver has a subwoofer output jack, you will need to connect your receiver as shown in the diagram below.



APPENDIX B: SPEAKER PLACEMENT

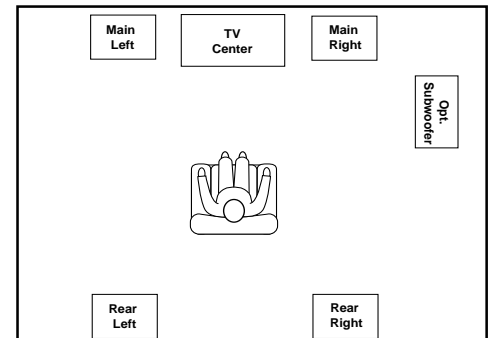
SPEAKER PLACEMENT

These diagrams offer suggested speaker placements that can enhance your home theater experience.

Place the subwoofer anywhere you want.

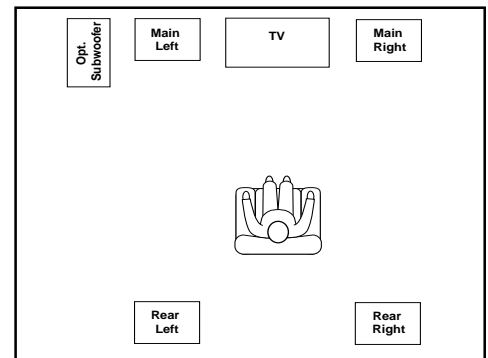
EXAMPLE 1

This five-speaker configuration is an effective option for recreating in any room the full cinema experience. It can be adapted to suit your taste and listening space. This five-speaker configuration is an effective option for Dolby Pro Logic Surround sound applications.



EXAMPLE 2

This configuration is recommended for four speakers. It provides Dolby Pro Logic Surround sound without a center speaker. Choose Phantom for the Center mode.



APPENDIX C: TROUBLESHOOTING

RECEIVER/TUNER OPERATION

STEREO indicator is off.

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

Severe hum or noise.

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

REMOTE CONTROL OPERATION

The remote control does not operate the unit.

- Another function is selected on the remote. Press the correct function button.
- The batteries are exhausted. Replace all batteries.
- The remote is not pointed at the remote control sensor on the main unit or there is an obstacle between the remote and the main unit.
- The remote control is too far from the main unit. Move closer.

GENERAL

No audio.

- Make sure the MUTE indicator on the front panel is off.
- Make sure the speakers are turned on.
- Check the connections.
- Check the power cord connection.

No audio from one channel.

- Adjust the balance control.
- Check the speaker wire connection or connecting cable.

Noise when the TV is turned on.

- The TV is too close to the audio system.

Specific instruments sound displaced.

APPENDIX D: CARE AND CLEANING

CARE AND CLEANING

Unplug AC power cord before cleaning. Use a polishing cloth or other clean, dry cloth to wipe off dust and dirt. When the surface is very dirty, wipe with a soft cloth dipped in a mild soap solution. Do not use furniture wax or cleaners.

Never use alcohol, paint thinner, benzene, or a chemically treated cloth to clean your system. Chemicals may damage the finish on the unit.

When using a damp cloth, make sure you squeeze out as much of the water as possible.

APPENDIX E: FCC INFORMATION

FCC INFORMATION

In accordance with FCC requirements, changes or modifications not expressly approved by Thomson Consumer Electronics could void the user's authority to operate this product.

Important Information Required by Federal Communications Commission Concerning Radio Frequency Interference:

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) This device must accept any interference received, including interference that may cause undesired operation.

If this equipment does cause interference to radios or televisions not connected to your system, try to correct the interference with one or more of the following measures:

- Reorient the receiving antenna (that is, the antenna for the radio or television that is, "receiving" the interference).
- Change the position of the unit with respect to the radio or television equipment that is receiving the interference.
- Move the unit away from the equipment that is receiving the interference.
- Plug the unit into a different wall outlet so that the unit and the equipment receiving the interference are on different branch circuits.

If these measures do not eliminate the interference, please consult with your dealer or an experienced radio/television technician for additional suggestions. Also, the Federal Communications Commission has prepared a helpful booklet, "How to Identify and Resolve Radio and TV Interference Problems." This booklet is available from the U.S. Government Printing Office, Washington, D.C. 20402. Please specify stock number 004-000-00345-4 when ordering copies.

APPENDIX F: LIMITED WARRANTY

LIMITED WARRANTY

What your warranty covers:

- Any defect in materials or workmanship.

For how long after your purchase:

- Two years.

(The warranty period for rental units begins with the first rental or 45 days from date of shipment to the customer, whichever comes first.)

What we will do:

- Provide you with a new, or at our option, a refurbished unit.
- The exchange unit is under warranty for the remainder of the original product's warranty period.

How to make a warranty claim:

- Properly pack your unit. Include any cables, etc., which were originally provided with the product. We recommend using the original carton and packing materials.
- Include in the package evidence of purchase date such as the bill of sale. Also print your name and address and a description of the defect. Send standard UPS or its equivalent to:

Thomson Consumer Electronics, Inc.

Product Exchange Center

32 Spur Drive

El Paso, Texas 79906

- Pay any charges billed to you by the Exchange Center for service not covered by the warranty.
- A new or refurbished unit will be shipped to you prepaid freight.

What your warranty *does not* cover:

- Customer instruction. (Your Owner's Manual provides information regarding operating instructions and user controls. For additional information, ask your dealer.)
- Installation and set-up service adjustments.
- Batteries.
- Damage from misuse or neglect.
- Products which have been modified or incorporated into other products.
- Products purchased or serviced outside the USA.
- Acts of God, such as but not limited to lightning damage.

Product Registration:

- Please complete and mail the Product Registration Card packed with your unit. It will make it easier to contact you should it ever be necessary. The return of the card is not required for warranty coverage.

How state law relates to this warranty:

- This warranty gives you specific legal rights, and you may have other rights which vary from state to state.

If you purchased your product outside the USA:

- This warranty does not apply. Contact your dealer for warranty information.

APPENDIX G: EQUIPMENT SPECIFICATIONS

EQUIPMENT SPECIFICATIONS

Amplifier Section

Left/Center/Right (at 8 Ω):	RV-9900	30 watts/30 watts/30 watts
	RV-9950	50 watts/50 watts/50 watts
		1% THD @ 1 KHz
Rear Surround (at 8 Ω):	RV-9900	15 watts/15 watts
	RV-9950	20 watts/20 watts
		1% THD @ 1 KHz
Muting Attenuation:		50dB
Frequency Response		40-20 kHz +/- 3 dB

Video Section

Input (Sensitivity/Impedance):	1 Vp-p/75 Ω
Output (Level/Impedance):	1 Vp-p/75 Ω
Frequency Response for	10 Hz to 6MHz at +/- 3 dB
Signal to Noise Ratio:	40 dB
Crosstalk @ 3.58 MHz:	40 dB

AM Tuner Section


Frequency Response:	80 Hz -2 kHz +/- 6 dB
Usable Sensitivity:	55 dBm
Signal to Noise :	38 dB
Image Ratio:	27 dB @ 1000 kHz
IF Rejection:	35 dB

FM Tuner Section

Frequency Response:	50 Hz-15 kHz +/- 6 dB
50 dB Quieting	24 dBu
Signal to Noise:	60 dB
Image Ratio:	40 dB @ 1000 kHz
IF Rejection:	50 dB

Specifications are based on nominal measurements.

Manufactured under license from Dolby Laboratories Licensing Corporation.

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

APPENDIX H: PRESET STATION LIST FORM

Preset Number	Band	Frequency	Notes
1			
2			
3			
4			
5			
6			
7			
8			
9			
10			
11			
12			
13			
14			
15			
16			
17			
18			
19			
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30			

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NOTES

NOTES

For your nearest RCA Home Entertainment Dealer or Authorized Servicenter, all toll-free in the USA.

1-800-336-1900

If your product needs service, please contact your dealer or the nearest Servicenter from the yellow pages. Please do not send any products to the Indianapolis address listed in this manual or on the carton. This will only add delays in service for your product.

 **THOMSON CONSUMER ELECTRONICS**
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