

PROSCAN[®]

80 Series
Monitor/Receiver
Owner's Manual

Models PS52682 and PS60682

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Features

First-Time
Operation

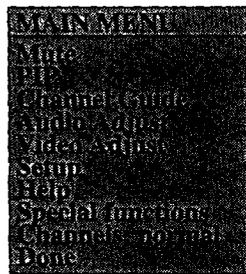
Detailed
Operating

Monitor Panel
and Connections

Optional
Accessories

Reference
Section

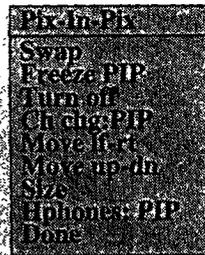
Quick-Reference Menu Operating Guide



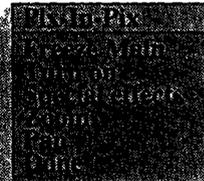
Press the MENU button to display the MAIN MENU on the TV screen. Press the + or - button to highlight the desired function, then press the MENU button to enter or adjust that function.

When one of the menus shown at the right appears, repeatedly press the + or - button to highlight the desired function, and then press the MENU button to enter or adjust that function or display the next menu.

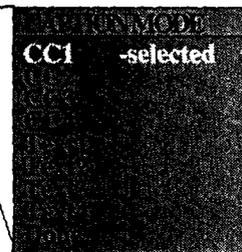
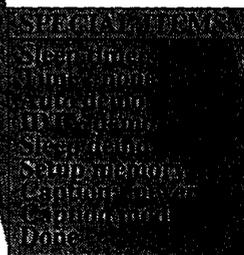
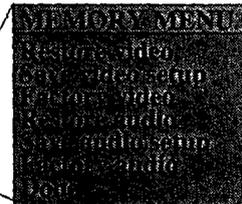
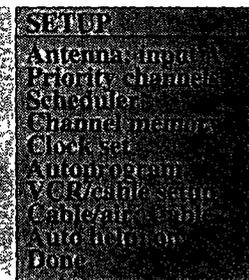
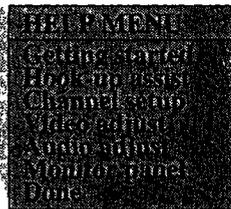
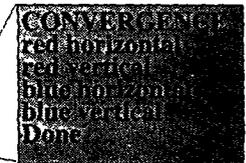
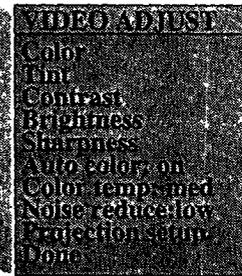
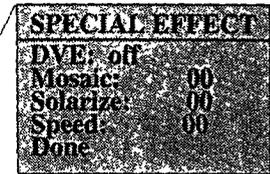
-OR-



PIP ON Menu
This menu appears if PIP is on.



PIP OFF Menu
This menu appears if PIP is off.



AUDIO ADJUST
 Equalizer
 Headphone Volume
 Balance
 Mode
 Setup
 Volume Limit
 Done

Graphic Equalizer
 12db
 2db (50%)
 00 00 00 00 20 40 00 00

AUDIO MODE
 Stereo
 Surround
 Dolby Digital
 DTS
 ProLogic
 ProLogic II
 ProLogic IIx
 ProLogic IIz
 Done

AUDIO SETUP MENUS

The individual setup menus allow you to adjust individual features for the audio mode you have selected.

PRIORITY CHANNEL
 Ch1 not used
 Ch2 not used
 Ch3 not used
 Ch4 not used
 Ch5 not used
 Ch6 not used

SCHEDULED
 program 1
 entries
 Ch1 on
 Ch2 on
 Ch3 on
 Ch4 on
 Ch5 on
 Ch6 on
 Done

CHANNEL NAME
 Channel 1
 Search for
 SA Pro
 Param 1
 Label
 Brace
 Done

CLOCK SET
 12:00
 Done

VER/Cable SETUP
 VER 1
 Cable 1
 Done

STEREO SETUP
 Speakers
 Volume
 Balance
 Mode
 Done

DIGITAL SURROUND
 Speakers
 Volume
 Done

DOLBY DIGITAL SETUP
 In speakers
 In subwoofer
 Volume
 Balance
 Center volume
 Done

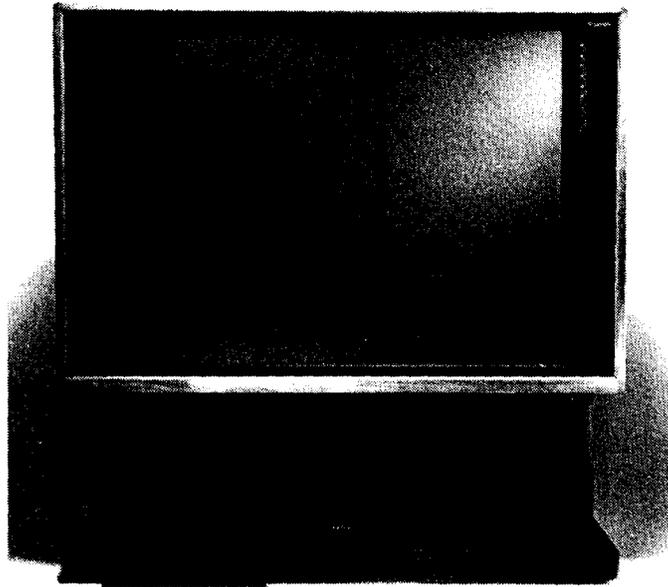
PROLOGIC SETUP
 In speakers
 In subwoofer
 Volume
 Balance
 Center volume
 Surround volume
 Done

PHANTOM SETUP
 Speakers
 Volume
 Balance
 Rear volume
 Front volume
 Done

VIRTUAL SURROUND
 Speakers
 Volume
 Done

SURROUND
 Speakers
 Volume
 Balance
 Rear volume
 Front volume
 Done

SURROUND
 Speakers
 Volume
 Balance
 Rear volume
 Front volume
 Done



PROSCAN[®]

So advanced. Yet so simple.[™]

We're building our reputation on products that are so advanced, they're simple. If you want all the benefits of the latest technology, without the complexity, we have a very simple solution. It's called ProScan. State-of-the-art technology that real people can use.

Thank you for choosing ProScan. And welcome to our company-wide commitment to your complete satisfaction and viewing enjoyment.

This page folds open to display the menus. We designed this page so that you could leave it open and use it as a quick-reference guide while reviewing the manual.

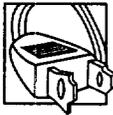


If you suspect that liquid has entered the TV, unplug it immediately and have it inspected by an Authorized TV Servicenter. Turning it off is not enough – your TV has power applied to some circuits even when the TV is turned off.

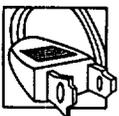
 <p>The lightning flash and arrowhead within the triangle is a warning sign alerting you of "dangerous voltage" inside the product that presents a risk of electric shock.</p>	<p>CAUTION</p> <p>RISK OF ELECTRIC SHOCK DO NOT OPEN</p> <p>CAUTION: TO REDUCE THE RISK OF ELECTRICAL SHOCK, DO NOT REMOVE COVER (OR BACK). NO USER-SERVICEABLE PARTS INSIDE. REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.</p>	 <p>The exclamation point within the triangle is a warning sign alerting you of important instructions accompanying the product.</p>
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Caution: Maintain electrical safety. Powerline-operated equipment or accessories connected to this unit should bear the UL listing mark or CSA certification mark on the accessory itself and should not have been modified so as to defeat the safety features. This will help avoid any potential hazard from electric shock or fire. If in doubt, contact qualified service personnel.

Your TV operates on 120 volts, 60 Hz AC power (normal house power) and has a polarized AC plug. Because one blade of the plug is wider than the other, the plug fits into the wall socket only one way. Do not defeat the safety feature of this plug. If you need an extension cord, make sure it is polarized.



Caution: To prevent electric shock, do not use the polarized plug on this TV with an extension cord, receptacle, or other outlet unless both blades can be fully inserted to prevent blade exposure. Match wide blade of plug to wide slot, fully insert.



Mise En Garde: Pour prévenir les chocs électriques, ne pas utiliser la fiche polarisée de cet appareil avec une rallonge, une prise de courant ou une autre sortie, à moins que les lames ne puissent être insérées à fond sans qu'aucune partie ne soit laissée à découvert. Introduire la lame la plus large de la fiche dans la borne correspondante de la prise et pousser jusqu'au fond.

All operating controls and their functions are identified and explained in this manual. For warranty service or routine maintenance, contact the nearest Authorized ProScan TV Servicenter. All servicing and adjustments to electrical components should be done by a qualified service technician.

Warning: To prevent fire or shock hazard, do not expose this TV to rain or moisture.

Note to Cable TV Installer: This reminder is provided to call your attention to Article 820-40 of the National Electrical Code (Section 54 of the Canadian Electrical Code, Part 1) which provides guidelines for proper grounding and, in particular, specifies that the cable ground shall be connected to the grounding system of the building as close to the point of cable entry as practical.

Mail Your Registration Card Today

A *Product Registration Card* is packed with your set. Please fill out the card and return it immediately.

Your prompt submission of this card confirms your right to the protection available under the terms and conditions of the warranty and also allows us to contact you should it ever become necessary.

With your card on file, we can also help you in the event of loss or theft by verifying your ownership.

If you did not receive a *Product Registration Card*, please contact your dealer.

Attach Your Sales Receipt Here and File at Home For Future Reference

To obtain warranty parts and service, you must show your sales receipt (or other evidence of purchase) to your Authorized ProScan TV Servicenter.

Tape or staple your sales receipt to this manual so you will have it handy should service ever be needed. Do not mail your sales receipt to us. File it at home with your owner's manual for future reference.

Record Vital Information Here

No other set has the same serial number as yours. You will find the serial number and the model number on the back of your set.

Make sure you record both numbers below so that you will have them in case your set is stolen or if you need a complete description for identification.

Model Number: _____

Serial Number: _____

Purchase Date: _____

Dealer Name/Address/Phone: _____

Your ProScan television is more than state-of-the-art technology. It's technology tailored to you. Features designed to deliver viewing and listening enjoyment beyond expectations. Innovation and simplicity of operation become one-ProScan.

Improving Your Image

- **IDTV (Improved Definition TV):** High tech video processing gives you twice the number of video scan lines as conventional TVs for superior picture quality.
- **A Cleaner Picture:** The Digital Comb Filter reduces distortion and extends resolution.
- **Greater Contrast:** Dynamic Gamma Correction automatically extends the dynamic range of the luminance signal, producing blacker blacks and whiter whites.
- **Increased Clarity:** Edge Replacement enhances image edges. That along with dynamic focus give you crisp clean details—with up to 600 lines of horizontal resolution.

Sound Thinking

- **Flexibility:** Eight different audio modes built right into the TV. From basic stereo, to Dolby* 3 stereo, to Dolby* prologic, and all the steps between. *For details, see pages 22-36.*
 - **On-Screen Graphic Equalizer** permits precise adjustment of seven frequency bands to complement your room's acoustics. *For details, see pages 26-27.*
 - **10 Watts Per Channel****
 - **dbx*** Noise Reduction**
 - **Second Audio Program (SAP)** *For details, see page 30.*
- *Dolby is a registered trademark of Dolby Laboratories Licensing Corp.
**RMS rating, into 8 ohms, 50 to 20,000 Hz ± 3 db, with less than 1% THD.
***dbx is a registered trademark of Carillon Electronics Corp.

Creative Entertainment

- **DVE (Digital Video Effects)** lets you control the speed of mosaic and solarization effects on the large picture. *For details, see page 16.*
 - **Advanced Color Picture-in-Picture** using two tuners lets you watch two programs at once. You can swap, freeze, move, or pan either picture—for viewing convenience. You do *not* need a VCR or external video source for additional picture. *For details see pages 18-21.*
 - **Zoom** — enlarges any desired video image for a closer look. Also changes the size of the inset Picture-In-Picture. *For details, see pages 14-15 and 18.*
 - **Pan** — allows you to move across the enlarged video image to select any portion for viewing. *For details, see pages 14-15.*
 - **Channel Guide** — displays a still picture from 12 different channels at one time for a quick review of available programs. *For details, see page 17.*
 - **Channel Labeling** lets you label channels with one of over 100 built-in labels or create your own five-character label. *For details, see pages 48-49.*
 - **Scheduler** allows you to enter up to three separate programs to run only once or to run at the same time every week. The TV will turn on, tune to the selected channel, and turn off—all automatically. *For details, see pages 44-45.*
 - **Commercial Skip** *For details, see page 11.*
 - **Sleep Timer** *For details, see page 52.*
 - **Parental Control** *For details, see page 50.*
 - **Previous Channel Feature** *For details, see page 10.*
 - **181 Channel Tuning Capability in U.S.A.*** *For details, see page 65.*
- * Check your cable company's compatibility requirements.

One Minute Manual

- **On-Screen Menus** for operation of all features.
- **AutoProgramming** automatically searches for and stores all active channels. Eliminates the need for manual set-up. *For details, see page 46.*
- **Frequency Synthesis Tuning** automatically and accurately tunes each channel.
- **Automatic VCR Setup:** With the push of a button, your TV is ready for VCR play: Both TV and VCR turn on, and TV tunes to the correct channel or input. *For details, see page 43.*
- **Automatic Cable Box Setup:** With the push of a button, your TV is ready for cable box operation: Both TV and cable box turn on, and TV tunes to the correct channel or input. *For details, see page 43.*
- **On-Screen Clock/Channel Display** *For details, see page 7.*
- **Picture and Audio Reset** *For details, see pages 38-39.*
- **Auto Demos** *For details, see page 51.*

Networking

Gold Plated Phono Jacks for Superior Performance:

- **Two Sets of Audio/Video Inputs** including S-VIDEO for VCR, Laser Disc Player, Camcorder etc. *For details, see pages 66 and 68-69.*
- **One Set of Audio/Video Outputs** including S-video for video dubbing. *For details, see pages 67 and 69.*
- **One Set of Volume-Controlled Audio Outputs (Hi Fi)** to retain remote volume when connected to an external amplifier. *For details, see page 70.*
- **One Volume-Controlled SURROUND Audio Output jack** to connect surround sound to an external amplifier. *For details, see page 71.*
- **One Volume-Controlled CENTER Audio Output jack** to connect center sound to an external amplifier. *For details, see page 71.*

Other Connections to Expand Your System:

- **Four Speaker Jacks** to allow hook up of optional external or surround sound speakers. *For details, see page 73.*
- **Dual RF Inputs** to allow direct connection of up to two basic cable, cable box, or other RF sources. *For details, see pages 41 and 61-63.*
- **Front-Mounted Stereo Headphone Jack** for private listening with optional headphones. *For details, see pages 12 and 25.*

At Your Command

Your ProScan television includes two remote controls.

- **The ProScan Universal Remote:** Operation is as easy as entering a channel. It operates all major ProScan TV, VCR, and LaserDisc player functions. It also operates the basic functions of 60 different VCR brands and 28 different brands of cable boxes, eliminating the need for additional remotes.
- **The ProScan Simple Remote:** 6 buttons control most TV functions for the ultimate in simplicity.

At Your Service

Our Human Touch policy offers all these valuable benefits:

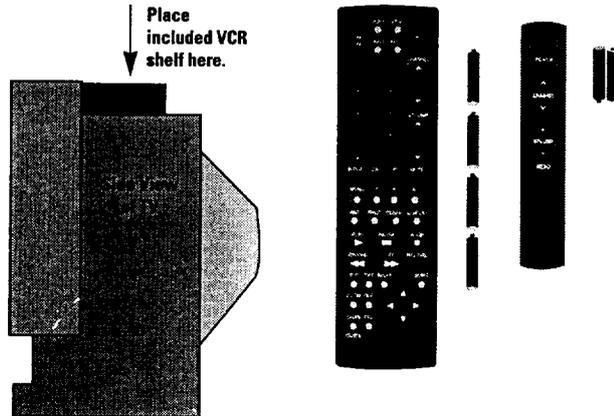
- **1-800-ProScan:** Call our information service Monday through Friday, 7 a.m. to 7 p.m. EST, year round.
- **Nationwide Authorized Independent Service Centers**
- **ProScan Limited Warranty for U.S.A.:** In-home service of all parts and labor for one year, picture tube for two years. *For details, see page 79.* A separate warranty for Canada is enclosed with all televisions sold in Canada.

First-Time Operation

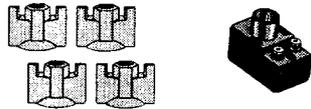
The steps below will help you get your TV connected and working quickly. The page numbers on which you can find detailed instructions for each of these steps are also listed for your convenience.

1 Unpack TV and accessories.

The accessories that came packed with your TV include two remote controls, six AAA batteries, antenna adapter, four wing nuts, and a VCR shelf.



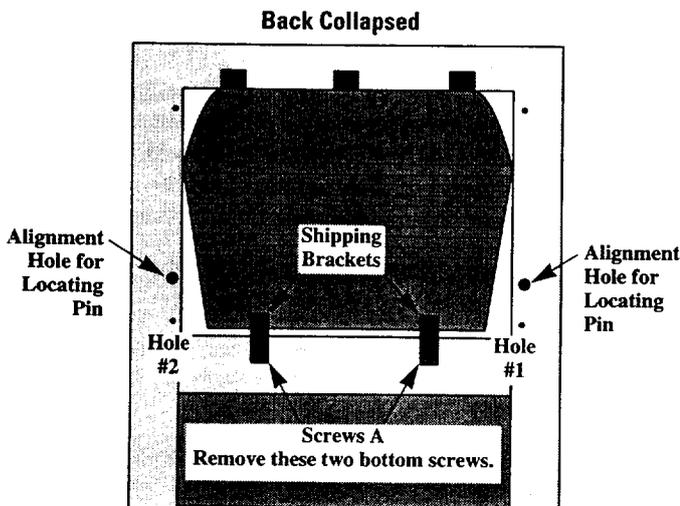
Note: The VCR shelf allows you to position a VCR or other component on top of your TV. Simply place the shelf on top of your TV as shown above, and then place the VCR on the shelf.



2 Extend back cover.

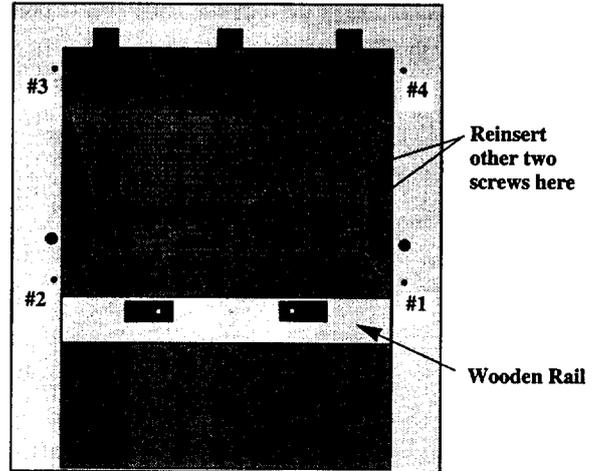
Your projection TV has been specially designed with a collapsible back cover. This design makes it easier for you to move the TV through doorways because the collapsed back makes the TV narrower. After the TV is positioned in your home, you can easily extend the back cover to its normal operating position by following the instructions below.

- 1 Remove the four wing nuts from the literature bag.
- 2 Remove the two screws (labeled A) from the shipping brackets. You will use these screws later in step 6.



- 3 Grasp the shipping brackets and gently pull the back cover up and out until the locating pins enter the alignment holes. Keep the back cover tight against the cabinet by holding the shipping bracket on the right side. Then attach wing nut to built-in hole screw in hole #1. Hand tighten.
- 4 Hold left shipping bracket and attach wing nut to built-in screw in hole #2. Hand tighten.

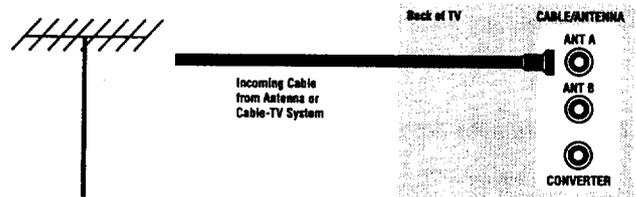
Back Extended



- 5 Attach remaining wing nuts to screws in holes #3 and #4 to ensure stability and best picture quality.
- 6 Remove the shipping brackets from the back cover and attach them to the wooden rail with the two screws (A) from step 2. Reinsert the other two screws from the shipping brackets into the back of the TV as shown, so they will be available in case you need to move your TV and want to collapse the back again.

3 Connect an antenna or cable-TV system.

Most antenna or cable-TV systems can be connected as shown here.



- Details for connecting a home antenna to your TV are on page 61.
- Details for connecting a cable-TV system to your TV are on pages 62-63.
- Details for connecting a VCR to your TV are on pages 66-67.
- Details for connecting a laser disc player to your TV are on page 68.

4 Install the batteries in remote controls.

- Details are on page 8.

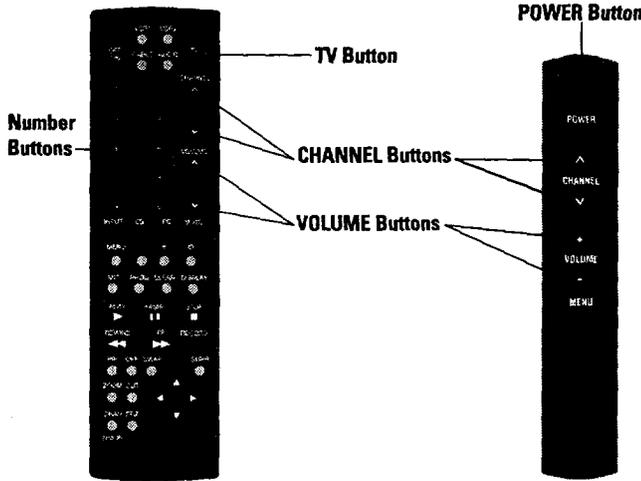
(continued on next page)

5 Turn on the TV, select a channel, and adjust the volume.

- 1 Plug the TV's power cord into a wall outlet or suitable power strip outlet.

Caution: Do not plug the TV's power cord into another component's outlet (switched or unswitched).

- 2 To turn on the TV, press the TV button on the master remote or press the POWER button on the simplified remote. When using either one of the remotes, remember to point it at the front of the TV.



- 3 Press the VOLUME up or down button to adjust the volume to a desired level.
- 4 Press the CHANNEL up or down button to select the next channel in memory. You can also press two number buttons to select a channel. Some channels were programmed into the channel memory at the factory, so pressing CHANNEL up or down stops at only these channels. When you start the autoprogramming feature *described on page 6*, your set will automatically scan through all channels and place the active channels for your area into its channel memory.

6 Make sure auto-help displays are turned on.

Your TV has a complete menu system that allows you to perform most functions using only the simplified remote. Whenever one of the menus appears on the TV screen, auto-help displays appear on the bottom of the screen if the Auto Help: on/off function is set to on.

If the auto-help displays do not automatically appear on your TV screen, the instructions in the next column explain how to turn them on.

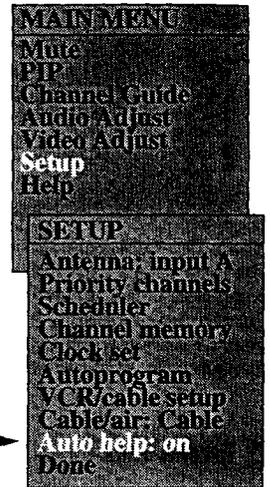
Press MENU button to display MAIN MENU.



Help displays automatically appear on screen.

To turn on auto-help displays:

- 1 Press MENU to display the MAIN MENU.
- 2 Repeatedly press - or + to highlight Setup in white.
- 3 Press MENU again to display the SETUP menu.
- 4 Repeatedly press - or + to highlight the Auto help: on/off function in white.
- 5 Press MENU again to turn the Auto help: on/off function to on.



Note: The menus will automatically disappear from the screen after a few seconds if no button is pressed. To quickly remove them, press the CLEAR button on the master remote or press the - or + button to highlight the Done function and then press MENU.

Power Interruption Protection Feature

In the first few months of operation, it is normal for your TV to occasionally shut down and immediately turn itself on again. The picture tubes in this TV (as in all TV's) operate at a very high voltage and at times may arc internally. Your TV will recognize what is happening and will automatically shut down. This protects the TV's memory from locking up or, in some cases, being erased. After a shut down occurs, the following message will briefly appear on the screen.

An occasional interruption is normal. Your manual has more information.

Note: This message will also be displayed briefly if power is interrupted due to a loss of power to the TV, such as in an electrical storm or a brown-out situation.

Caution: Occasional power interruptions are normal—especially in the first few months. However, if your TV shuts down regularly after a few months of operation, have it inspected by an Authorized ProScan TV Servicenter.

7 (Optional) Converge your TV.

Your projection TV has three color projection tubes—one for red, one for green, and one for blue. When mixed together in the proper proportion, the output of these three color tubes can produce many colors. To produce these colors, the beams must be precisely aligned over each other so that the colors can be mixed. The process of aligning these picture beams is called “convergence”.

Over a period of time, the picture tubes can drift out of alignment due to normal bumps and vibrations or moving the TV. If you move your TV or notice colored rings or halos around objects in the picture, you may want to converge (align) the colors.

To simplify convergence, an on-screen menu is provided that allows you to display a test pattern of lines on the screen. Properly converged, the lines appear white—which is actually a combination of the output of the three color tubes. The position of the green lines is stationary. The positions of the red and blue lines are adjustable. When properly adjusted, the red and blue lines should lie directly over the green lines to produce single white lines.

To Converge (Align) the Colors.

1 Turn on the TV and select a channel that is active in your area. Allow the TV to operate at least ten minutes before converging.

2 Display the CONVERGENCE menu.

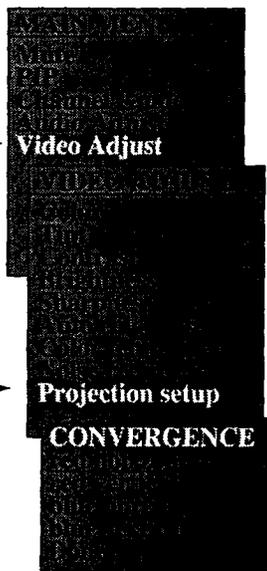
1 Press MENU to display the MAIN MENU.

2 Repeatedly press – or + to highlight Video Adjust in white.

3 Press MENU again to display the VIDEO ADJUST menu.

4 Repeatedly press – or + to highlight Projection setup in white.

5 Press MENU again to display the CONVERGENCE menu.



3 When properly converged, all three colors in the pattern (red, blue, and green) should align to form white lines. If you see any red or blue lines in the pattern, you can move them to align with the green lines by following the steps in the next column.

Single white vertical line

Single white horizontal line

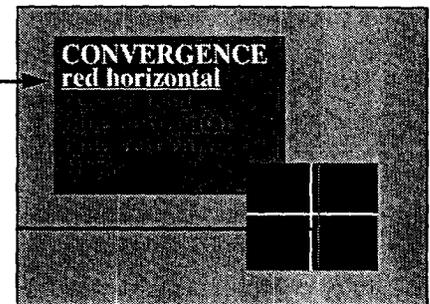


4 Adjust horizontal convergence.

1 Press + or – to select (underline) the red horizontal function.

CONVERGENCE

2 Press MENU to highlight in white (activate) red horizontal convergence.



3 Press + to move the line to the right or press – to move the line to the left.

4 Press MENU again to return to the CONVERGENCE menu.

5 Repeat steps 1-3 above to adjust the blue horizontal function.

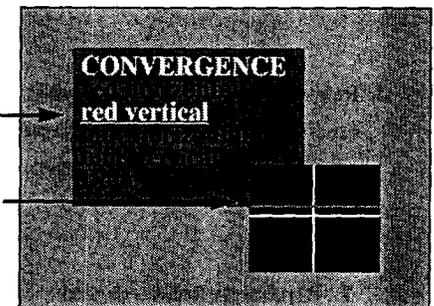
Note: When adjusting convergence make sure the red and blue lines are exactly centered on green line in order to form a white line.

5 Adjust vertical convergence.

1 Press + or – to select (underline) the red vertical function.

CONVERGENCE

2 Press MENU to highlight in white (activate) red vertical convergence.



3 Press + to move the line up or press – to move the line down.

4 Press MENU again to return to the CONVERGENCE menu.

5 Repeat steps 1-3 above to adjust the blue vertical

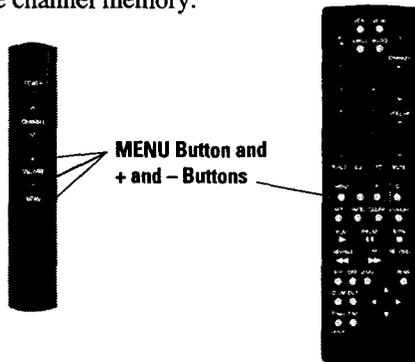
Note: When adjusting convergence make sure the red and blue lines are exactly centered on the green line in order to form a white line.

6 When you are finished, press the CLEAR button on the remote control, or press the – button to highlight Done and then press the MENU button to remove the menu from the screen.

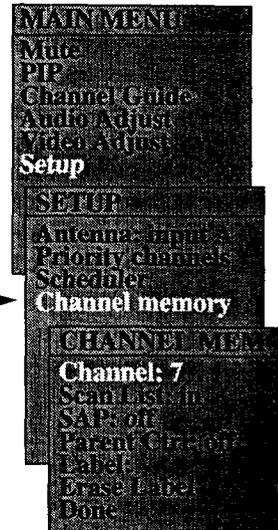
(continued on next page)

8 AutoProgram the TV's channel memory scan list.

The channel memory scan list is the list of TV channel numbers your TV will stop on when you press the CHANNEL up or down button. You can program any list of channels into the channel memory.

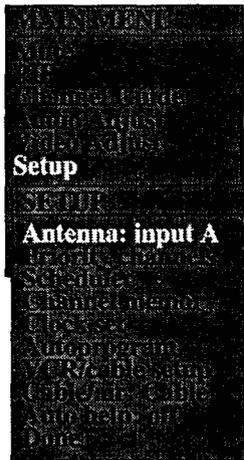


- 1 Press MENU to display the MAIN MENU.
- 2 Repeatedly press – or + to highlight Setup in white.
- 3 Press MENU again to display the SETUP menu.
- 4 Repeatedly press – or + to highlight Channel memory in white.
- 5 Press MENU again to display the CHANNEL MEM menu.



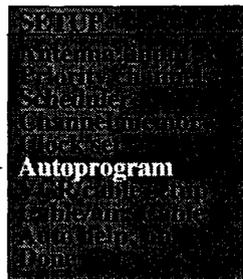
1 To start the TV autoprogramming itself:

- 1 Press MENU to display the MAIN MENU.
- 2 Repeatedly press – or + to highlight Setup in white.
- 3 Press MENU again to display the SETUP menu.



- 2 Repeatedly press – or + to highlight the AutoProgram function in white. Then press MENU to start the TV AutoProgramming. *Details are on page 46.*

- 1 Repeatedly press – or + to highlight AutoProgram in white.
- 2 Press MENU to start AutoProgramming.



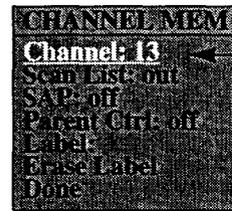
Notes: The Active Channels display will appear on the TV screen.
The TV will automatically program all channels for ANT A input and then ANT B input (even if you only have one antenna input connected).

9 Add or erase channels to the channel memory scan list.

You can add and erase channels from the channel memory scan list as desired. *Details are on page 47.*

- 1 Display the CHANNEL MEM (memory) menu on the TV screen.

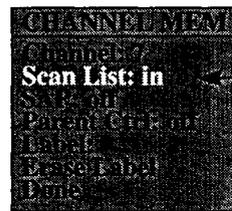
- 2 Press the MENU button to select (underline) the Channel function. Enter the number of the channel you want to add or erase from the channel memory scan list. Press + to enter a channel with a higher number or press – to enter a channel with a lower number.



Press + to enter a channel with a higher number.
Press – to enter a channel with a lower number.

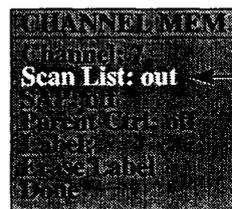
Press MENU again to exit (remove underline) the Channel function.

- 3 Then press – to highlight the Scan List: out/in function. Then press MENU to add or erase the channel from the channel memory scan list.
 - Press MENU to select Scan List: in to add a channel.



To add a channel to the channel memory scan list.

- Press MENU to select Scan List: out to erase a channel.



To erase a channel from the channel memory scan list.

- 4 To erase or add other channels, press + to go back up the menu to the Channel function. Then repeat steps 2 and 3 for each channel you want to add or erase.
- 5 When you are finished, press the CLEAR button on the master remote or press the – button to highlight Done and then press the MENU button to remove the menu from the screen.

Note: The menu will automatically disappear from the screen within a few seconds if no button is pressed.

10 Set the clock.

The clock must be set before the time will automatically appear on the TV screen. Once the time is set, it will automatically appear whenever you turn on the TV, change channels or press the DISPLAY button. The clock must also be set before you can use some of the special features, such as the scheduler.

1 Display the CLOCK SET menu on the TV screen.

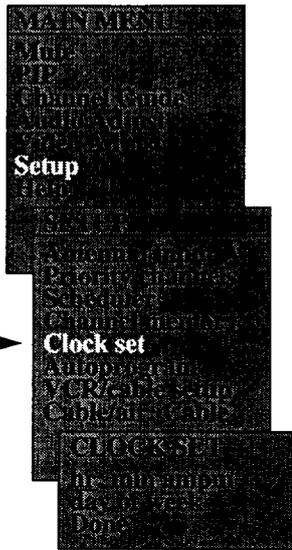
1 Press MENU to display the MAIN MENU.

2 Repeatedly press - or + to highlight the Setup function.

3 Press MENU again to display the SETUP menu.

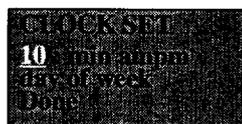
4 Repeatedly press - or + to highlight the Clock set function.

5 Press MENU to display the CLOCK SET menu.



Note: The CLOCK SET menu will automatically disappear from the screen within a few seconds if no button is pressed.

2 Press MENU to select (highlight) hr, and then press + or - to enter the correct hour.



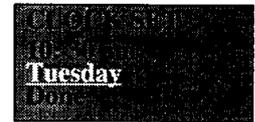
3 Press MENU again to exit (remove highlight) the hr function, and then press + to select (underline) min. Press MENU to select (highlight) min, and then + or - to enter the correct minutes.



4 Press MENU to exit (remove highlight) the min function, and then press + to select (underline) ampm. Press MENU to select am or pm.



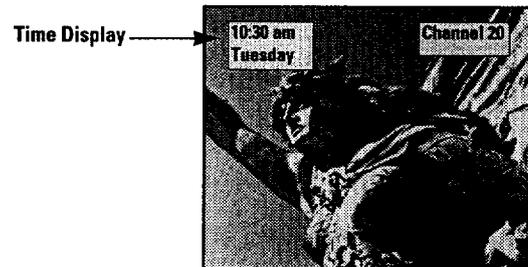
5 Press + to select (underline) day of week. Then press MENU to enter (highlight) the day. Press + or - to enter the correct day of the week.



6 Press MENU to exit (remove highlight) the day of the week function. Then press + to select (underline) Done and then press MENU to start the clock.



7 Press the TV, DISPLAY or CHANNEL up or down button to see if the correct time and day of the week appear on the TV screen along with the channel number display.



The correct time will now appear on the screen whenever you change channels or press the DISPLAY or TV button.

Notes: The CLOCK SET menu will automatically disappear from the screen within a few seconds if no button is pressed. If the CLOCK SET menu disappears from the screen before you have finished setting the clock, none of the settings will be saved. You must enter the time and the day of the week, and then select Done. Then press the MENU button to start the clock.

To correct the time or day of the week, follow the steps above for the part you want to correct. Then press the + button to select (underline) Done and press MENU to enter your change.

If power is interrupted for an extended time, you will need to reset the clock.

11 Review menus and other features.

When you feel comfortable with your TV and remote controls, review the menus. Most of the menus are shown inside the front cover. You can fold this page out for quick reference while reading the manual.

The Help function on the MAIN MENU offers a variety of help screens to assist you in the connection and operation of your TV. *Details are on page 13.*

The rest of this manual can be used as a reference guide with detailed information about each operating control, menu, and function. There is an alphabetical index in the back for your convenience.

Inside of the back cover is a quick-reference operating guide. This page is designed so it can be removed from the manual.

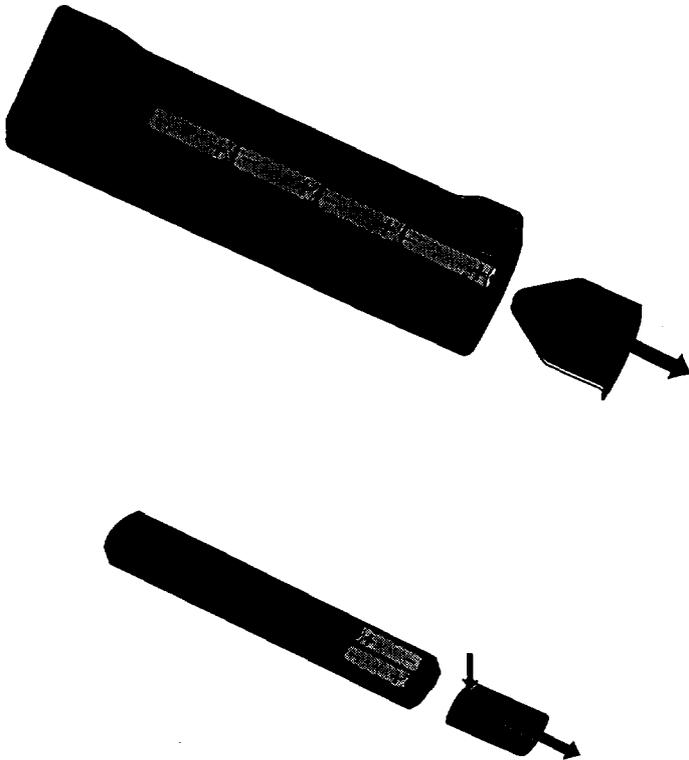
Remote Controls: TV Functions

Operating Remote Controls

Before attempting to operate either one of the remote controls, install the batteries as shown below.

Installing/Replacing Batteries

- 1 Turn each remote control face down.
- 2 Press down on the ridged area of each battery cover and slide it off.



- 3 Install the "AAA" batteries in each compartment as shown.
- 4 Replace the covers and turn remotes over (face up).

Notes: Replace the batteries when the TV fails to respond to the remote control.

If you programmed your master remote to control other components, you may have to reprogram the code numbers when you change batteries. Try not to press any buttons while changing batteries.

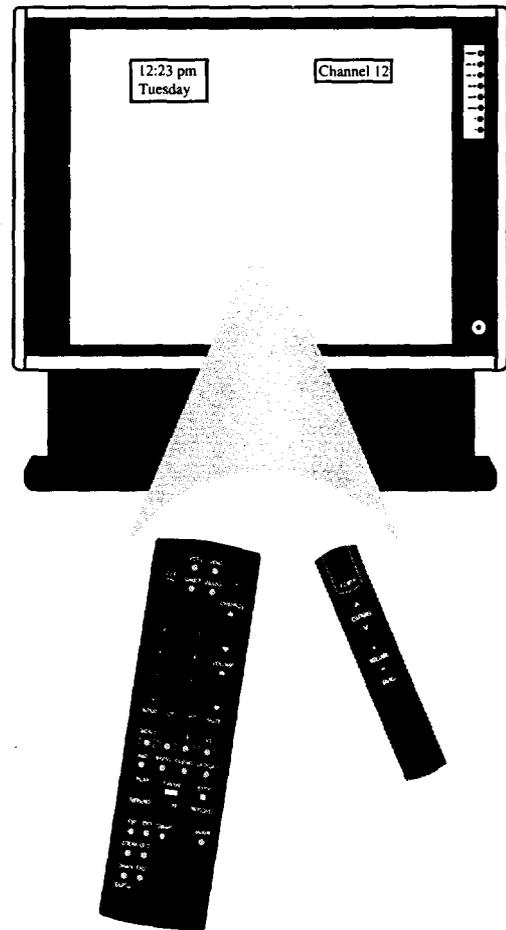
Never place anything heavy on top of the remote control or lay it upside-down. This may accidentally depress the buttons for a long time and discharge the batteries.

Do not mix new and used batteries or different brands of batteries.

If battery leakage occurs, wipe up the liquid inside the compartment and replace the batteries with new ones.

Using the Remote Controls

Aim either remote control at your TV's remote control sensor (located behind the TV screen). The remote controls produce an invisible (infrared) beam that travels in a straight line much as the beam of a flashlight. For this reason, when operating either one of the remote controls, you must point it directly at the front of the TV without objects between that can block the infrared light beam.



Aim remote at your TV's remote control sensor (located behind the TV screen).

Basic Operation Theory (for master remote control)

Step 1

Component Buttons

First press one of these five component buttons to tell the remote control which component you want to control. You can program the VCR1, VCR2, CABLE, or AUDIO buttons to control most brands of equipment.*

Step 2

Then press the OFF/ON button to turn on or off that component.

Note: The TV and some other components will automatically turn on when you press the button in Step 1.

Step 3

Function Buttons

These function buttons can now be used to control the basic functions of the component you selected in Step 1. To control a different component, first press its component button (VCR1, VCR2, CABLE, AUDIO, or TV), and then press the desired function button.

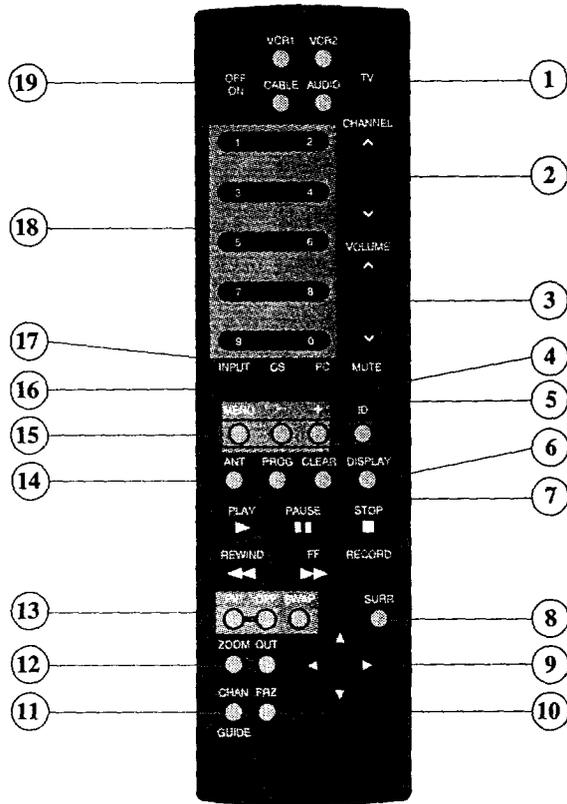
Note: Not all components have functions that can be controlled by these buttons, but you can experiment with your particular component to discover exactly which buttons will control it.



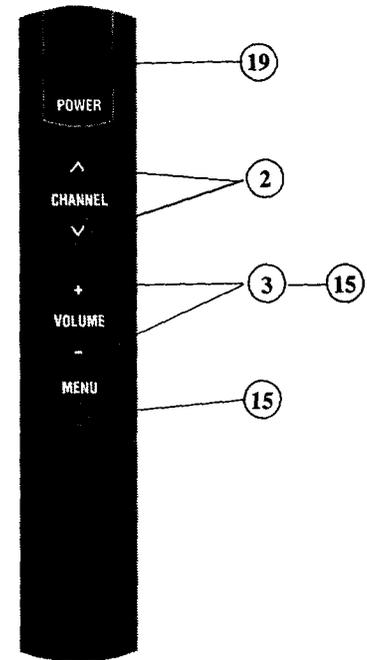
- * The tv button automatically controls your TV—no additional programming is required.
- Details for programming the VCR1 and VCR2 buttons to control other brands of VCR's are on page 55.
 - Details for programming the AUDIO button to control audio equipment are on page 56.
 - Details for programming the CABLE button to control cable boxes are on page 64.

Remote Controls: TV Functions *continued*

The ProScan master remote that came packed with your TV also controls most brands of VCR's and cable-TV boxes. The buttons shown below can be used to operate your TV. The rest of the buttons are used to control VCR's, LaserDisc players, audio equipment, or cable boxes and are explained on pages 53-57 and 64.



For added convenience, the simplified six-button remote also lets you control most of the TV's operations and functions using the advanced menu system.



- ① **TV Button** turns on TV and puts remote in "TV Mode" so that the other remote buttons will control the TV. Also displays time (if clock has been set) and channel number on the TV screen.

Important Note: Most buttons on the master remote control will not control the TV unless the remote is in the "TV Mode". If another component button (such as VCR1, VCR2, CABLE, or AUDIO) is pressed, the remote will no longer be in the "TV Mode". To get back into the "TV Mode", simply press the button labeled TV. The remote will go back into the "TV Mode" and will control the TV again.

- ② **CHANNEL Buttons**
Press CHANNEL up to see the next higher channel in memory, or press CHANNEL down to see the next lower channel in memory.

Your TV will automatically program active channels for your area into memory when you start the AutoProgram feature described on page 46. You can also add or remove individual channels from memory as described on page 47.

- ③ **VOLUME Buttons**
Press VOLUME up to increase volume, or press VOLUME down to decrease volume. The volume display will automatically appear on the screen when you press the VOLUME buttons.

- ④ **MUTE Button**
Press MUTE to quickly reduce sound to its minimum level without affecting the picture. This is very useful during telephone calls or other interruptions. When sound is muted, the word Mute will appear on the screen for a few seconds to let you know you have muted the TV. To restore sound, press MUTE again or press VOLUME up.

- ⑤ **PC (Previous Channel) Button**
Pressing the PC button causes the TV to change back to the last-tuned channel. This is useful should you want to monitor two channels.
To operate, select the first channel you want to watch. Then select the other channel by pressing two number buttons. The TV will now change back and forth between the two channels each time you press the PC button.

- 6 DISPLAY Button** displays time (if clock has been set) and channel number on the TV screen.
- 7 CLEAR Button**
Pressing CLEAR quickly clears the screen of all on-screen display messages (except Mute). It is also used to cancel the commercial skip count-down clock.
- 8 SURR (Surround) Button** lets you switch between the eight audio modes (STEREO, EXPANDED STEREO, DOLBY 3 STEREO, PROLOGIC, PHANTOM PROLOGIC, MATRIX SURROUND, HALL SURROUND, or STADIUM SURROUND). *Details are on pages 22-36.*
- 9 Arrow Buttons** let you pan across the picture when it is zoomed in. *Details are on pages 14-15.* They also let you move the small picture around the screen during PIP (Picture-In-Picture) operation. *Details are on pages 18-19.*
- 10 FRZ (Freeze) Button** lets you freeze the picture. When using the PIP (Picture-In-Picture) function, the FRZ button only freezes the small inset picture. *Details are on pages 14 and 19.*
- 11 CHAN (Channel) GUIDE Button** lets you display 12 channels at the same time. *Details are on page 17.*
- 12 ZOOM and OUT Buttons** let you make the picture larger and smaller. *Details are on pages 14-15.* These buttons also let you change the size of the small picture during PIP (Picture-In-Picture) operation. *Details are on pages 18-19.*
- 13 PIP (Picture-In-Picture) Control Buttons (PIP, OFF, and SWAP)** are used to display two pictures on the TV screen at once. The little picture can be switched with the big picture. *Details are on pages 18-19.*
- 14 ANT (Antenna) Button**
Because your TV has two different antenna inputs on the back (labeled ANT A and ANT B) you can connect more than one antenna or signal source. Press the ANT button to switch from one input to the other.

Antenna B appears with the channel number in the channel number display when you are watching whatever is connected to the ANT B input. *Details are on page 41.*
- 15 MENU Button and – and + Buttons**
Press MENU once to display the MAIN MENU, then press + or – to highlight the function you want. Next press MENU again to enter or adjust that function or display the next menu. *Details about using each function begin on page 13.*
- 16 INPUT Button** lets you quickly view signals from the INPUT jacks. Pressing this button switches the TV from its current channel directly to channel 91, and then to channel 92. Channel 91 lets you view the signal from a component connected to the INPUT 1 jacks and channel 92 accesses the INPUT 2 jacks. Press the CHANNEL up or down button to return to normal channels.
- 17 CS (Commercial Skip) Button**
Use this button when you want to scan other channels during a commercial break. When a program break occurs, press CS once before changing channels. The TV will count down 30 seconds on the screen and then automatically switch back to the original channel you were watching.

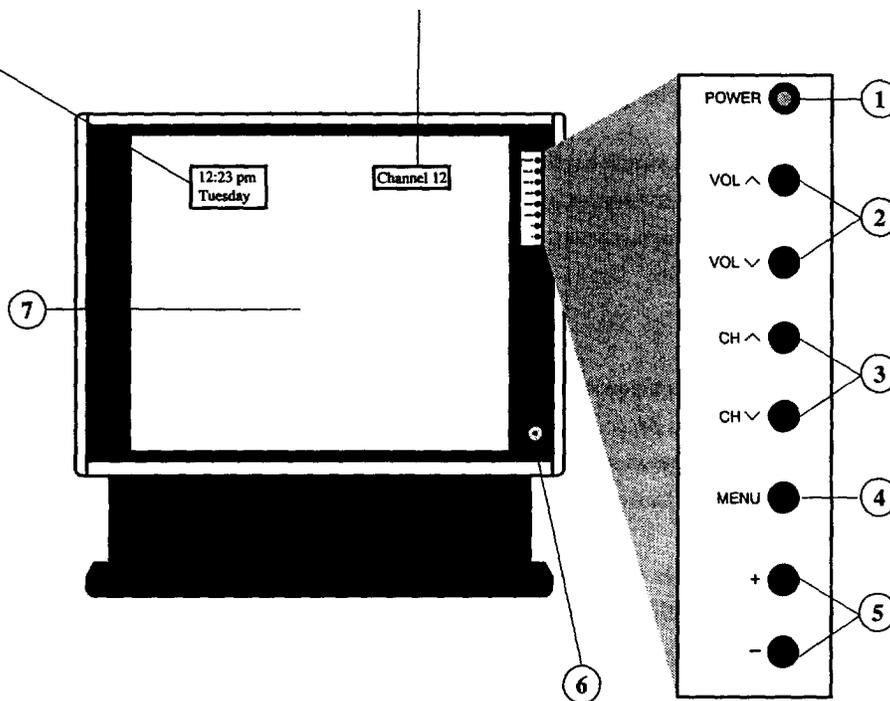
Press CS twice if you want the TV to count down 60 seconds. Each additional press will add another 30 seconds to the count-down time (up to four minutes) and then each additional press will add another 60 seconds to the countdown time (up to 60 minutes).

To cancel, press CLEAR. The countdown clock will disappear from the screen, and the TV will stay tuned to the channel it was on when you pressed CLEAR.
- 18 Number Buttons** let you select channels directly instead of using the CHANNEL buttons. Always press two number buttons (first one, then the other) to select a channel. For example, press 0 then 6 for channel 6.

To select a 3-digit cable channel (like 127), press and hold number button 1 until 1-- appears, and then press two more number buttons. Your TV will tune up to channel number 128 when the Cable/Air function is set to Cable. Check with your cable company to determine which channels are available in your area.
- 19 OFF/ON Button** on the master remote turns the TV off and on. The POWER button on the simplified remote turns the TV off and on.

Time and Day-of-Week Display shows the current time and day of the week (after the clock is set) whenever you turn on the TV, change channels, or press the DISPLAY button on the master remote control.

Channel Number Display shows the channel number whenever you turn on the TV, change channels, or press the DISPLAY button on the master remote. Antenna B appears with channels from the ANT B input. This display also shows PIP (Picture-In-Picture), channel label, and sleep timer information when they are activated.



1 POWER Button and Indicator

Press once to turn on TV. Press again to turn off TV. The power indicator lights whenever the TV is turned on.

2 VOLUME Buttons

Press VOLUME ^ to increase volume, or press VOLUME v to decrease volume. The volume display will automatically appear on the screen when you press a VOLUME button.

3 CHANNEL Buttons

Press CHANNEL ^ to see the next higher channel in memory, or press CHANNEL v to see the next lower channel in memory. Your TV will automatically program channels into the channel memory for you when you start the Autoprogram feature *described on page 46*. You can also add or erase individual channels *as described on page 47*.

4 MENU Button

Press MENU to display the MAIN MENU. Use + and - and MENU to select and adjust other menu functions. *Details about using each menu function begin on page 13.*

5 + and - Buttons

Use these buttons after you have pressed the MENU button to enter or adjust functions.

6 Stereo Headphone Jack

This headphone jack lets you connect optional headphones to listen to the audio from the PIP (Picture-In-Picture) at the same time others are listening to the audio from the main picture. You can also enjoy private listening to the audio from the main picture without disturbing others. If the plug on your headphones does not fit this jack, adapters are available from your local electronics supply store.

Plugging in headphones will not automatically mute the sound from the TV. This special feature enables someone with a hearing impairment to attach a set of headphones, adjust the headphone volume, and enjoy a program with others in the same room listening at a lower volume. You can also enjoy private listening.

Details are on page 25.

7 Remote Control Sensor (behind TV screen)

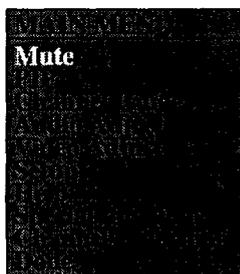
Receives commands from the remote controls. When using a remote control, point it toward this sensor.

Details are on page 8.

MAIN MENU and HELP MENU

Your TV's advanced menu system allows you to select and operate any of the TV's functions through the MAIN MENU using either remote control or the TV's front control panel. Several of the TV functions (such as mute, freeze, zoom, PIP, channel guide, etc.) can be directly accessed using buttons on the master remote control.

- 1 Press the **MENU** button to display the MAIN MENU.
- 2 Repeatedly press the + or - button to highlight the desired function in white.
- 3 Press the **MENU** button again to enter or adjust the function.



Pressing the - button moves the highlight down the screen (one item per press).

Pressing the + button moves the highlight up the screen (one item per press).

Pressing the MENU button when a function is highlighted allows you to enter or change that function.

After a few seconds, the MAIN MENU will disappear from the screen if no button is pressed. To exit the menu quickly, highlight Done and then press MENU or press the CLEAR button on the master remote control.

Mute reduces the TV's sound to a minimum level. Press the MENU button when Mute is highlighted to mute the sound.

The **PIP** (Picture-In-Picture) function displays one of two Pix-In-Pix menus.

- The first Pix-In-Pix menu lets you freeze, zoom, pan, and apply special effects to the main picture. It also lets you turn on the PIP feature. *Details are on pages 14-16.*
- The second Pix-In-Pix menu allows you to swap, freeze, move, adjust the size of the small inset picture and select which picture's (PIP or main) audio the headphone jack will receive. *Details about operating PIP are on pages 18-21.*

Channel Guide continually displays small pictures across the TV screen. Only the channels (normal or priority) selected with the Channels: normal/priority function in the MAIN MENU will appear. *Details are on page 17.*

The **Audio Adjust** menu allows you to adjust the equalizer, adjust the headphone's volume, adjust right and left balance, select one of eight different audio modes (each with individual setup features), and set the volume limit of your TV. *Details are on pages 23-36.*

The **Video Adjust** menu allows you to adjust the color, tint, contrast, brightness, sharpness, color temperature, noise reduction, and turn auto color on or off for the TV's picture. *Details are on page 37.*

The **Setup** menu allows you to select the antenna input, setup a priority channel scan list, program the scheduler, edit the channel memory, set the clock, AutoProgram the scan list, setup your VCR and cable channels, set cable/air function, and turn on or off the auto-help screens that appear at the bottom of the screen. *Details begin on page 40.*

The **Help** function offers a variety of on-screen instructions and diagrams to assist you in the operation and connection of your TV. To enter the HELP MENU and display the help screens, follow the instructions below.

- 1 Press the **MENU** button when Help is highlighted to display the HELP MENU.
- 2 Repeatedly press the + or - button to highlight the desired help function.
- 3 Press the **MENU** button again to enter a help screen.
- 4 Then press + to continue or MENU to exit a help screen.

Getting started

Notes: The HELP MENU and help screens will remain on the TV screen until you exit the Help function.

Special functions allow you to activate the sleep timer, set the time-reminder feature, and start TV demonstrations (auto, IDTV, and sleep). You can also save your personalized audio and video settings to be recalled later or return audio and video to factory settings.. You can select Closed Captioning to display the audio portion of a program as text or show current program information. *Details are on page 38-39.*

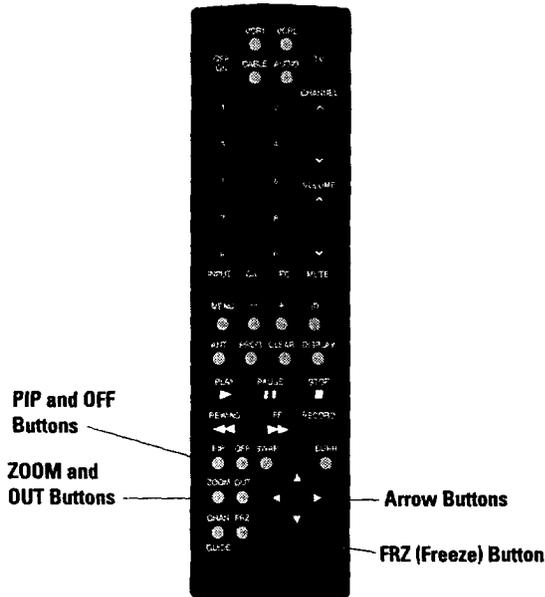
The **Channels: priority/normal** function switches the channel memory scan list between normal and priority channels. *Details are on page 42.*

Freeze, Zoom, and Pan (Main Picture)

Anytime you are watching a TV program (or a VCR tape through your TV), you will be able to use the special features described below. The PIP (Picture-In-Picture) feature must be turned off to use these features on the main picture.

Note: These features can also be used on the small inset PIP picture. Details are on pages 18-21.

Freeze and Zoom with master remote control



To Freeze the Picture

- 1 Press the FRZ (freeze) button to freeze the picture. Freeze does not affect the audio portion of the program.
- 2 Press the FRZ button again (or the OFF button) to return to normal video.

Note: If the PIP (picture-in-picture) feature is turned on, pressing FRZ will freeze the small inset picture.

To Zoom and Pan the Main Picture

- 1 If the PIP (Picture-In-Picture) feature is turned on, press the OFF button to turn it off.
- 2 Press and hold ZOOM until the desired zoom amount is reached.
- 3 After you have zoomed in, press the arrow buttons to move (pan) around the screen. Sometimes you may want to freeze the picture first and then zoom in, or you can zoom in and then freeze the picture.
- 4 To reduce the zoom amount and return to normal size, press and hold OUT or press the OFF button.

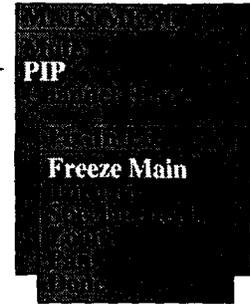
Freeze and Zoom with menus

To Freeze the Main Picture

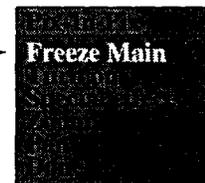
- 1 Press MENU to display the MAIN MENU.
- 2 Press the – or + button to highlight the PIP function.
- 3 Press MENU again to display the Pix-In-Pix menu.

Note: If the PIP (Picture-In-Picture) feature is turned on, this menu will not appear. The other Pix-In-Pix menu will appear instead of the Pix-In-Pix menu shown. To turn off Pix-In-Pix, highlight the Turn off function and then press the MENU button.

- 4 Repeatedly press the + or – button to highlight the Freeze Main function. Press the MENU button to freeze the picture. Press the MENU button again to return to normal video.



Press MENU Button to freeze picture. Press again to return to normal video.

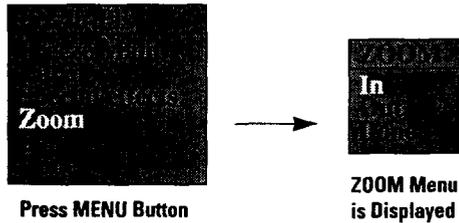


Notes: Sometimes you may want to freeze the picture first and then zoom in or you can zoom in and then freeze the picture.

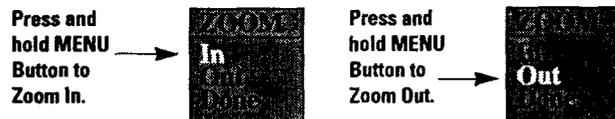
(continued on next page)

To Zoom and Pan the Main Picture

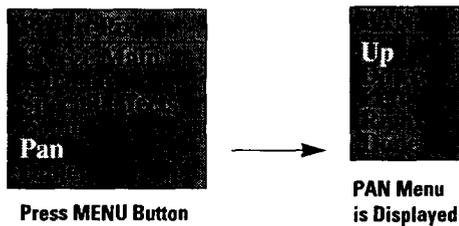
- 1 Display the Pix-In-Pix menu *as described in steps 1–3 under “To Freeze the Main Picture” on the previous page.* Repeatedly press the + or – button to highlight the Zoom function. Press the MENU button to display the ZOOM menu.



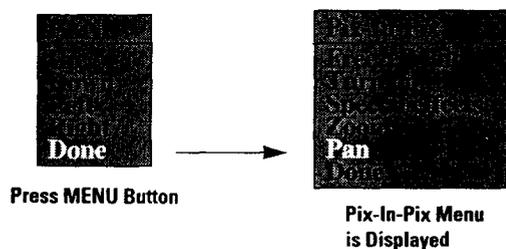
- 2 Press and hold the MENU button until the desired zoom amount is reached. To zoom back out, press the – button to highlight the Out function and then press and hold the MENU button.



- 3 If you want to move (pan) around the picture after you have zoomed in, repeatedly press the + or – button to highlight Done and press the MENU button to return to the Pix-In-Pix menu. Press the – or + button to highlight the Pan function, and then press the MENU button to display the PAN menu on the TV screen.



- Repeatedly press the + or – button to highlight the PAN function you want to use. Then press and hold the MENU button to move around the screen.
 - Up moves you to the top of the picture.
 - Down moves you to the bottom of the picture.
 - Left moves you to the left side of the picture.
 - Right moves you to the right side of the picture.
- When you are finished panning around the screen, repeatedly press the + or – button to highlight Done and press the MENU button to return to the Pix-In-Pix menu.



- 4 When you are finished, repeatedly press the + or – button to highlight Done and press the MENU button to remove the Pix-In-Pix menu from the TV screen.

Note: The menu will automatically disappear after a few seconds if no button is pressed. You can also quickly remove the menu from the screen by pressing the CLEAR button on the master remote control.

To Turn Off Zoom and Pan

- 1 Display the ZOOM menu.

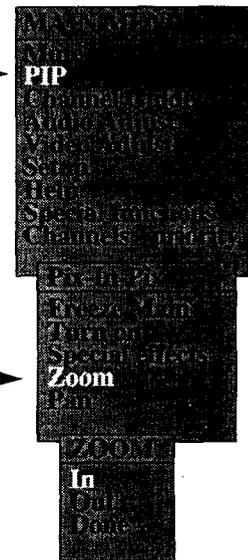
- 1 Press MENU to display the MAIN MENU.

- 2 Press the – button to highlight the PIP function.

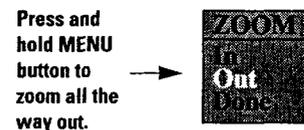
- 3 Press MENU again to display the Pix-In-Pix menu.

- 4 Press the – or + button to highlight the Zoom function.

- 5 Press MENU again to display the ZOOM menu.



- 2 Press the – button to highlight the Out function on the ZOOM menu. Then press and hold the MENU button to zoom all the way out.



- 3 When you are finished, press the – button to highlight Done and press the MENU button to return to the Pix-In-Pix menu. Then press the – button to highlight Done on the Pix-In-Pix menu, and press the MENU button to remove it from the screen.

Notes: The menu will automatically disappear after a few seconds if no button is pressed. You can also quickly remove the menu from the screen by pressing the CLEAR button on the master remote control.

You can quickly return the picture to normal by pressing the OFF button on the master remote control.

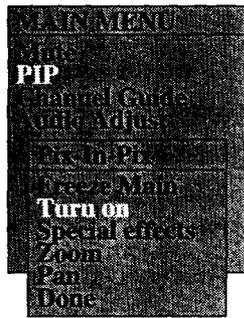
DVE (Digital Video Effects) (Main Picture)

Your TV is capable of producing DVE (Digital Video Effects) on the main picture. You can select a mosaic or solarization effect or a combination of both. The speed of the picture can also be controlled.

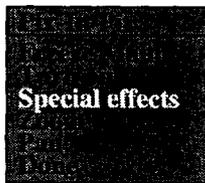
To Use DVE (Digital Video Effects) with menus

- 1 Press MENU to display the MAIN MENU.
- 2 Press the - button to highlight the PIP function.
- 3 Press MENU again to display the Pix-In-Pix menu.

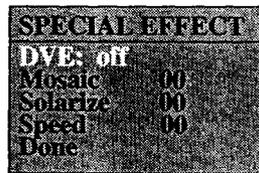
Note: If the PIP (Picture-In-Picture) feature is turned on, this menu will not appear. The other Pix-In-Pix menu will appear. To turn off Pix-In-Pix, highlight the Turn off function and then press the MENU button or press the OFF button on the master remote control.



- 4 Repeatedly press the + or - button to highlight the Special effects function. Press the MENU button to display the SPECIAL EFFECT menu.

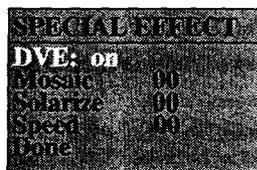


Press MENU to display SPECIAL EFFECT menu.

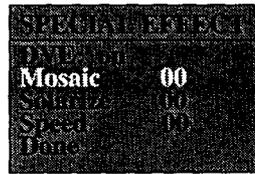


- 5 Press the MENU button to turn the DVE function on.

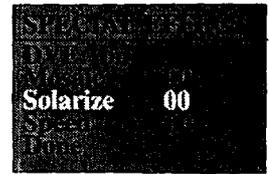
Press MENU to turn DVE function on.



- 6 Repeatedly press the + or - button to highlight the digital effect you want (Mosaic or Solarize).



Mosaic Effect



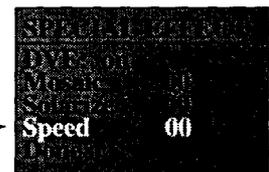
Solarize Effect

When the effect (Mosaic or Solarize) is highlighted, repeatedly press the MENU button to select the amount of effect you want.

- You can increase the amount of mosaic effect from 00 to 07.
- You can increase the amount of solarization effect from 00 to 04.

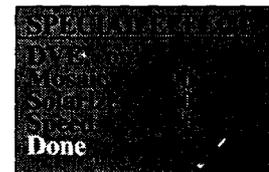
- 7 Select the speed of the digital effect. Repeatedly press the + or - button to highlight the Speed function. Then press the MENU button to increase the speed from 00 (picture is frozen) to 08.

Press MENU to increase the speed of the digital effect.



- 8 When you are finished, repeatedly press the + or - button to highlight Done, and then press the MENU button to remove the SPECIAL EFFECT menu from the TV screen.

Press MENU to remove the menu from the screen.



Note: The menu will automatically disappear after a few seconds if no button is pressed. You can also quickly remove the menu from the screen by pressing the CLEAR button on the master remote control.

To Cancel DVE (Digital Video Effects)

To cancel the DVE effects on the picture, display the SPECIAL EFFECT menu, and press the MENU button to turn the DVE: on/off function to off.

Note: You can also quickly turn off the digital effects by pressing the OFF button on the master remote control.

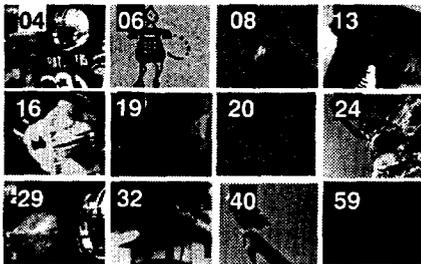
Channel Guide

Starting Channel Guide with master remote control

To start channel guide, press the CHAN (channel) GUIDE button on the master remote control.

- The screen will display all the channels that are programmed into the channel memory scan list, 12 at a time.
- To see the next 12 channels, press the + button.
- To see the previous 12 channels, press the – button.
- Each little screen will display a stop-action picture that will be continuously updated.
- While the 12 channels are on the screen, you can use the ZOOM button to enlarge the picture and then use the arrow buttons to pan around the screen. To return to normal size, press and hold OUT.

Note: When using the ZOOM feature, you will see a mosaic effect as the picture is made larger.



Notes: Some channels were programmed into the channel memory scan list at the factory. These are the channels that will appear during channel guide unless you AutoProgram the channel memory or add and erase channels as described on pages 46-47.

If the Channels: normal/priority function is set to priority, only the channels in the priority channel scan list will appear. See page 42 for details.

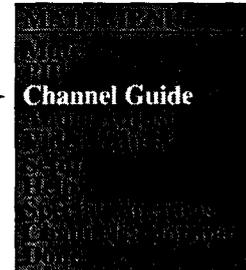
Stopping Channel Guide

- To select one of the channels being displayed in the channel guide, press the CHANNEL up or down button to highlight the channel number (white box with black numbers), and then press the MENU button. This will stop channel guide and take you directly to the channel you selected.
- Another way to stop channel guide is to press the CHAN (channel) GUIDE button again.

Starting Channel Guide with menus

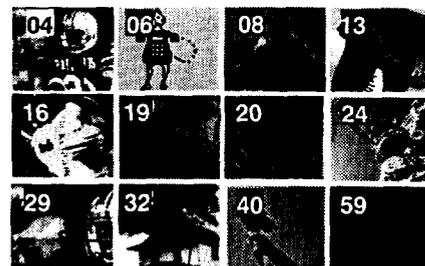
Press the MENU button to display the MAIN MENU. Then press the + or – button to highlight the Channel Guide function. Press MENU again to start displaying the channels on the screen.

- 1 Press MENU to display the MAIN MENU.
- 2 Repeatedly press the – button to highlight Channel Guide.
- 3 Press MENU again to start Channel Guide.



- The screen will display all the channels that are programmed into channel memory scan list, 12 at a time.
- To see the next 12 channels, press the + button.
- To see the previous 12 channels, press the – button.
- Each little screen will display a stop-action picture that will be continuously updated.
- While the 12 channels are on the screen, you can use the ZOOM button on the master remote control to enlarge the picture and then use the arrow buttons to pan around the screen. To return to normal size, press and hold OUT on the master remote control.

Note: When using the ZOOM feature, you will see a mosaic pattern as the picture is made larger.



Notes: Some channels were programmed into the channel memory scan list at the factory. These are the channels that will appear during channel guide unless you AutoProgram the channel memory or add and erase channels as described on pages 46-47.

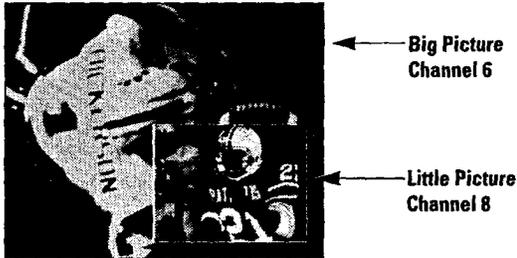
If the Channels: normal/priority function is set to priority, only the channels in the priority channel scan list will appear. See page 42 for details.

Stopping Channel Guide

To select one of the channels being displayed in the channel guide, press the CHANNEL up or down button to highlight the channel number (white box with black numbers), and then press the MENU button. This will stop channel guide and take you directly to the channel you selected.

PIP (Picture-In-Picture)

Because your TV has two separate tuners, you can watch two different channels at the same time with the touch of a button. You can swap the big and little picture, move the little picture around the screen, enlarge or reduce the size of the little picture, or freeze the little picture.

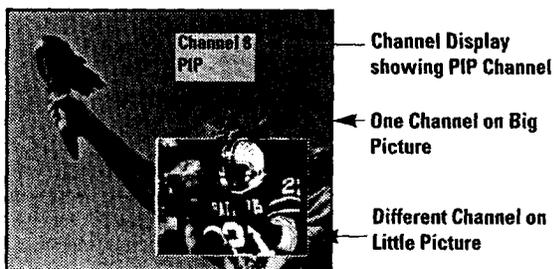


Two Football Games on Different Channels

You can also connect another video source (such as a VCR) and watch one TV channel and the input from the VCR. Connecting a video camera or camcorder lets you use the PIP feature as a surveillance system for a baby's room while you watch TV. *Details on using other video sources with PIP are on the next page.*

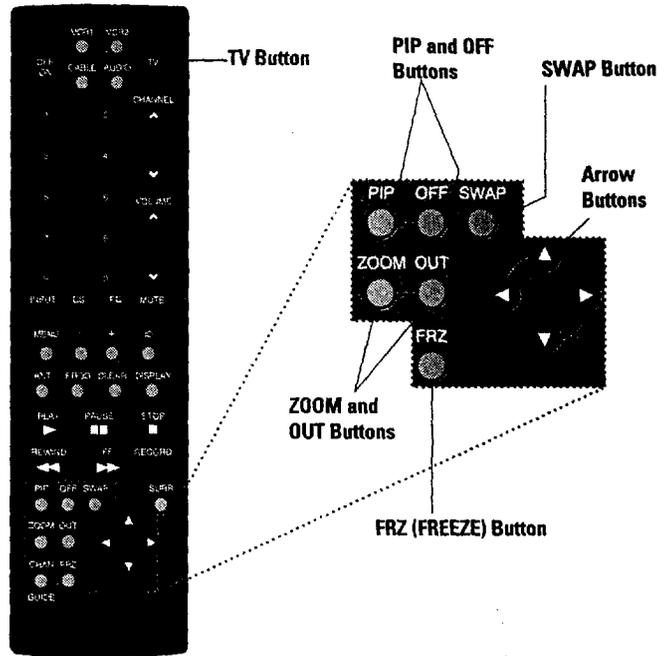
Using PIP (Picture-In-Picture) with master remote control

- 1 Turn on the TV and select the channel you want to watch on the big picture. Press the PIP button to turn on the little picture. Press the CHANNEL up or down button or two number buttons to select a channel on the little picture.

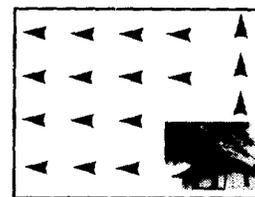


Notes: The remote must be in the "TV mode" when you press the PIP button. To put the remote in the "TV mode", press the TV button. After you press the PIP button, pressing the CHANNEL up or down button will automatically change channels on the small picture. PIP will appear in the channel number display. To change channels on the big picture, press the TV button and then CHANNEL up or down or two number buttons. To change channels on the little picture, press the PIP button and then CHANNEL up or down or two number buttons.

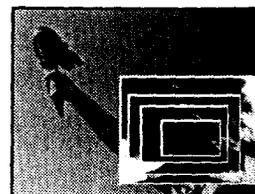
PIP Buttons on Master Remote Control



- 2 Whenever you have the PIP feature turned on, you can move, enlarge, reduce, freeze, or swap the big and little picture. **Note:** The remote must be in the "TV mode" to operate the special PIP functions. To put the remote in the "TV mode", press the TV button.
 - To move the small picture anywhere on the screen, press and hold one of the four arrow keys to move the small picture in that direction.



- Repeatedly press ZOOM to enlarge the size of the small picture or OUT to reduce the size of the small picture. Five sizes are available.



- Press SWAP to switch the small picture with the main picture.



- Press FRZ to freeze the small picture. Press FRZ again to return to an action picture.



Cancelling PIP (Picture-In-Picture)

Press the OFF button to turn off PIP and remove the little picture from the screen.



Using Other Video Input Sources with PIP

The PIP (Picture-In-Picture) feature can be used with video sources (such as VCR's and camcorders) that are connected to the INPUT 1 or INPUT 2 jacks on the back of the TV. You can only view the picture from one set of INPUT jacks at a time. The picture from the INPUT jacks can be viewed on either the large picture or the small picture.

Note: S-VHS video can only be viewed on the main picture. If you plan on viewing the picture from the INPUT jacks in the small picture and have connected S-VHS, be sure to also connect the normal video cable to the VIDEO INPUT jack.



You can still use all of the PIP features when viewing a picture from another video source.

To see the signal from a source connected to the INPUT jacks, first press PIP and then repeatedly press the INPUT button or press two number buttons to select channel 91 or 92. If you have added channel 91 or 92 to your channel memory scan list *as described on page 47*, you can use the CHANNEL up or down button.

- Select channel 91 if the other video source is connected to the TV's INPUT 1 jacks.
- Select channel 92 if the other video source is connected to the TV's INPUT 2 jacks.

Notes: If you want to watch signals from two other video sources (such as two VCR's or a VCR and camcorder), connect one VCR to the ANT connector on the back of the TV *as shown on page 66*. Then select channel 3 or 4 (the same channel to which the CH3/CH4 switch on the VCR is set) to see the signal from that VCR.

If you are controlling your VCR with the VCR1 or VCR2 button on the remote control, make sure the VCR/cable function *described on page 43* matches the channel you want to watch the VCR's signal on.

To Hear Sound from the Small Picture

To hear the audio from the small picture, plug optional headphones into the stereo headphone jack on the front panel of the TV. You can also adjust the volume of the headphones. *Details are on page 25.*

Picture-In-Picture (PIP)

PIP (Picture-In-Picture) *continued*

Using PIP (Picture-In-Picture) *with menus*

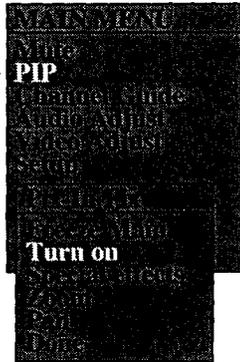
1 Turn on the TV and select the channel you want to watch on the big picture. Display the Pix-In-Pix menu

1 Press MENU to display the MAIN MENU.

2 Press + or - to highlight PIP function.

3 Press MENU to display the Pix-In-Pix menu.

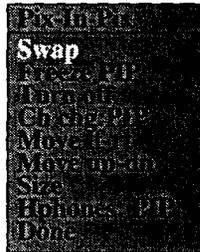
4 Press MENU again to turn on PIP.



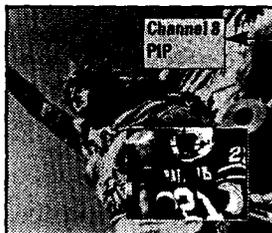
After the small picture appears the Pix-In-Pix menu will automatically change to a new Pix-In-Pix menu.

You can use this menu to:

- Swap the big and small picture.
- Freeze the small picture.
- Turn off the small picture.
- Ch chg (change channel) of either the main or small picture.
- Move the small picture anywhere on the screen.
- Size: Change size of small picture.
- Hphones: Select whether the audio from the headphone jack is from the small picture or main picture.

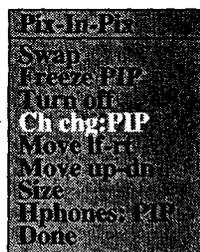


2 To change channels on the small picture, press the CHANNEL up or down button. The Pix-In-Pix menu will automatically disappear from the screen.



Channel Display showing PIP
One Channel on Big Picture
Different Channel on Small Picture

Note: To change channels on the big picture, press + or - to highlight the Ch chg:PIP/Main function. Then press MENU to change this function to Ch chg:Main. Press the CHANNEL up or down button. The menu will disappear from the screen.



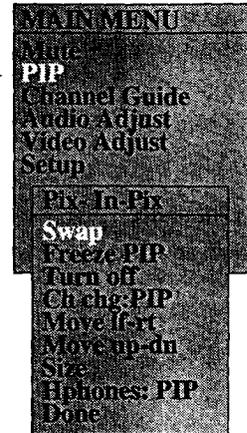
3 Whenever you have the PIP feature turned on, you can move, enlarge, reduce, freeze, or swap the big and little picture with the Pix-In-Pix menu.

1 Press MENU to display the MAIN MENU.

2 Press - or + to highlight PIP function.

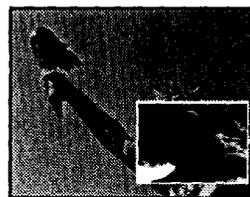
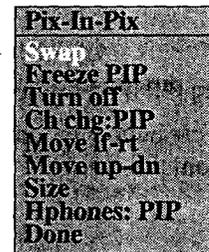
3 Press MENU to display the Pix-In-Pix menu.

4 Repeatedly press + or - to highlight the function you want to use, and then press MENU.



• **To swap the large and small picture:** Repeatedly press the + or - button to highlight the Swap function. Then press the MENU button. Press the MENU button again to swap the pictures again.

Repeatedly press the + or - button to highlight the Swap function. Then press MENU.



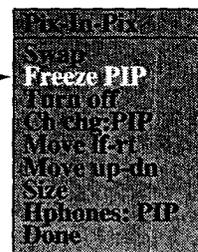
Press MENU to swap pictures.



Press MENU again to swap again.

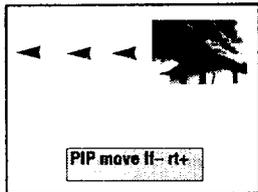
• **To freeze the small picture:** Repeatedly press the + or - button to highlight the Freeze PIP function. Then press the MENU button to freeze the small picture. Press the MENU button again to return to an action picture.

Press MENU to freeze the PIP picture.

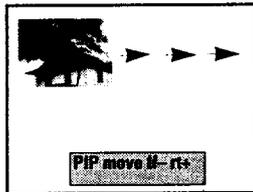


- **To move the small picture left or right:** Repeatedly press the + or – button to highlight the Move lf-rt function. Then press the MENU button to display the PIP move lf- rt+ display on the TV screen. Press and hold the – button to move the small picture to the left or the + button to move the small picture to the right. Pressing the MENU button will return you to the Pix-In-Pix menu.

Repeatedly press the + or – button to highlight the Move lf-rt function. Then press MENU.



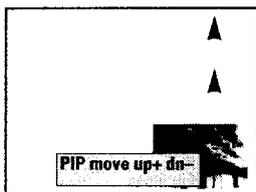
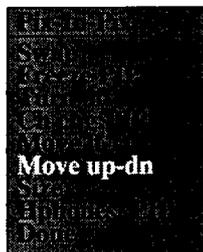
Press and hold – button to move small picture to the left.



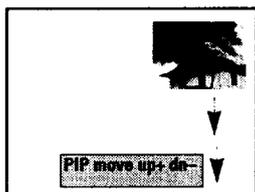
Press and hold + button to move small picture to the right.

- **To move the small picture up or down:** Repeatedly press the + or – button to highlight the Move up-dn function. Then press the MENU button to display the PIP move up+ dn– display on the TV screen. Press and hold the + button to move the small picture up or the – button to move the small picture down. Pressing the MENU button will return you to the Pix-In-Pix menu.

Repeatedly press the + or – button to highlight the Move up-dn function. Then press MENU.



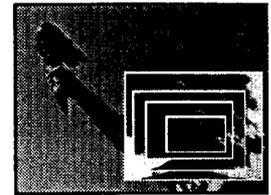
Press and hold + button to move small picture up.



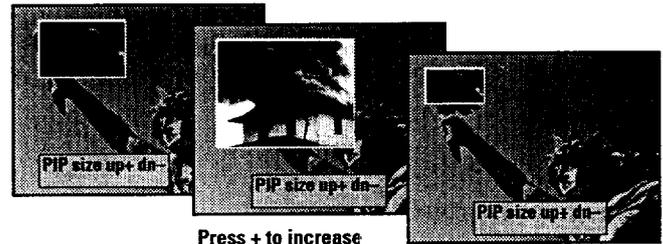
Press and hold – button to move small picture down.

- **To change the size of the small picture:** Repeatedly press the + or – button to highlight the Size function. Then press the MENU button to display the PIP size up+ dn– display on the TV screen. Press the + button to increase the size of the small picture or the – button to reduce the size of the small picture. Pressing the MENU button will return you to the Pix-In-Pix menu.

Repeatedly press the + or – button to highlight the Size function. Then press MENU.



Five sizes are available.



Press + to increase the small picture size.

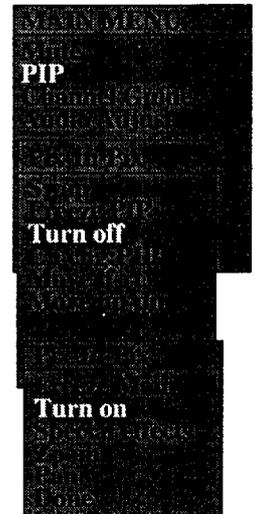
Press – to decrease the small picture size.

- 4 When you are finished, press the + or – button to highlight Done. Then press MENU to remove the menu from the screen.
Note: The menu will automatically disappear from the screen in a few seconds if no button is pressed.

To turn off PIP with menus

- 1 Press MENU to display the MAIN MENU.
- 2 Press – or + to highlight PIP function.
- 3 Press MENU again to display the Pix-In-Pix menu.
- 4 Repeatedly press – or + to highlight the Turn off function.
- 5 Press MENU again to turn off PIP. The small picture will disappear. The other Pix-In-Pix menu will appear on the TV.

Note: This menu will disappear within a few seconds if no button is pressed. To remove the menu, repeatedly press + or – to highlight Done. Then press the MENU button to remove the menu.



Picture-In-Picture (PIP)

Speaker Arrangements

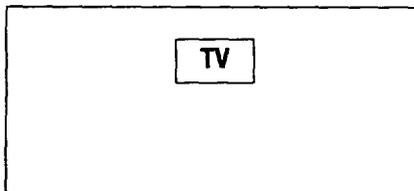
Your TV is equipped with built-in advanced audio technology. The AUDIO ADJUST menu *described on page 24* will allow you to adjust the equalizer, adjust the headphone's volume, adjust right and left balance, select one of eight different audio modes (each with individual setup features), and set the volume limit of your TV.

Before you select one of the eight audio modes or adjust the AUDIO ADJUST menu, follow the steps below.

- 1 Select your room speaker arrangement from one of the following pictures.
- 2 Select the audio mode that is compatible with your audio source and speaker arrangement. *Details on selecting audio modes begin on page 28.*
- 3 After selecting the audio mode, adjust the SETUP menu for that mode to your personal preference. *Details on adjusting setup menus begin on page 28.*

Note: You may save your personalized adjustments for each SETUP menu by using the MEMORY MENU as *described on page 39.*

A No additional speakers connected



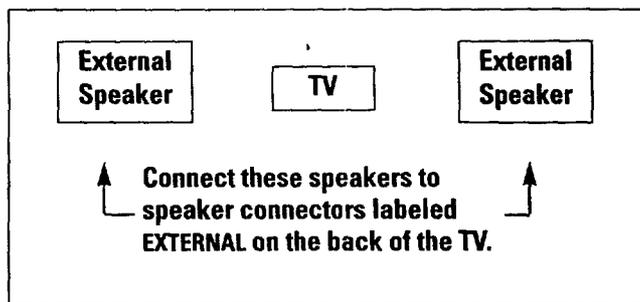
If you do not have any external speakers connected to the speaker connectors on the back of your TV, you will want to choose the Stereo, Stereo expand, or Prologic phantom mode.

Note: The TV's audio mode is set to Prologic phantom at the factory.

- Select the Stereo mode so your TV will automatically produce stereo sound whenever it is broadcast. *Details are on page 28.*
- Select the Stereo expand mode to add greater depth and dimension to stereo broadcasts. *Details are on page 29.*
- Select the Prologic Phantom mode so your TV will automatically produce clearer dialog and better stereo imaging when stereo is broadcast. *Details are on pages 34-35.*

Note: In some fringe viewing areas, the stereo signal may not be strong enough for quality reception. The signal may drift, or the reproduction may become noisy. Should this occur, change the Mode: stereo/mono function on the STEREO SETUP menu to Mode: mono to receive clearer, cleaner sound. *Details are on page 28.*

B External right and left front speakers connected



If you have external right and left front speakers connected to the speaker connectors labeled EXTERNAL on the back of your TV, you will want to choose the Stereo, stereo expand, or Dolby* 3 stereo mode.

- Select the Stereo mode so your TV will automatically produce stereo sound whenever it is broadcast. *Details are on page 28.*
Note: In some fringe viewing areas, the stereo signal may not be strong enough for quality reception. The signal may drift, or the reproduction may become noisy. Should this occur, change the Mode: stereo/mono function on the STEREO SETUP menu to Mode: mono to receive clearer, cleaner sound. *Details are on page 28.*
- Select the Stereo expand mode to add greater depth and dimension to stereo broadcasts. *Details are on page 29.*
- Select the Dolby 3 stereo mode to take a Dolby* surround encoded source and add a center channel. This center channel makes the actor's voice appear to come from the TV screen regardless of where you are sitting in the room. Dolby 3 stereo provides a left, right, and center channel sound. *Details are on page 31.*

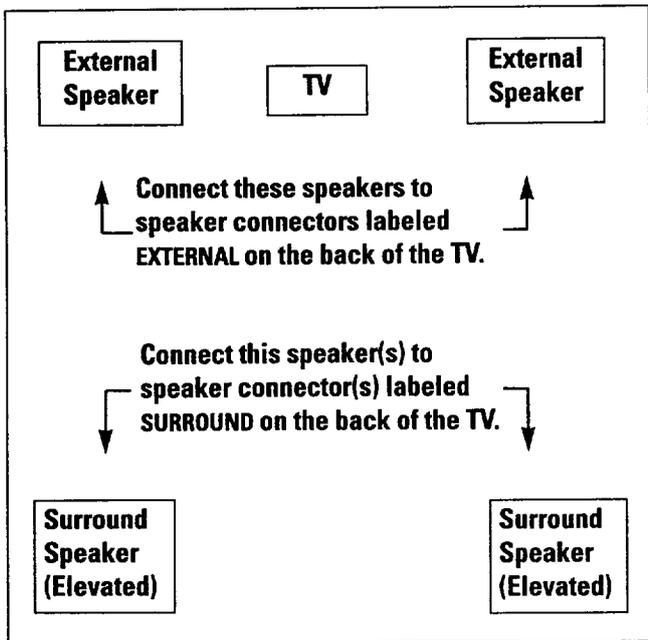
Note: Dolby 3 stereo works best with Dolby surround encoded material, but will produce clearer dialog and better stereo imaging even on normal stereo material.

*"Dolby" and the double-D symbol are trademarks of Dolby Laboratories Licensing Corporation.

Manufactured under license from Dolby Laboratories Licensing Corporation.

Additionally licensed under one or more of the following patents: U.S. numbers 3,632,886, 3,746,792 and 3,959,590; Canadian numbers 1,004,603 and 1,037,877.

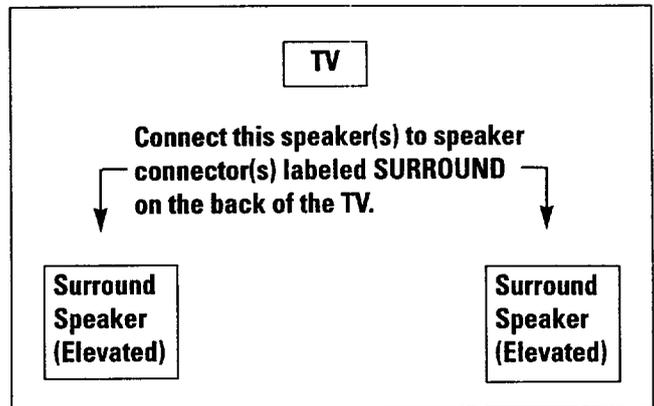
C External right, left, and surround speaker(s) connected



If you have external right and left speakers connected to the speaker connectors labeled EXTERNAL on the back of your TV, and another speaker(s) connected to the speaker connector(s) labeled SURROUND, you will want to choose the Prologic, Matrix surr, Hall surr, or Stadium surr mode.

- Select the Prologic mode to fully utilize a Dolby surround encoded source. Prologic produces a more realistic “theater-like” sound experience in the home by using dedicated center, right, left, and surround channels. Prologic also electronically decodes the predominant audio channel and automatically emphasizes that channel’s volume. The result is greater perceived channel separation and the sensation of wider and more realistic three-dimensional sound. *Details are on pages 32-33.*
Note: Prologic works best with Dolby surround encoded material, but will produce clearer dialog and better stereo imaging even on normal stereo material.
- Select the Matrix surr (surround) mode to simulate surround sound from a mono broadcast. *Details are on page 36.*
- Select the Hall surr (surround) mode to hear surround sound from a stereo broadcast and create the effect of being in a large room. *Details are on page 36.*
- Select the Stadium surr (surround) mode to hear surround sound from a stereo broadcast and create the effect of being in a stadium. *Details are on page 36.*

D External surround speaker(s) connected

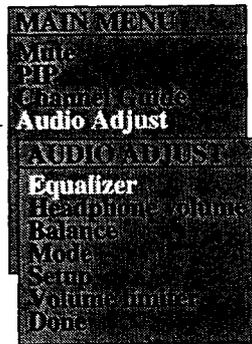


If you have external speaker(s) connected to the speaker connector(s) labeled SURROUND, you will want to choose the Prologic phantom, Matrix surr, Hall surr, or Stadium surr mode.

- Select the Prologic phantom mode if you have only connected a surround speaker(s) and no external right or left speakers. Prologic phantom uses the prologic decoder, but splits the center channel between left and right. It then uses the TV’s internal speakers for left, right, and center sound. *Details are on pages 34-35.*
Note: Prologic phantom works best with Dolby surround encoded material, but will produce clearer dialog and better stereo imaging even on normal stereo material.
- Select the Matrix surr (surround) mode to simulate surround sound from a mono broadcast. *Details are on page 36.*
- Select the Hall surr (surround) mode to hear surround sound from a stereo broadcast and create the effect of being in a large room. *Details are on page 36.*
- Select the Stadium surr (surround) mode to hear surround sound from a stereo broadcast and create the effect of being in a stadium. *Details are on page 36.*

AUDIO ADJUST Menu: Basic Functions

- 1 Press MENU to display the MAIN MENU.
- 2 Then press + or – to highlight Audio Adjust in white.
- 3 Press MENU again to display the AUDIO ADJUST menu.
- 4 Press + or – to highlight desired function. Then press MENU to enter the function.



Pressing the – button moves the highlight down the TV screen (one item per press).

Pressing the + button moves the highlight up the TV screen (one item per press).

Pressing the MENU button when a function is highlighted allows you to enter or adjust that function.

After a few seconds, the AUDIO ADJUST menu will disappear from the screen if no button is pressed. To exit the menu quickly, highlight Done and then press MENU (or press the CLEAR button on the master remote control).

The **Equalizer** function lets you display an on-screen graphic equalizer so you can remotely adjust audio bandwidths for different environments or individual tastes. *Details are on pages 26-27.*

The **Headphone volume** function allows you to adjust the volume of the sound from the headphone jack. Press the + or – button to highlight the Headphone volume function. Then press the MENU button to enter the HEADPHONE VOL display. Press + or – to adjust the headphone volume level. *Details are on the next page.*

The **Balance** function adjusts the left/right balance of sound from the speakers. When adjusting the balance, sit in your normal viewing seat. Then press the + or – button to highlight the Balance function, press the MENU button to enter the BALANCE adjustment display. Press the + or – button until the sound seems to originate from a point halfway between the speakers.

The **Mode** function allows you to select one of eight different audio modes.

Note: You can quickly select one of the eight audio modes by repeatedly pressing the SURR (surround) button on the master remote control.

- **Stereo** allows the TV to automatically produce stereo or monaural audio, whichever is broadcast. *Details are on page 28.*

- **Stereo expand** adds greater depth and dimension to stereo broadcasts and other stereo sources such as stereo VCR's and laser disc players. *Details are on page 29.*
- **Dolby 3 stereo** provides right, left, and center channel sound from Dolby* encoded sources. Requires external right and left front speakers. *Details are on page 31.*
- **Prologic** provides separate surround, center, right, and left sound from Dolby encoded sources. Requires external right and left front speakers and rear surround speaker(s). *Details are on pages 32-33.*
- **Prologic phantom** is the prologic mode to select if you have no external speakers connected or only external surround speaker(s) connected. It uses the prologic decoder, but splits the center channel between left and right. It then uses the TV's internal speakers for left, right, and center sounds. *Details are on pages 34-35.*
- **Matrix surround** allows you to simulate surround sound from a mono broadcast. Rear surround speaker(s) are required. *Details are on page 36.*
- **Hall surround** provides surround sound from a stereo signal. Rear surround speaker(s) are required. *Details are on page 36.*
- **Stadium surround** provides surround sound from a stereo signal. Stadium surround delays the rear sound longer than hall surround which gives you the feeling of being in a larger area, such as a large stadium. Rear surround speaker(s) are required. *Details are on page 36.*

The **Setup** function allows you to adjust individual features for the audio mode you have selected. *Details are on page 28-36.*

The **Volume limiter** function lets you set the upper volume level of your TV. This is useful if you have children and do not want them listening to a program above a certain level. Press the MENU button when Volume limiter is highlighted to enter the VOLUME LIMIT adjustment display. Press + or – to adjust the display.

Saving, Restoring, and Returning to Factory Audio Settings

The TV will remember your personalized audio setup functions for each audio mode—even when you turn it off. To prevent losing your personal settings because someone changes them accidentally, you can save them using the MEMORY MENU. After the settings have been saved, you can restore them at a later date using the MEMORY MENU. The MEMORY MENU also lets you easily restore the audio setup functions to their factory settings. *Details are on page 39.*

*"Dolby" and the double-D symbol are trademarks of Dolby Laboratories Licensing Corporation.

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Additionally licensed under one or more of the following patents: U.S. numbers 3,632,886, 3,746,792 and 3,959,590; Canadian numbers 1,004,603 and 1,037,877.

Stereo Headphone Jack

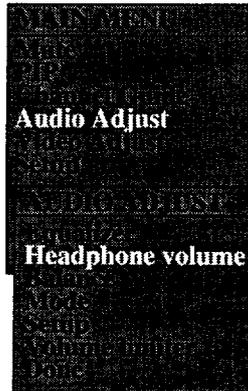
The stereo headphone jack *on the front of the TV* lets you connect optional headphones to enjoy private listening without disturbing others. If the plug on your headphones does not fit this jack, adapters are available from your local electronics supply store.

Plugging in headphones will not automatically mute the sound from the TV. This special feature allows someone with a hearing impairment to attach a set of headphones and adjust the volume independently from the TV's volume. You can also enjoy private listening by muting the TV's sound. To mute the TV's sound, simply press the **MENU** button *twice* or press the **MUTE** button on the master remote control.

You can also select whether you want the sound from the headphone jack to come from the main picture or the PIP (Picture-In-Picture) small inset picture with the Hphones: Main/PIP function.

Adjusting Headphone Volume

- 1 Press **MENU** to display the **MAIN** menu.
- 2 Press **+** or **-** button to highlight the **Audio Adjust** function. →
- 3 Press **MENU** button to display **AUDIO ADJUST** menu.
- 4 Press **+** or **-** to highlight → the **Headphone volume** function.
- 5 Then press **MENU** to enter the **HEADPHONE VOL** adjustment display. Press **+** to increase the headphone's volume, and press **-** to decrease the volume.



To Change Audio Coming Out of Headphone Jack.

The Hphones: Main/PIP function lets you select whether you want the audio from the headphone jack to come from the main picture or the PIP (Picture-In-Picture) small inset picture.

- 1 Press **MENU** to display the **MAIN** MENU.
- 2 Press **+** or **-** to highlight → the **PIP** function.
- 3 Press **MENU** to display the **Pix-In-Pix** menu.
- 4 Press **+** or **-** to highlight the **Hphones:** function. Then press **MENU** to change the function between **Main** and **PIP**. →



Note: When the Hphones: Main/PIP function is set to Hphones: PIP, you will hear audio from the small inset picture through the headphones. When the Hphones: Main/PIP function is set to Hphones: Main, you will hear audio from the main picture.

- 5 When you are finished, press **+** or **-** to highlight **Done**, and then press **MENU**.

VIDEO ADJUSTMENT
Headphone Jack

Stereo Mode (AUDIO ADJUST Menu)

Your TV is fully capable of reproducing stereo sound from TV stations transmitting stereo sound in your area. Although you can adjust the stereo functions to only produce mono sound, you may prefer to leave the Mode: stereo/mono function set to Mode: stereo. That way your TV will automatically reproduce stereo or monaural sound, whichever is broadcast.

You can easily select STEREO by repeatedly pressing the SURR (surround) button on the master remote control. You can also select Stereo with the AUDIO MODE menu as shown below. Then you can use the STEREO SETUP menu to adjust the stereo functions to your personal preference.

Note: When stereo is being broadcast and received, the word stereo appears in the channel number display area.

In some fringe viewing areas, the stereo signal may not be strong enough for quality reception. The signal may drift or the reproduction may become noisy. Should that occur, change the Mode: stereo/mono function in the STEREO SETUP menu to Mode: mono to receive clearer, cleaner sound.

Note: To put the TV in the mono mode, you must select Stereo in the AUDIO MODE menu. Then by pressing the MENU button you will automatically go to the AUDIO ADJUST menu and Setup will be highlighted. Then press the MENU button again to bring up the STEREO SETUP menu. Press the + or - button to highlight Mode: stereo and press the MENU button to change to Mode: mono.

To Select and Setup Stereo Mode with menus

1 Display the AUDIO MODE menu.

1 Press the MENU button to display the MAIN MENU.

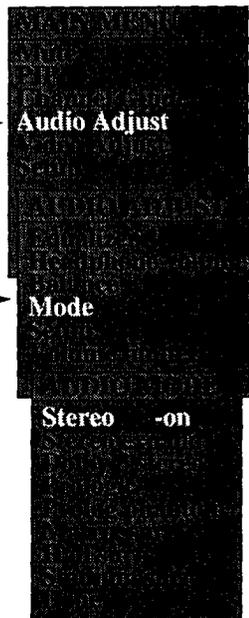
2 Press the + or - button to highlight the Audio Adjust function in white.

3 Then press MENU again to display the AUDIO ADJUST menu.

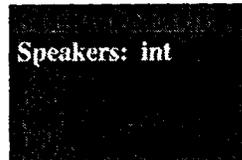
4 Press the + or - button to highlight the Mode function.

5 Then press MENU to display the AUDIO MODE menu.

Note: Only one mode can be turned on at a time. If Stereo is on, all other modes are off. To turn off a mode, you must turn on a different mode.



- 2 Make sure the Stereo mode is turned on (-on appears to the right of Stereo). If it is not on, press + or - to highlight Stereo and then press MENU.
- 3 Press MENU again to exit the AUDIO MODE menu and return to the AUDIO ADJUST menu. Setup will already be highlighted.
- 4 Press the MENU button to enter the STEREO SETUP menu.



- 5 Adjust the STEREO SETUP menu to your personal preference. Press + or - to highlight the function.
 - Press MENU when the Speakers: int/ext/off function is highlighted to select the TV's internal or optional external speakers. Set this function to Speakers: int (internal) to listen to the TV's built-in speakers. Set this function to Speakers: ext (external) if you have connected external speakers to the TV's EXTERNAL speaker connectors. Set this function to Speakers: off to turn off the internal and external speakers if connecting TV to your stereo system with its own set of speakers.
 - Press MENU when Volume is highlighted to enter the VOLUME adjustment display. Press + to increase and - to decrease the TV's volume.

Note: If the VOLUME display stops before it is at full volume and the volume is not high enough, check the Volume limiter to see if it is set too low. *Details are on page 24.*
 - Press MENU when the Balance function is highlighted to enter the BALANCE adjustment display. Then press + or - to adjust the left/right balance until the sound seems to originate from a point halfway between the speakers.
 - Press MENU when the Mode: stereo/mono function is highlighted to select Mode: stereo or Mode: mono. Normally this function can be left set to Mode: stereo. Your TV will then automatically reproduce either stereo or monaural sound, whichever is broadcast.
 - Press MENU when Done is highlighted to exit the STEREO SETUP menu.

Saving, Restoring, and Returning to Factory Settings

The TV will remember your settings—even when you turn it off. To prevent losing your personal settings because someone changes them accidentally, you can save them using the MEMORY MENU. After the settings have been saved, you can restore them at a later date using the MEMORY MENU. The MEMORY MENU also lets you easily restore the STEREO SETUP menu to its factory settings. *Details are on page 39.*

Graphic Equalizer (AUDIO ADJUST)

The EQUALIZER function lets you display an on-screen graphic equalizer so you can remotely adjust audio bandwidths for different environments or individual tastes.

Adjusting the graphic equalizer is primarily a matter of personal taste. The adjustments allow certain characteristics of the audio to be changed without affecting others. For example, if someone enjoys sharp, clean horns (brass), increasing the 4.5 kHz control can bring them out.

The equalizer also gives control of the mid-range frequencies that bass and treble controls do not affect. Since vocal frequencies are in these mid ranges, tone controls have little effect on them. The center bands not only give control of vocals, but allow selective vocal ranges to be controlled. For example, reducing the 400 Hz and 1 kHz bands can soften a strident male vocalist, and increasing the 2 kHz and 4.5 kHz controls can bring a subtle female voice forward. Adjusting the 1 kHz and 2 kHz bands can add intelligibility to a speaker or singer under certain circumstances.

The equalizer can also be used to compensate for either deficiencies or excesses in the way the system reproduces the audio in your room. Most common problems are “dull” or “live” rooms that have too little or too much treble, and rooms of certain sizes that have standing waves that boom. Experimentation can help find the nearest band to correct such problems. A room with a sofa and many drapes, for example, might benefit from increasing the 4.5 kHz and 10 kHz bands. Live rooms with wood floors and few furnishings commonly boom or resonate in the upper bass range. Adjusting the 150 Hz band could control that without taking away good, deep bass that a conventional bass control would reduce.

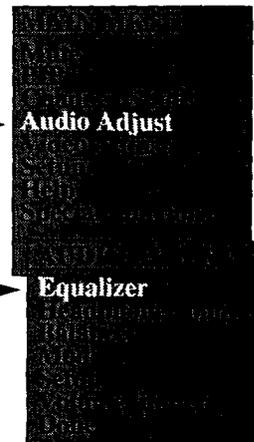
Saving, Restoring, and Returning to Factory Settings

The TV will remember your settings for the Graphic Equalizer—even when you turn it off. To prevent losing your personal settings because someone changes them accidentally, you can save them using the MEMORY MENU. After the settings have been saved, you can restore them at a later date using the MEMORY MENU. The MEMORY MENU also lets you easily restore the Graphic Equalizer to its factory settings. *Details are on page 39.*

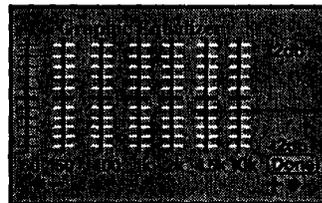
Adjusting Graphic Equalizer with menus

- 1 Display the Graphic Equalizer.

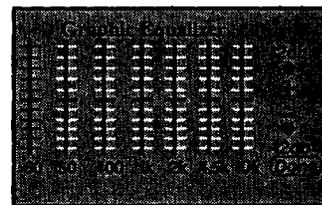
- 1 Press the MENU button to display the MAIN MENU
- 2 Press the + or – button to highlight the Audio Adjust function in white.
- 3 Then press MENU again to display the AUDIO ADJUST menu.
- 4 The Equalizer function is highlighted since it is the first item in the AUDIO ADJUST menu.



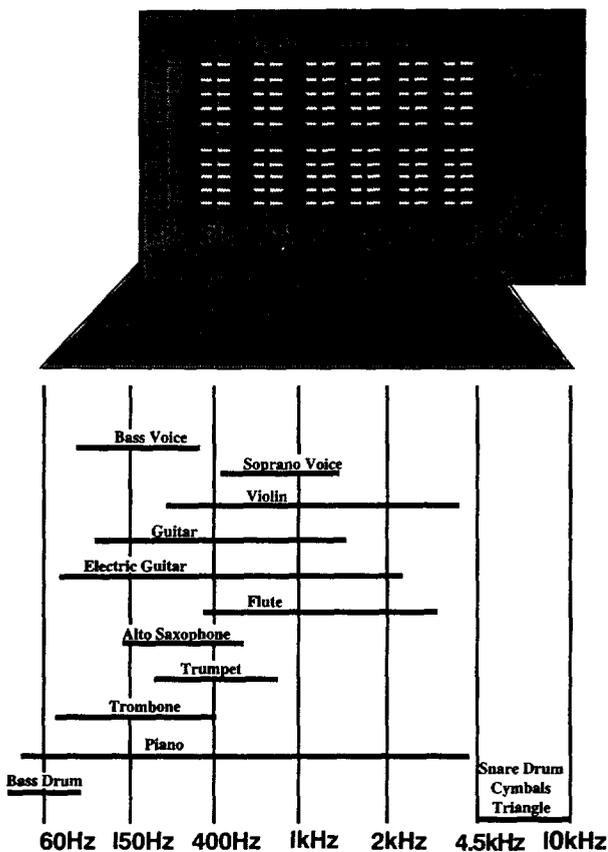
- 2 Press MENU to enter the Graphic Equalizer and display the various audio bands on the screen.



- 3 Repeatedly press the + or – button to highlight in yellow the band you want to adjust.
- 4 Press MENU to enter the highlighted band, then press + to boost (raise) the amplitude, or press – to cut (lower) the amplitude.



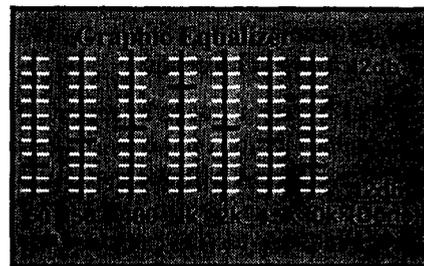
- 5 Press MENU again to exit that audio band.
- 6 When finished, the display will automatically disappear from the screen if no buttons are pressed. To quickly exit the Graphic Equalizer, press the CLEAR button on the master remote control, or press + or – to highlight Done. Then press MENU to return to the AUDIO ADJUST menu. Press + or – to highlight Done and then press MENU again.



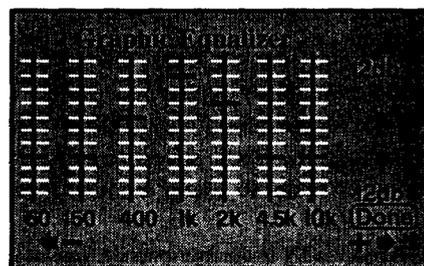
Listening Tips

Adjust the equalizer according to the type of music you are listening to. You can start from these examples and adjust sound to your preference.

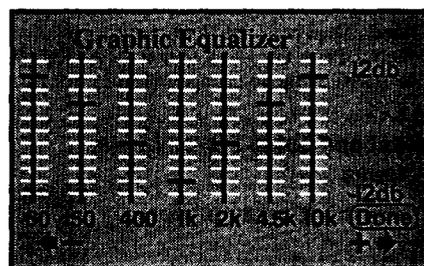
Jazz and the 50's



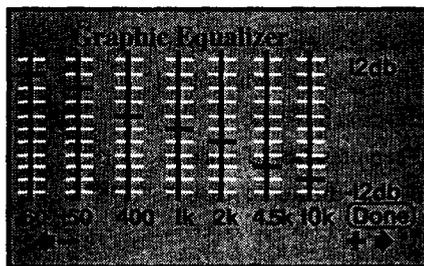
Vocals and Talk Shows



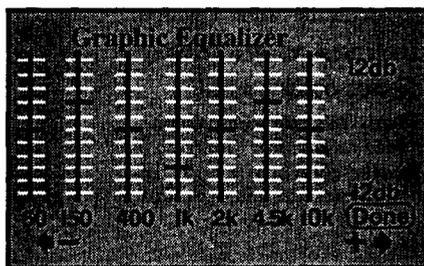
Rock



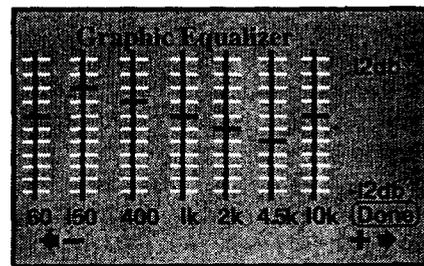
Background



Classical



Pops



60 Hz...Gives these low, "real" bass sounds more or less impact. This area is where many systems and/or programs are weak. Increasing this control can overcome such deficiencies, lowering it can reduce "muddiness".

150 Hz...Affects the loudness of bass. These mid-bass frequencies sound the loudest, and most systems reproduce them well. Increasing the control gives the bass more "punch", lowering it can help reduce "booming".

400 Hz...Affects the fullness of some instruments and lower vocals. Since this is the basic frequency range of music, increasing this control adds fullness to these sounds, reducing it makes them sound thinner.

1 kHz...Strongly affects the "forwardness" and "presence" of vocals and most instruments. Increasing this control can help project these sounds or make a vocalist easier to understand. Reducing it can soften strident music.

2 kHz...Strongly affects the harmonics (overtones) of voices and some instruments. This frequency is most easily heard by the ear. Increasing this control will project most instruments and vocals. Reducing it helps control brilliance and allows more subtle sounds in the other ranges to be heard.

4.5 kHz...Affects harmonics (overtones) of voices and some instruments, particularly brass and strings. Increasing this control makes these instruments and vocals sharper and brighter. Reducing it can help control excessively "lispy" vocals or shrill instruments.

10 kHz...Affects the highest, most delicate harmonics of some instruments such as strings and the overall content of others such as cymbals and drum snares. Increasing this control brings out this "crispness" in cymbals and "sweetness" in strings and gives the music "atmosphere". Reducing it can help control noise and hiss.

Your TV is fully capable of reproducing stereo sound from TV stations transmitting stereo sound in your area. Although you can adjust the stereo functions to only produce mono sound, you may prefer to leave the Mode: stereo/mono function set to Mode: stereo. That way your TV will automatically reproduce stereo or monaural sound, whichever is broadcast.

You can easily select STEREO by repeatedly pressing the SURR (surround) button on the master remote control. You can also select Stereo with the AUDIO MODE menu as shown below. Then you can use the STEREO SETUP menu to adjust the stereo functions to your personal preference.

Note: When stereo is being broadcasted and received, the word stereo appears in the channel number display area.

In some fringe viewing areas, the stereo signal may not be strong enough for quality reception. The signal may drift or the reproduction may become noisy. Should that occur, change the Mode: stereo/mono function in the STEREO SETUP menu to Mode: mono to receive clearer, cleaner sound.

Note: To put the TV in the mono mode, you must select Stereo in the AUDIO MODE menu. Then by pressing the MENU button you will automatically go to the AUDIO ADJUST menu and Setup will be highlighted. Then press the MENU button again to bring up the STEREO SETUP menu. Press the + or – button to highlight Mode: stereo and press the MENU button to change to Mode: mono.

To Select and Setup Stereo Mode with menus

1 Display the AUDIO MODE menu.

1 Press the MENU button to display the MAIN MENU.

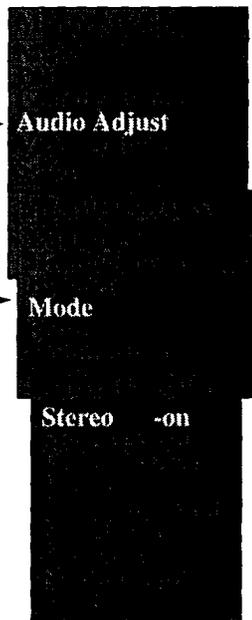
2 Press the + or – button to highlight the Audio Adjust function in white.

3 Then press MENU again to display the AUDIO ADJUST menu.

4 Press the + or – button to highlight the Mode function.

5 Then press MENU to display the AUDIO MODE menu.

Note: Only one mode can be turned on at a time. If Stereo is on, all other modes are off. To turn off a mode, you must turn on a different mode.



- 2 Make sure the Stereo mode is turned on (-on appears to the right of Stereo). If it is not on, press + or – to highlight Stereo and then press MENU.
- 3 Press MENU again to exit the AUDIO MODE menu and return to the AUDIO ADJUST menu. Setup will already be highlighted.
- 4 Press the MENU button to enter the STEREO SETUP menu.

Speakers: int

5 Adjust the STEREO SETUP menu to your personal preference. Press + or – to highlight the function.

- Press MENU when the Speakers: int/ext/off function is highlighted to select the TV's internal or optional external speakers. Set this function to Speakers: int (internal) to listen to the TV's built-in speakers. Set this function to Speakers: ext (external) if you have connected external speakers to the TV's EXTERNAL speaker connectors. Set this function to Speakers: off to turn off the internal and external speakers if connecting TV to your stereo system with its own set of speakers.
- Press MENU when Volume is highlighted to enter the VOLUME adjustment display. Press + to increase and – to decrease the TV's volume.

Note: If the VOLUME display stops before it is at full volume and the volume is not high enough, check the Volume limiter to see if it is set too low. *Details are on page 24.*

- Press MENU when the Balance function is highlighted to enter the BALANCE adjustment display. Then press + or – to adjust the left/right balance until the sound seems to originate from a point halfway between the speakers.
- Press MENU when the Mode: stereo/mono function is highlighted to select Mode: stereo or Mode: mono. Normally this function can be left set to Mode: stereo. Your TV will then automatically reproduce either stereo or monaural sound, whichever is broadcast.
- Press MENU when Done is highlighted to exit the STEREO SETUP menu.

Saving, Restoring, and Returning to Factory Settings

The TV will remember your settings—even when you turn it off. To prevent losing your personal settings because someone changes them accidentally, you can save them using the MEMORY MENU. After the settings have been saved, you can restore them at a later date using the MEMORY MENU. The MEMORY MENU also lets you easily restore the STEREO SETUP menu to its factory settings. *Details are on page 39.*

Your TV includes an expanded stereo feature which adds greater depth and dimension to stereo broadcasts. Your TV electronically increases the stereo image from the speakers so you perceive an “expanded” more spacious stereo sound effect. Stereo expansion enhances the ambience of music and program material. Dramatic effects of spatial enhancement can be experienced with music. Talk shows with background crowd noise also benefit from expansion by engulfing the listener in a wider sound field than would be experienced without expanded stereo. The effect will vary with program material.

The perception of a greater stereo image is created by cancelling the cross-coupled sound from the right speaker that arrives at the left ear (and the left speaker that arrives at the right ear). Like stereo headphones, stereo expansion isolates the left and right signals that arrive at the ears. As a result, the speakers seem to be farther away from the TV.

Although you can easily turn the expanded stereo feature on and off as desired, you may prefer to leave it turned on. That way your TV will automatically process and expand the stereo signals whenever a stereo broadcast is received (or whenever a stereo tape or laser disc is played through a stereo VCR or disc player connected to the TV’s audio/video jacks labeled INPUT).

You can easily select EXPANDED STEREO by repeatedly pressing the SURR (surround) button on the master remote control. You can also select Stereo expand with the AUDIO MODE menu as shown in the next column.

Notes: When stereo is being broadcast and received, the word stereo appears in the channel number display area.

The Stereo expand function will have no effect unless the program is broadcast in stereo.

Saving, Restoring, and Returning to Factory Settings

The TV will remember your settings—even when you turn it off. To prevent losing your personal settings because someone changes them accidentally, you can save them using the MEMORY MENU. After the settings have been saved, you can restore them at a later date using the MEMORY MENU. The MEMORY MENU also lets you easily restore the EXPD STEREO menu to its factory settings.

Details are on page 39.

To Select and Setup Stereo Expand Mode with menus

1 Display the AUDIO MODE menu.

1 Press MENU to display the MAIN MENU.

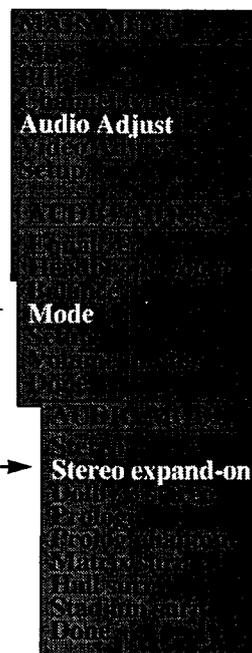
2 Press + or – to highlight the Audio Adjust function.

3 Then press MENU again to display the AUDIO ADJUST menu.

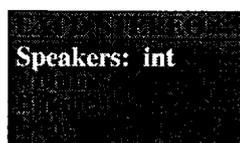
4 Press + or – to highlight Mode.

5 Press MENU to display the AUDIO MODE menu.

6 Press + or – to highlight Stereo expand-on expand. Then press MENU to turn it on.



2 Press the + or – button to highlight Done, and then press MENU to exit the AUDIO MODE menu and return to the AUDIO ADJUST menu. Setup will already be highlighted. Press the MENU button again to enter the EXPD STEREO menu.



- 3 Adjust the EXPD STEREO menu to your personal preference. Press + or – to highlight the function.
- Press MENU when the Speakers: int/ext/off function is highlighted to select the TV’s internal or optional external speakers. Set this function to Speakers: int (internal) to listen to the TV’s built-in speakers. Set this function to Speakers: ext (external) if you have connected external speakers to the TV’s EXTERNAL speaker connectors. Set this function to Speakers: off to turn off the internal and external speakers if connecting TV to your stereo system with its own set of speakers.
 - Press MENU when Volume is highlighted to enter the VOLUME adjustment display. Press + to increase and – to decrease the TV’s volume.

Note: If the VOLUME display stops before it is at full volume and the volume is not high enough, check the Volume limiter to see if it is set too low. *Details are on page 24.*
 - Press MENU when the Balance function is highlighted to enter the BALANCE adjustment display. Then press + or – to adjust the left/right balance until the sound seems to originate from a point halfway between the speakers.
 - Press MENU when Done is highlighted to exit the EXPD STEREO menu.

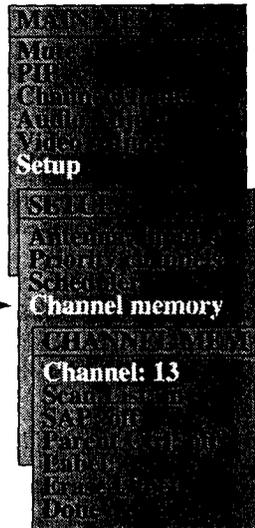
Some TV stations that broadcast stereo also broadcast another audio program called SAP. SAP stands for Second Audio Program and is sometimes used to broadcast a second audio track for a bilingual movie.

In order to receive SAP broadcasts you must first turn on the SAP function for each channel you want to receive SAP. To turn on SAP follow the steps below.

Selecting SAP Audio

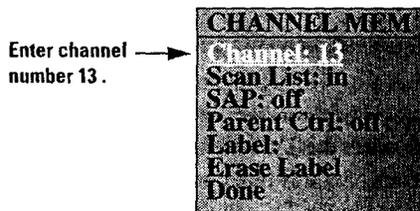
1 Display the CHANNEL MEM (memory) menu.

- 1 Press the MENU button to display the MAIN MENU.
- 2 Press the + or - button to highlight the Setup function in white.
- 3 Then press MENU again to display the SETUP menu.
- 4 Press the + or - button to highlight the Channel memory function.
- 5 Then press MENU to display the CHANNEL MEM (memory) menu.

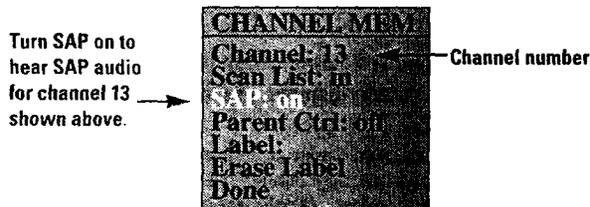


2 Select the channel you want to hear SAP on. Press the MENU button to underline the Channel function. Then press + to enter a higher channel or - to enter a lower channel. Press the MENU button again to exit the Channel function by removing the underline.

Note: The channel you are currently tuned to will automatically appear in the Channel function.



3 Turn SAP on or off for selected channel. Press the + or - button to highlight the SAP: off/on function. Press the MENU button to select SAP: on or SAP: off.



4 Press the + or - button to highlight Done, and then press MENU to exit the CHANNEL MEM menu.

Notes: To hear SAP you must select each channel individually and turn on SAP. Although SAP is transmitted with the stereo signal, it is not broadcast in stereo. That means SAP audio will be monaural sound.

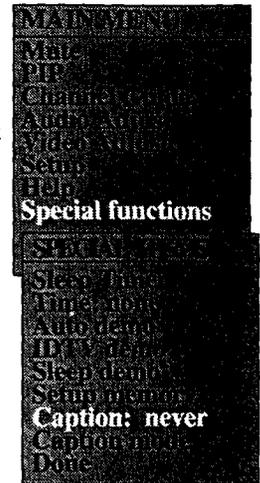
When SAP is turned on for a channel, you will only hear the SAP audio for that channel whenever SAP is broadcast. If SAP is not broadcast, you will hear normal audio.

Closed Captioning lets you display the audio portion of a program as text on the TV screen. This is useful to the hearing impaired or anyone who wants to watch a program without the sound. Eight types of closed captioning are available: CC1, CC2, CC3, CC4, Text1, Text2, Text3, and Text4.

Selecting when Closed Captioning is displayed

1 Display the SPECIAL ITEMS menu.

- 1 Press the MENU button to display the MAIN MENU.
- 2 Press the + or - button to highlight Special functions in white.
- 3 Then press MENU again to display the SPECIAL ITEMS menu.
- 4 Press the + or - button to highlight the Caption function.
- 5 Then press MENU to cycle between NEVER, ALWAYS, and ON MUTE.

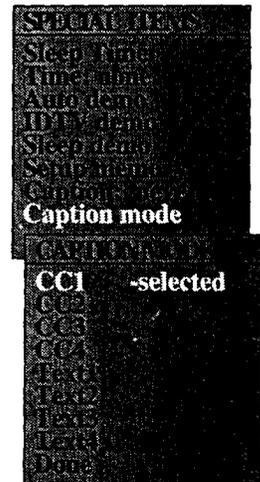


2 Select NEVER to keep captioning turned off. Select ALWAYS to always show captioning when available. Select ON MUTE to show captioning only when the TV sound has been muted.

Selecting the Closed Captioning Mode

1 Display the SPECIAL ITEMS menu.

- 1 Follow steps 1-3 above to display the SPECIAL ITEMS menu.
- 2 Press the + or - button to highlight the Caption mode function.
- 3 Then press MENU to display the CAPTION MODE menu.
- 4 Press the + or - button to highlight the Caption mode you want to use.
- 5 Press the MENU button to select the captioning mode you want to use.



2 Select CC1 for complete text of the primary language in your area. Select CC3 for secondary language translation or simplified English, depending on which type is available in your area. Select CC2 or CC4 for captioning not necessarily in the same time frame as the sound from the program. Several second delays are typical for CC2 and CC4. Text modes; Text1, Text2, Text3 and Text4, display on-screen boxes containing general information not related to the audio portion of the program.

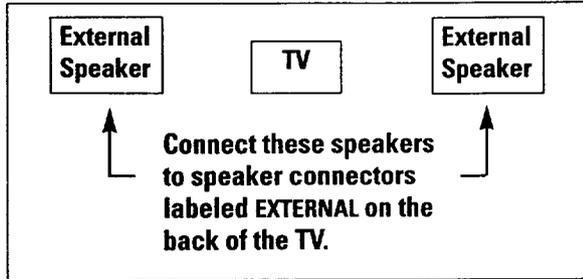
3 Press the + or - button to highlight Done, and then press MENU to exit the CAPTION MODE menu.

Notes: Closed Captioning (CC) is not available on all channels at all times. The Text modes are also not available at all times on all channels.

Dolby 3 Stereo Mode (AUDIO ADJUST Menu)

The Dolby 3 stereo mode actively decodes Dolby* surround encoded audio to provide left, right, and center channel sound. The center channel makes the actor's voice appear to come from the TV screen regardless of where you are sitting in the room. To hear Dolby 3 stereo, you must attach right and left front speakers to the EXTERNAL speaker terminals on the back of the TV.

General Recommended Speaker Placement for Best Dolby 3 Stereo Sound

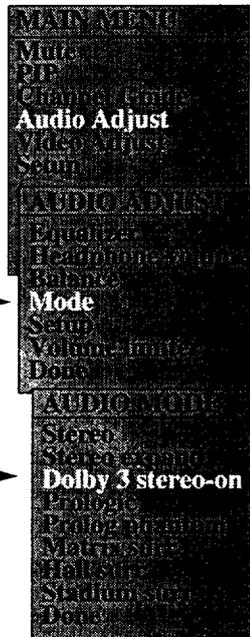


You can easily select DOLBY 3 STEREO by repeatedly pressing the SURR (surround) button on the master remote control. You can also select Dolby 3 stereo with the AUDIO MODE menu as shown below. Then you can use the DOLBY 3 SETUP menu to adjust the functions to your personal preference.

Note: Dolby 3 stereo works best with Dolby surround encoded material, but will produce clearer dialog and better stereo imaging even on normal stereo material.

Selecting Dolby 3 Stereo Mode

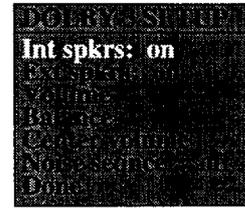
- 1 Connect external speakers to the EXTERNAL speaker connectors on the back of the TV. *Details on connecting speakers are on page 72.* Position the speakers to the right and left of the TV as shown above.
- 2 Display the AUDIO MODE menu and select Dolby 3 stereo.
 - 1 Press MENU to display the MAIN MENU.
 - 2 Press + or - to highlight the Audio Adjust function in white. →
 - 3 Press MENU again to display AUDIO ADJUST menu.
 - 4 Press the + or - button to highlight Mode. →
 - 5 Then press MENU to display the AUDIO MODE menu.
 - 6 Press + or - to highlight Dolby 3 stereo. Press MENU to turn Dolby 3 stereo on. →
 - 7 Press MENU again to exit the AUDIO MODE menu and return to the AUDIO ADJUST menu. Setup will already be highlighted.



**"Dolby" and the double-D symbol are trademarks of Dolby Laboratories Licensing Corporation.

Manufactured under license from Dolby Laboratories Licensing Corporation. Additionally licensed under one or more of the following patents: U.S. numbers 3,632,886, 3,746,792 and 3,959,590; Canadian numbers 1,004,603 and 1,037,877.

- 3 Press the MENU button to enter the DOLBY 3 SETUP menu.



- 4 Adjust the DOLBY 3 SETUP menu to your personal preference. Press + or - to highlight the function.
 - Press MENU when the Int spkrs: (internal speakers) on/off function is highlighted to turn the internal speakers on or off. Leave the Int spkrs function set to Int spkrs: on if you want to hear the sound from the TV's internal speakers which produce the center channel sound.
 - Press MENU when the Ext spkrs: (external speakers) on/off function is highlighted to turn the external right and left speakers on or off. Leave the Ext spkrs function set to Ext spkrs: on if you want to hear the sound from the speakers connected to the EXTERNAL speaker connectors.
 - Press MENU when Volume is highlighted to enter the VOLUME adjustment display. Press + to increase or - to decrease the TV's volume. This volume control raises and lowers the volume of the internal and external speakers.

Note: If the VOLUME display stops before it is at full volume and the volume is not high enough, check the Volume limiter to see if it is set too low. *Details are on page 24.*
 - Press MENU when the Balance function is highlighted to enter the BALANCE adjustment display. Then press + or - to adjust the left/right balance until the sound seems to originate from a point halfway between the speakers.
 - Press MENU when Center volume is highlighted to enter the CENTER VOLUME adjustment display. Press + to increase the volume from the center channel or - to decrease the volume from the center channel.
 - Press MENU when Noise seqncer (sequencer): on/off is highlighted to select either Noise seqncer: on or off. The noise sequencer supplies audio noise to each audio channel (left, right, and center) one at a time. This allows you to check and adjust the volume level and balance to each channel, as well as check to see if all the speakers are working correctly.
 - Press MENU when Done is highlighted to exit the DOLBY 3 SETUP menu.

Note: The TV has a built-in help screen for Dolby 3 stereo. To use the help screen press the MENU button to display the MAIN MENU and then press + or - to highlight Help. Then press the MENU button again to display the HELP MENU. After the HELP MENU is displayed, press + or - to highlight Audio Adjust and then press the MENU button. Now follow the instructions on the TV screen.

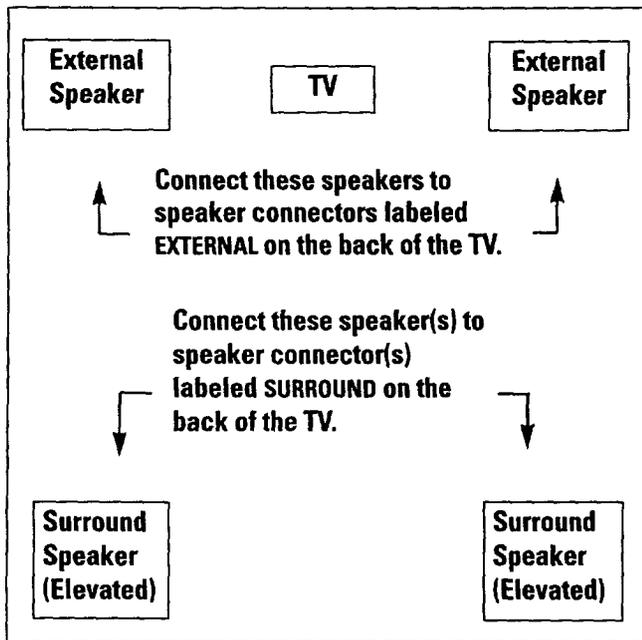
Saving, Restoring, and Returning to Factory Settings

The TV will remember your settings—even when you turn it off. To prevent losing your personal settings because someone changes them accidentally, you can save them using the MEMORY MENU. After the settings have been saved, you can restore them at a later date using the MEMORY MENU. The MEMORY MENU also lets you easily restore the DOLBY 3 SETUP menu to its factory settings. *Details are on page 39.*

Prologic Mode (AUDIO ADJUST Menu)

The Prologic mode actively decodes Dolby surround encoded audio to provide left, right, center, and rear channel sound. The center channel makes the actor's voice appear to come from the TV screen regardless of where you are sitting in the room. Prologic electronically decodes the predominant sounds at a given time and automatically emphasizes that channel's volume. To hear prologic audio you will need to connect external right, left, and surround speaker(s).

General Recommended Speaker Placement for Best Dolby Prologic* Sound



You can easily select PROLOGIC by repeatedly pressing the SURR (surround) button on the master remote control. You can also select Prologic with the AUDIO MODE menu as shown in the next column. Then you can use the PROLOGIC SETUP menu to adjust the functions to your personal preferences.

Note: The TV has a built-in help screen for Prologic. To use the help screen press the MENU button to display the MAIN MENU and then press + or - to highlight Help. Then press the MENU button again to display the HELP MENU. After the HELP MENU is displayed, press + or - to highlight Audio Adjust and then press the MENU button. Now follow the instructions on the TV screen.

*"Dolby" and the double-D symbol are trademarks of Dolby Laboratories Licensing Corporation.
Manufactured under license from Dolby Laboratories Licensing Corporation.

Additionally licensed under one or more of the following patents: U.S. numbers 3,632,886, 3,746,792 and 3,959,590; Canadian numbers 1,004,603 and 1,037,877.

Selecting Prologic Mode

1 Connect external speakers to the EXTERNAL speaker connectors and connect the surround speaker(s) to the SURROUND speaker connector(s) on the back of the TV. *Details on connecting speakers are on pages 72-73.* Position the speakers as shown in the previous column.

2 Display the AUDIO MODE menu.

1 Press the MENU button to display the MAIN MENU.

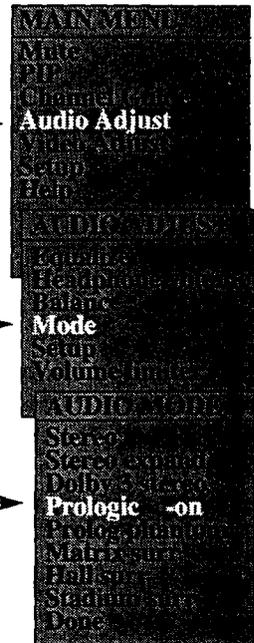
2 Press the + or - button to highlight the Audio Adjust function in white.

3 Then press MENU again to display the AUDIO ADJUST menu.

4 Press the + or - button to highlight Mode.

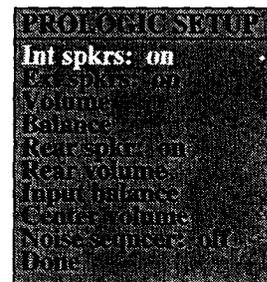
5 Then press MENU to display the AUDIO MODE menu.

6 Press + or - to highlight Prologic, then press MENU to turn Prologic -on.



3 Press MENU again to exit the AUDIO MODE menu and return to the AUDIO ADJUST menu. Setup will already be highlighted.

4 Press the MENU button to enter the PROLOGIC SETUP menu.



5 Adjust the PROLOGIC SETUP menu to your personal preference. Press + or - to highlight the function.

- Press MENU when the Int spkrs (internal speakers): on/off function is highlighted to turn the center speaker sound on or off. Leave the Int spkrs function on if you want to hear the sound from the TV's internal speakers which produce the center channel sound.

- Press MENU when the Ext spkrs (external speakers): on/off function is highlighted to select either Ext spkrs: on or Ext spkrs: off. Leave this function set to Ext spkrs: on if you want to hear the sound from the front external speakers connected to the EXTERNAL speaker jacks.

- Press MENU when Volume is highlighted to enter the VOLUME adjustment display. Press + to increase or – to decrease the TV's volume. This volume control raises and lowers the volume of the internal, external, and surround speakers.
Note: If the VOLUME display stops before it is at full volume and the volume is not high enough, check the Volume limiter to see if it is set too low. *Details are on page 24.*
- Press MENU when the Balance function is highlighted to enter the BALANCE adjustment display. Then press + or – to adjust the left/right balance until the sound seems to originate from a point halfway between the speakers.
Note: The balance control will not affect the audio from the surround speakers.
- Press MENU when Rear spkrs (speakers): on/off function is highlighted to select Rear spkrs: on or Rear spkrs: off. Leave this function set to Rear spkrs: on to hear sound from the rear (surround) speakers.
- Press MENU when Rear volume is highlighted to enter the REAR VOLUME adjustment display. Press + to increase the volume from the rear surround speakers or – to decrease the surround speaker volume.
- Press MENU when the Input balance function is highlighted to enter the INPUT BALANCE display. The INPUT BALANCE display is used to balance the left and right audio signals coming into the set for optimum surround sound performance. Most of the time you will want to leave this at mid scale. If the sound coming from your surround sound speaker(s) has a lot of voices (instead of mostly background ambience), you may want to adjust the INPUT BALANCE display to minimize the voices. With the INPUT BALANCE display on the TV screen, press the + and – buttons to move to the right and to the left of the scale. Stop at the point where voices are minimal in the surround speaker(s).
Note: When adjusting the INPUT BALANCE, the front speakers will automatically be muted. This allows you to hear only the sound from the rear surround speakers. Adjust the sound to minimize voices and to give mostly background ambience.
- Press MENU when Center volume is highlighted to enter the CENTER VOLUME adjustment display. Press + to increase the volume from the center channel or – to decrease the volume from the center channel.
- Press MENU when Noise seqncr (sequencer): on/off is highlighted to select either Noise seqncr: on or off. The noise sequencer supplies audio noise to each audio channel (left, right, center, and surround) one at a time. This allows you to check and adjust the volume level and balance to each channel as well as check to see if all the speakers are working correctly.
- Press MENU when Done is highlighted to exit the PROLOGIC SETUP menu.

Saving, Restoring, and Returning to Factory Settings

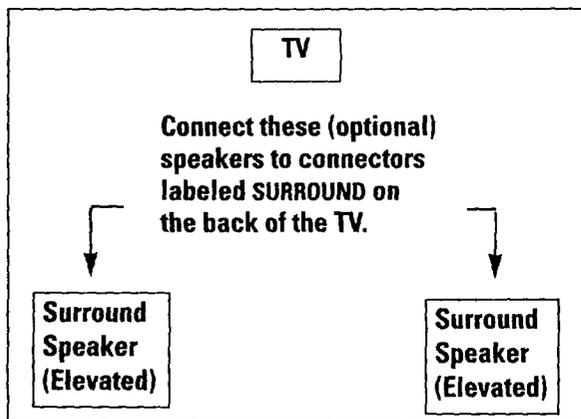
The TV will remember your settings—even when you turn it off. To prevent losing your personal settings because someone changes them accidentally, you can save them using the MEMORY MENU. After the settings have been saved, you can restore them at a later date using the MEMORY MENU. The MEMORY MENU also lets you easily restore the PROLOGIC SETUP menu to its factory settings. *Details are on page 39.*

Prologic Phantom Mode

Prologic phantom mode is the prologic mode to use if you have external surround speaker(s) connected to the SURROUND connector(s) on the back of the TV, but no front right and left external speakers connected. It uses the Prologic decoder, but splits the center channel between the left and right channels. It then uses the TV's internal speakers for the right, left, and center audio.

Note: Prologic phantom works best with Dolby surround encoded material, but will produce clearer dialog and better stereo imaging even on normal stereo material.

General Recommended Speaker Placement for Best Prologic Phantom Audio



You can easily select PHANTOM PROLOGIC by repeatedly pressing the SURR (surround) button on the master remote control. You can also select Prologic phantom with the AUDIO MODE menu *in the next column*. Then you can use the PHANTOM SETUP menu to adjust the functions to your personal preferences.

Note: The TV has a built-in help screen for Prologic phantom. To use the help screen, press the MENU button to display the MAIN MENU and then press + or - to highlight Help. Then press the MENU button again to display the HELP MENU. After the HELP MENU is displayed, press + or - to highlight Audio Adjust and then press the MENU button. Now follow the instructions on the TV screen.

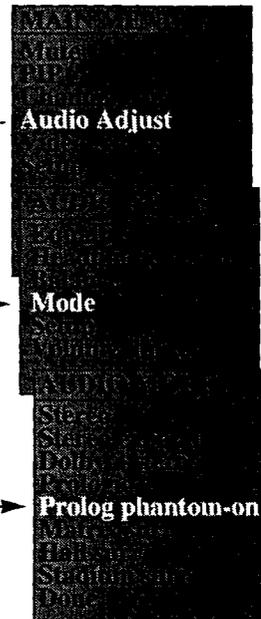
Selecting Prologic Phantom Mode with menus

- 1 Connect surround speaker(s) to the SURROUND speaker connector(s) on the back of the TV. *Details on connecting speakers are on pages 72-73.* Position the speakers as shown.

- 2 Display the AUDIO MODE menu.

- 1 Press MENU to display the MAIN MENU.

- 2 Press + or - to highlight the Audio Adjust function in white.



- 3 Then press MENU again to display the AUDIO ADJUST menu.

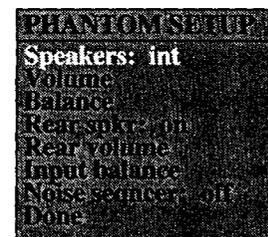
- 4 Press + or - to highlight the Mode function.

- 5 Then press MENU to display the AUDIO MODE menu.

- 6 Press + or - to highlight the Prolog phantom mode. Then press MENU to turn Prolog phantom-on.

- 3 Press MENU again to exit the AUDIO MODE menu and return to the AUDIO ADJUST menu. Setup will already be highlighted.

- 4 Press the MENU button to enter the PHANTOM SETUP menu.



- 5 Adjust the PHANTOM SETUP menu to your personal preference. Press + or - to highlight the function.

- Press MENU when the Speakers: int/ext/off function is highlighted to select which speakers you want to hear the sound from (internal or external). If you have external front speakers connected, you may select Speakers: ext. If you have not connected external speakers, select Speakers: int. Select Speakers: off to turn off the internal and external speakers.

- Press MENU when Volume is highlighted to enter the VOLUME adjustment display. Press + to increase or – to decrease the TV’s volume. This volume control raises and lowers the volume of the internal, external, and surround speakers.
Note: If the VOLUME display stops before it is at full volume and the volume is not high enough, check the Volume limiter to see if it is set too low. *Details are on page 24.*
- Press MENU when the Balance function is highlighted to enter the BALANCE adjustment display. Then press + or – to adjust the left/right balance until the sound seems to originate from a point halfway between the speakers.
- Press MENU when Rear spkr (speaker): on/off function is highlighted to select either Rear spkr: on or Rear spkr: off. Leave this function set to Rear spkr: on to hear sound from the rear (surround) speaker(s).
- Press MENU when Rear volume is highlighted to enter the REAR VOLUME adjustment display. Press + to increase the volume from the rear surround speaker(s) or – to decrease the volume from the rear surround speaker(s).
- Press MENU when the Input balance function is highlighted to enter the INPUT BALANCE display. The INPUT BALANCE display is used to balance the left and right audio signals coming into the set for optimum surround sound performance. Most of the time you will want to leave this at mid scale. If the sound coming from your surround sound speaker(s) has a lot of voices (instead of mostly background ambience), you may want to adjust the INPUT BALANCE display to minimize the voices. With the INPUT BALANCE display on the TV screen, press the + and – buttons to move to the right and to the left of the scale. Stop at the point where voices are minimal in the surround speaker(s).
Note: When adjusting the INPUT BALANCE, the front speakers will automatically be muted. This allows you to hear only the sound from the rear surround speakers. Adjust the sound to minimize voices and to give mostly background ambience.
- Press MENU when Noise seqncer (sequencer): on/off is highlighted to select either Noise seqncer: on or off. The noise sequencer supplies audio noise to each audio channel (left, right, center, and surround) one at a time. This allows you to check and adjust the volume level and balance to each channel as well as check to see if all the speakers are working correctly.
- Press MENU when Done is highlighted to exit the PHANTOM SETUP menu.

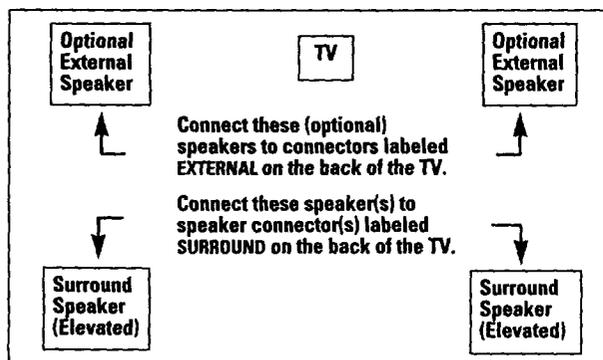
Saving, Restoring, and Returning to Factory Settings

The TV will remember your settings—even when you turn it off. To prevent losing your personal settings because someone changes them accidentally, you can save them using the MEMORY MENU. After the settings have been saved, you can restore them at a later date using the MEMORY MENU. The MEMORY MENU also lets you easily restore the PHANTOM SETUP menu to its factory settings. *Details are on page 39.*

Matrix, Hall and Stadium Surround Sound Modes (AUDIO ADJUST Menu)

These modes provide surround sound generation and require rear speakers. There are three surround modes to choose from. Matrix surround simulates surround sound from a mono broadcast. Hall surround provides surround sound from a stereo signal, and stadium surround delays the rear sound longer than hall surround which gives you the feeling of being in a larger area.

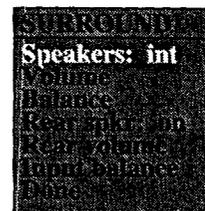
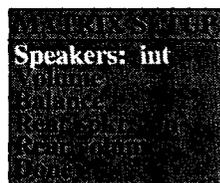
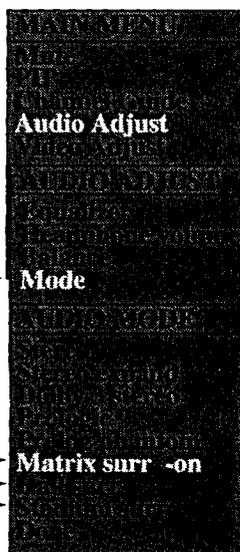
General Recommended Speaker Placement for Best Surround Sound Audio



You can easily select MATRIX SURROUND, HALL SURROUND, or STADIUM SURROUND by repeatedly pressing the SURR (surround) button on the master remote control. You can also select Matrix, Hall, or Stadium surr with the AUDIO MODE menu as shown below. Then you can use the SURROUND SETUP menu to adjust the functions to your personal preferences.

Selecting Matrix Surr, Hall Surr, or Stadium Surr Modes

- 1 Connect (optional) external speakers to the EXTERNAL speaker connectors and surround speaker(s) to the SURROUND connector(s) on the back of the TV. *Details on connecting speakers are on pages 72-73.*
- 2 Display the AUDIO MODE menu.
 - 1 Press MENU to display the MAIN MENU.
 - 2 Press + or – to highlight the Audio Adjust function in white.
 - 3 Then press MENU again to display the AUDIO ADJUST menu.
 - 4 Press the + or – button to highlight the Mode function.
 - 5 Then press MENU to display the AUDIO MODE menu.
 - 6 Press + or – to highlight Matrix surr, Hall surr, or Stadium surr mode. Then press MENU to turn on whichever mode is highlighted.
- 3 Press MENU again to exit the AUDIO MODE menu and return to the AUDIO ADJUST menu. Setup will already be highlighted.
- 4 Press the MENU button to enter the setup menu for the surround mode you have selected. If you have selected matrix surround the setup menu is titled MATRIX SETUP. If you have selected hall or stadium surround the setup menu is titled SURROUND.



- 5 Adjust the setup menu to your personal preference. Press + or – to highlight the function.

- Press MENU when the Speakers: int/ext/off function is highlighted to change the setting between Speakers: int (internal), ext (external), or off. Select Speakers: int to hear sound from the TV's internal speakers. Select Speakers: ext if you have external front speakers and you want to hear the sound from them instead of the internal speakers. Select Speakers: off if you do not want any sound from the internal or external front speakers.
- Press MENU when Volume is highlighted to enter the VOLUME display. Press + to increase or – to decrease the TV's volume. This volume control raises and lowers the volume of the internal, external, and surround speakers.

Note: If the VOLUME display stops before it is at full volume and the volume is not high enough, check the Volume limiter to see if it is set too low. *Details are on page 24.*

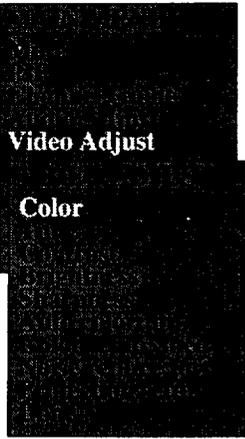
- Press MENU when the Balance function is highlighted to enter the BALANCE adjustment display. Then press + or – to adjust the left/right balance until the sound seems to originate from a point halfway between the speakers.
- Press MENU when Rear spkr (speaker): on/off function is highlighted to select either Rear spkr: on or Rear spkr: off. Leave this function set to Rear spkr: on to hear surround sound.
- Press MENU when Rear volume is highlighted to enter the REAR VOLUME adjustment display. Press + to increase the volume from the rear surround speakers or – to decrease the volume from the rear surround speakers.
- Press MENU when the Input balance function is highlighted to enter the INPUT BALANCE display. The INPUT BALANCE display is used to balance the left and right audio signals coming into the set for optimum surround sound performance. Most of the time you will want to leave this at mid scale. If the sound coming from your surround sound speaker(s) has a lot of voices (instead of mostly background ambience), you may want to adjust the INPUT BALANCE display to minimize the voices. With the INPUT BALANCE display on the TV screen, press the + and – buttons to move to the right and to the left of the scale. Stop at the point where voices are minimal in the surround speaker(s).
- Press MENU when Done is highlighted to exit the setup menu.

Saving, Restoring, and Returning to Factory Settings

The TV will remember your settings—even when you turn it off. To prevent losing your personal settings because someone changes them accidentally, you can save them using the MEMORY MENU. After the settings have been saved, you can restore them at a later date using the MEMORY MENU. The MEMORY MENU also lets you easily restore the MATRIX SETUP or SURROUND setup menu to its factory settings. *Details are on page 39.*

VIDEO ADJUST Menu

- 1 Press **MENU** to display the **MAIN MENU**.
- 2 Repeatedly press **+** or **-** to highlight the **Video Adjust** function. →
- 3 Press **MENU** to display **VIDEO ADJUST** menu.
- 4 Press the **+** or **-** button to highlight the function you want to adjust, then press **MENU** to enter the adjustment display. Press **+** or **-** to adjust it. Press **MENU** to return to the **VIDEO ADJUST** menu.



Video Adjust
Color

Pressing the **-** button moves the highlight down the TV screen (one item per press).

Pressing the **+** button moves the highlight up the TV screen (one item per press).

Pressing the **MENU** button when a function is highlighted allows you to enter or adjust that function.

After a few seconds, the **VIDEO ADJUST** menu will disappear from the screen if no button is pressed. To exit the menu quickly, highlight **Done** and then press **MENU** (or press the **CLEAR** button on the master remote control).

Color adjusts the amount of color in the picture. Press **+** to increase color or press **-** to decrease color.

Tint adjusts the color of flesh tones. Press **+** to add more red tint or press **-** to add more green tint.

Contrast adjusts the overall brightness and contrast of the picture. Press **+** to increase contrast or press **-** to decrease contrast.

Brightness adjusts the brightness of the dark portions of the picture. Press **+** to increase brightness or press **-** to decrease brightness.

Sharpness adjusts picture sharpness. Press **+** to increase sharpness or press **-** to decrease sharpness.

The **Auto color: on/off** function allows you to select either **Auto color: on** or **Auto color: off**. When **Auto color: on** is selected, the TV will minimize the differences in color and fleshtones that normally occur due to program variations. Press **+** or **-** to select either **Auto color: on** or **Auto color: off**.

The **Color temp (temperature): cool/med/warm** function lets you adjust the blue and red hues of the overall picture to your personal preference. Press **+** or **-** to change.

The **Noise reduce: low/med/high** function allows you to remove some of the picture noise caused by a weak signal. You can select how much noise reduction you need (low, medium, or high). Try each one and select the one that gives you the cleanest and clearest picture.

The **Projection setup** function allows you to adjust the TV's **CONVERGENCE** menu. *For details see page 5.*

Highlight **Done** and press **MENU** to exit the **VIDEO ADJUST** menu.

Adjusting for a Color Picture that Pleases You

- 1 Decrease color to minimum. This will leave a black-and-white image on the screen.
- 2 Adjust contrast until the picture pleases you.
- 3 Adjust brightness until the black parts of the picture appear black. You may need to wait until the picture shows something you are sure is black. Be careful not to lose the details in darkly shaded areas.
- 4 Increase color until you reach a pleasing level of intensity.
- 5 Adjust tint until flesh tones or other color objects appear natural.
- 6 Adjust sharpness for a pleasing level of picture sharpness. (For weak signals, the picture may be more pleasing with sharpness decreased.)
- 7 Set the **Auto color**, **Color temp**, and **Noise reduce** features to your personal preference.

Caution: When using TV games, computers, and similar products with your TV, keep the contrast function at a low setting. If a fixed (non-moving) pattern is left on the screen for long periods of time at a high contrast setting, the image can be permanently imprinted onto the picture tubes. These types of imprints are not covered by your warranty because they are the result of misuse.

Saving, Restoring, and Returning to Factory Video Settings

The TV will remember your settings—even when you turn it off. To prevent losing your personal settings because someone changes them accidentally, you can save them using the **MEMORY MENU**. The settings for color, tint, contrast, brightness, and sharpness will be saved. After the settings have been saved, you can restore them at a later date by using the **MEMORY MENU**. The **MEMORY MENU** also lets you easily restore the video functions to their factory settings. *Details are on page 38.*

MEMORY MENU (Video)

After setting the video functions to your personal preference *as described on page 37*, you can use the MEMORY MENU to save and restore them. This is helpful in case someone changes them accidentally.

The MEMORY MENU also lets you restore the color, tint, contrast, brightness, and sharpness settings to their factory settings.

To Save and Restore Your Personalized Video Settings with menus

1 Display the MEMORY MENU.

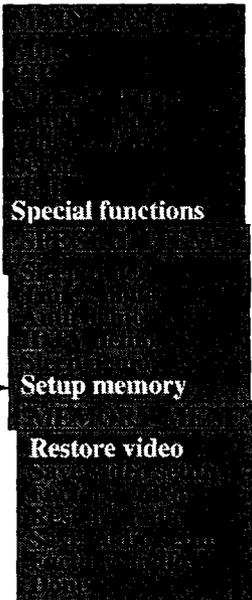
1 Press MENU to display the MAIN MENU.

2 Press + or - to highlight Special functions in white.

3 Then press MENU again to display the SPECIAL ITEMS menu.

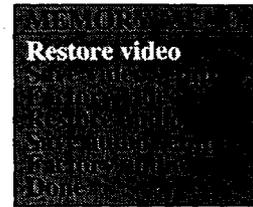
4 Press + or - to highlight the Setup memory function.

5 Then press MENU to display the MEMORY MENU.



3 To Restore Your Personalized Settings: Press the + or - button to highlight the Restore video function. Then press the MENU button to restore color, tint, contrast, brightness, and sharpness to the settings you previously saved with the Save video setup function. The word RESTORED will appear on the TV screen.

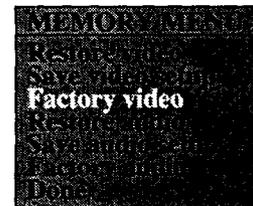
Press MENU to restore video to the settings you previously saved.



To Restore Factory Video Settings with menus

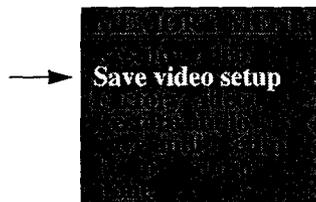
1 Display the MEMORY MENU. Press the + or - button to highlight the Factory video function. Then press MENU to restore the color, tint, contrast, brightness, and sharpness functions to their original factory settings. The word RESTORED will appear on the TV screen.

Press MENU to restore factory video settings.



2 To Save Your Personalized Settings: Press the + or - button to highlight the Save video setup function. Then press the MENU button to save your settings for color, tint, contrast, brightness, and sharpness. The word STORED appears on the TV screen while the settings are being stored in memory.

Press MENU to save video settings.



MEMORY MENU (Audio)

After setting the audio functions on the STEREO, EXPD (expanded) STEREO, DOLBY 3, PROLOGIC, PHANTOM, MATRIX, OR SURROUND SETUP menus to your personal preference *as described on pages 28-36*, you can use the MEMORY MENU to save them. This is helpful in case someone changes them accidentally.

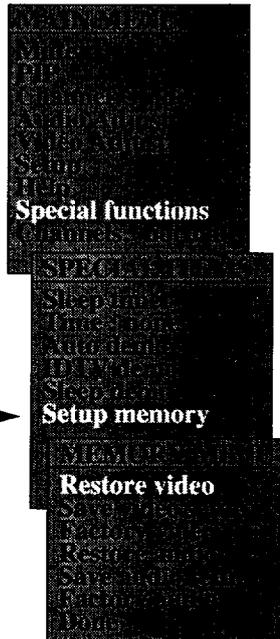
To save and restore your settings, use the MEMORY MENU as shown below.

The MEMORY MENU also lets you easily restore the settings to their factory settings.

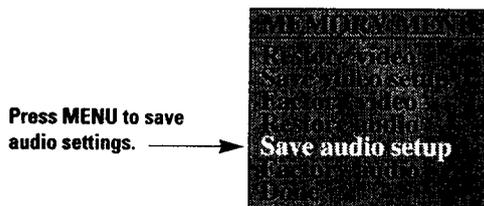
To Save and Restore Your Audio Settings with menus

1 Display the MEMORY MENU.

- 1 Press MENU to display the MAIN MENU.
- 2 Press + or – to highlight Special functions in white.
- 3 Then press MENU again to display the SPECIAL ITEMS menu.
- 4 Press + or – to highlight the Setup memory function.
- 5 Then press MENU to display the MEMORY MENU.



- 2 **To Save Your Personalized Settings:** Press the + or – button to highlight the Save audio setup function. Then press the MENU button to save your settings. The word STORED appears on the TV screen while the settings are being stored in memory.



- 3 **To Restore Your Personalized Settings:** Press the + or – button to highlight the Restore audio function. Then press the MENU button to restore the audio to the settings you previously saved with the Save audio setup function. The word RESTORED will appear on the TV screen.

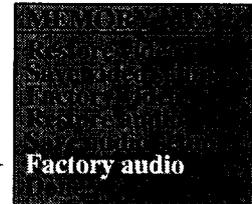
Press MENU to restore audio to the settings you previously saved. →



To Restore Factory Audio Settings with menus

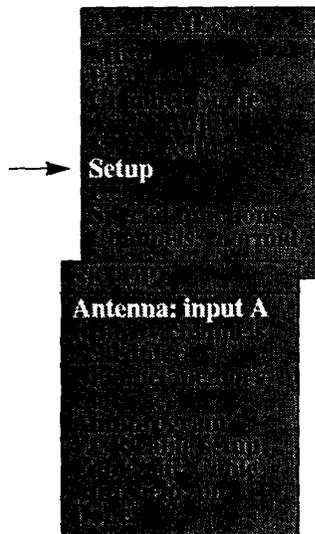
- 1 Display the MEMORY MENU. Press the + or – button to highlight the Factory audio function. Then press MENU to restore the audio setup functions to their original factory settings. The word RESTORED will appear on the TV screen.

Press MENU to restore audio setup functions to factory settings. →



SETUP Menu: Basic Functions

- 1 Press the MENU button to display the MAIN MENU.
- 2 Repeatedly press the + or – button to highlight Setup in white.
- 3 Press the MENU button again to display the SETUP menu.



Repeatedly press the – button to move the highlight down (one item per press).

Repeatedly press the + button to move the highlight up (one item per press).

Press the MENU button again to enter or adjust the highlighted function.

After a few seconds, the SETUP menu will disappear from the screen if no button is pressed. To exit the menu quicker, highlight Done and then press MENU (or press the CLEAR button on the master remote control).

Antenna: input A/B: Your TV has two separate antenna inputs on the back labeled ANT A and ANT B. Two different signal sources, such as a home antenna and cable-TV system, can both be connected. To switch between the two antennas, press the MENU button when Antenna: input A/B function is highlighted to switch between the two antennas. *Details are on the next page.*

Priority channels allow you to create a separate channel memory scan list consisting of up to six of your favorite channels. When the Channels: normal/priority function in the MAIN MENU is set to priority, pressing the CHANNEL UP or down button will only scan through the favorite channels you entered in the PRIORITY CHAN (channel) menu. *Details are on page 42.*

Scheduler allows you to program your TV with up to three separate programs. It will turn on automatically, tune to a specified channel, and turn off automatically. You can select once to run the scheduler only one time or you can select rpt. (repeat) weekly to run the scheduler every week at the same time. The program will play only once or repeat every week at the same time. Press the MENU button when Scheduler is highlighted to display the SCHEDULER menu. *Details are on pages 44-45.*

The **Channel memory** function allows you to add or erase channels from the channel memory scan list, turn SAP on or off, turn parental control on or off, and add or erase channel labels. *Details are on pages 30 and 47-50.*

The **Clock set** function allows you to set the clock and day of the week. The time and day-of-the-week display will then appear on the TV screen whenever you turn on the TV, change channels, or press the TV or DISPLAY button on the master remote control. *Details are on page 7.*

Autoprogram commands the TV to automatically cycle through all channels and place only active channels in the channel memory scan list. The TV will then only stop on the channels in the scan list when you press the CHANNEL up or down button. *Details are on page 46.*

VCR/cable setup lets you program which channel the TV will automatically tune when you press the VCR1, VCR2, or CABLE button. *Details are on page 43.*

The **Cable/air** function tells your TV whether you have a cable-TV system or home antenna (air) connected to the antenna inputs. Your TV is so automatic that you will probably never need to change this function. When your TV autoprograms, it automatically adjusts the Cable/air function for you. If you ever need to override the automatic setting, press the MENU button while the Cable/air function is highlighted to change it.

The **Auto help: on/off** function lets you turn on or turn off the help messages that appear on the bottom of the screen whenever a menu is displayed. Press the MENU button when the Auto help function is highlighted to turn the help messages on or off. *Details are on page 4.*

Changing Antenna Input (SETUP Menu)

Your TV has two separate antenna inputs on the back (labeled ANT A and ANT B) that allow you to connect two different signal sources if desired. For example, you can connect a cable-TV system to one input and a home antenna to the other input.

By pressing the ANT (antenna) button on the remote control, you can switch back and forth between the two signal sources.

Listed below are some other common uses of the two antenna inputs:

- 1 Connecting a cable-TV system (or antenna) to one input and a VCR to the other.
- 2 Connecting a cable-TV system (or antenna) to one input and a video game to the other.

Caution: When using TV games, computers, and similar products with your TV, keep the contrast function at a low setting. If a fixed (non-moving) pattern is left on the screen for long periods of time at a high contrast setting, the image can be permanently imprinted onto the picture tubes. These types of imprints are not covered by your warranty because they are the result of misuse.

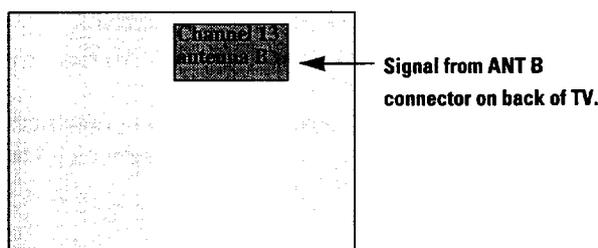
- 3 Connecting a double-trunk cable system to both inputs.
- 4 Connecting a cable-TV converter/decoder box that scrambles only premium channels and cannot be controlled by remote control. *Connection details are on pages 62-63.*

Your TV provides two separate channel memories (one for ANT A input and one for ANT B input). This allows you to add or erase channels into each channel memory scan list. The channel memory scan list is the list of channel numbers your TV will stop on when you press the CHANNEL up or down button.

When you use the Autoprogram function, the TV automatically checks both inputs and sets up a separate channel memory scan list for each.

Changing Antenna Input with master remote control

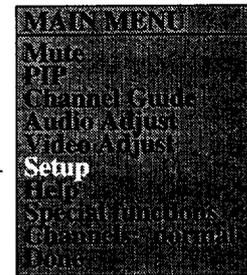
- 1 Press the ANT (antenna) button on the remote control to switch from ANT A input to ANT B input. Antenna B appears with the channel number display on the TV screen to let you know you are now watching whatever signal is connected to the ANT B connector on the back of the TV.



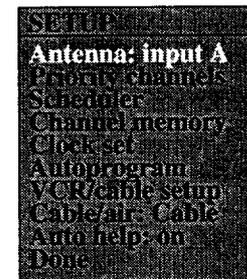
- 2 Press the ANT (antenna) button again to switch back to ANT A.

Changing Antenna Input with menus

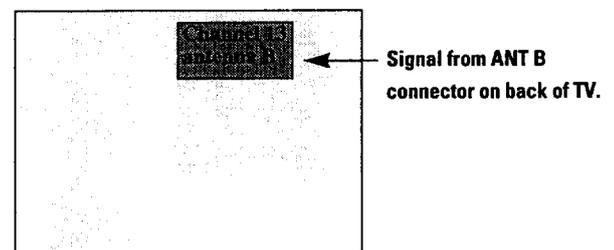
- 1 Press the MENU button to display the MAIN MENU on the TV screen. Press the + or - button to highlight Setup.



- 2 Then press the MENU button again to display the SETUP menu.



- 3 Press the MENU button to change the Antenna function between Antenna: input A and input B. Antenna B will appear with the channel number display to let you know you are watching whatever signal is connected to the ANT B connector on the back of the TV.



- 4 When you are finished, press the + or - button to highlight Done, and then press the MENU button to remove the SETUP menu from the TV screen. The SETUP menu will automatically disappear from the screen if you do not press a button within a few seconds.

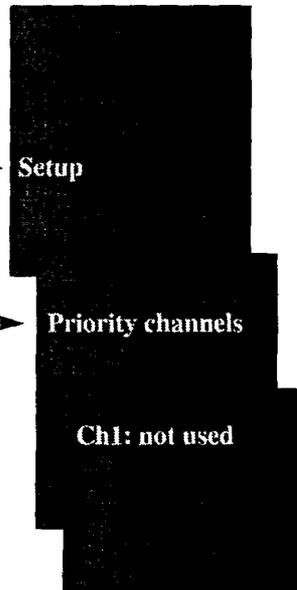
Priority Channels (SETUP Menu)

Your TV set allows you to create a separate priority channel memory scan list consisting of up to six of your favorite channels. You can then set the Channels: normal/priority function to Channels: priority so the TV will only stop on the priority channels when you press the CHANNEL up or down button.

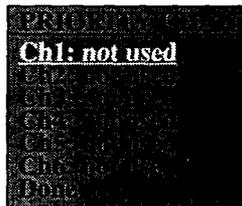
Setting Up Priority Channel Scan List with menus

- 1 Display the PRIORITY CHAN menu on the TV screen.

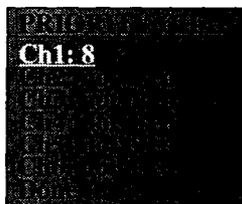
- 1 Press the MENU button to display the MAIN MENU.
- 2 Repeatedly press the + or - button to highlight Setup in white.
- 3 Press MENU again to display the SETUP menu.
- 4 Repeatedly press the + or - button to highlight Priority channels in white.
- 5 Press the MENU button again to display the PRIORITY CHAN menu.



- 2 Press the MENU button again to select (underline) Ch1: not used.



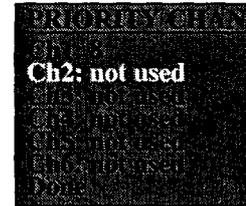
- 3 Repeatedly press the + or - button to enter the first channel for the priority channel scan list.



- 4 Press the MENU button again to add the channel (remove underline) to the priority channel scan list.

Note: If you have labeled the channels, the label will appear with the channel number. *Details about labeling channels are on pages 48-49.*

- 5 Press the + or - button to select another channel.



- 6 Repeat steps 2 through 5 to enter up to six channels that you want in your priority channel memory scan list.

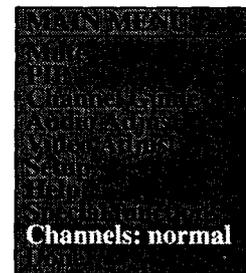
- 7 When you are finished, highlight Done and press the MENU button to remove the PRIORITY CHAN menu from the screen.

Note: After a few seconds, the PRIORITY CHAN menu will disappear from the screen if no button is pressed.

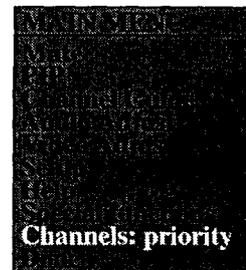
Selecting the Priority Channel Scan List

To make your TV use the priority scan list instead of the normal scan list, you will have to change the Channels: normal/priority function.

- 1 Press the MENU button to display the MAIN MENU on the TV screen. Repeatedly press the + or - button to highlight the Channels: normal/priority function in white.



- 2 Press the MENU button to select Channels: priority.



- 3 When you are finished, highlight Done and press the MENU button to remove the MAIN MENU from the screen.

Note: After a few seconds, the MAIN MENU will disappear from the screen if no button is pressed.

Remember to set the Channels: normal/priority function back to Channels: normal if you want the TV to stop on all the channels in the normal channel memory.

VCR/Cable Setup (SETUP Menu)

The VCR/cable setup function lets you program to which channel the TV will automatically tune when you press the VCR1, VCR2, or CABLE button on the remote. This is handy if you connect a VCR, LaserDisc player, or cable box to your TV. You will no longer have to remember to which input jacks the VCR, LaserDisc, or cable box is connected because the TV will remember for you.

For example, if you connect a VCR's AUDIO/VIDEO OUT jacks to the TV's INPUT 1 jacks (as shown on page 66), you will no longer have to remember to select channel 91 on the TV to see what the VCR is playing. If channel 91 appears next to the VCR 1 function on the VCR/Cable SETUP menu, the TV will automatically turn on and tune to channel 91 each time you press the VCR1 button on the master remote control.

This function is especially convenient if you have a compatible VCR that can be operated by the VCR1 button on the remote. Pressing VCR1 will then not only turn on the VCR, but also automatically turn on and tune the TV to the proper channel for viewing the picture from the VCR. You can program most brands of remote-controllable VCR's to respond to the VCR1 button as described on pages 54-55.

The VCR 2 function works the same way. It lets you program to which channel the TV will automatically tune when you press the VCR2 button on the master remote. Pressing the VCR2 button will then not only turn on the VCR, but also automatically tune the TV to the proper channel for viewing the picture from the VCR. You can program most brands of remote-controllable VCR's to respond to the VCR2 button as described on pages 54-55.

The Cable function lets you program to which channel the TV will automatically tune when you press the CABLE button on the master remote. This is handy if you have to connect a cable box to your TV. You will no longer have to remember the output channel of the cable box because the TV will remember for you.

For example, if you connect a cable box to the TV's CABLE/ANTENNA connector (as shown on pages 62-63), you will no longer have to remember to select channel 3 or 4 on the TV to see what is coming from the cable box. By entering the cable box's output channel (usually 03 or 04) next to the CABLE function, the TV will automatically tune to that channel each time you press the CABLE button on the remote.

This function is especially convenient if you have a remote-controllable cable box that can be operated by the CABLE button on the remote as described on page 64. Pressing the CABLE button will then not only switch the remote to cable mode but will also automatically tune the TV to the proper channel for viewing the picture from the cable box.

Setting up VCR or Cable Channels with menus

- 1 Connect VCR(s), LaserDisc player, and/or cable box to TV.
- 2 Display the VCR/Cable SETUP menu on the TV screen.

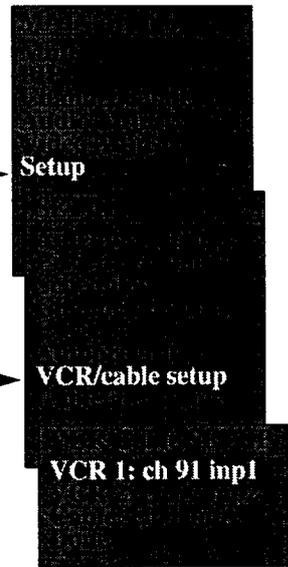
1 Press the MENU button to display the MAIN MENU.

2 Repeatedly press the + or - button to highlight Setup in white.

3 Press MENU again to display the SETUP menu.

4 Press the + or - button to highlight the VCR/cable setup function in white.

5 Press the MENU button again to display the VCR/Cable SETUP menu.

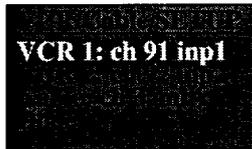


Setup

VCR/cable setup

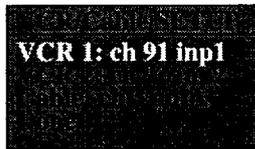
VCR 1: ch 91 inp1

- 3 Press the + or - button to highlight the VCR 1, VCR 2, or Cable function.



VCR 1: ch 91 inp1

- 4 Press the MENU button to select the input to which you have connected your VCR or cable box (Ch 3 ant A, Ch 4 ant A, ch 91 inp1, ch 92 inp2, ch 3 ant B, ch 4 ant B).



VCR 1: ch 91 inp1

Notes about Selecting a channel number:

- Select Ch 91 inp1 if your VCR or cable box is connected to the TV's audio and video INPUT 1 jacks.
- Select Ch 92 inp2 if your VCR or cable box is connected to the TV's audio and video INPUT 2 jacks.
- Select Ch 3 ant A/B (or Ch 4 ant A/B) if your VCR or cable box is connected to one of the TV's CABLE/ANTENNA connectors labeled ANT A or ANT B. Select the same channel number (3 or 4) as the position of the VCR's CH3/CH4 switch. This is the channel to which you must tune your TV for viewing signals from your VCR. Select ant A if your VCR or cable box is connected to the ANT A connector on the back of the TV. Select ant B if your VCR or cable box is connected to the ANT B connector on the back of the TV.
- Refer to pages 62-63 or 66-68 if you want to review details about connecting your cable box, VCR, or LaserDisc player.

- 5 When you are finished, press the + or - button to highlight Done and then press the MENU button to remove the menu from the TV screen.

Note: Pressing the CLEAR button on the master remote will also quickly remove the menu from the TV screen. After a few seconds, the menu will automatically disappear from the screen if no button is pressed.

Scheduler (SETUP Menu)

The scheduler allows you to enter up to three separate programs. The TV will turn on automatically at the time selected, tune to the selected channel, and turn off automatically at the selected time. Each program can be set for one-time or to be repeated weekly.

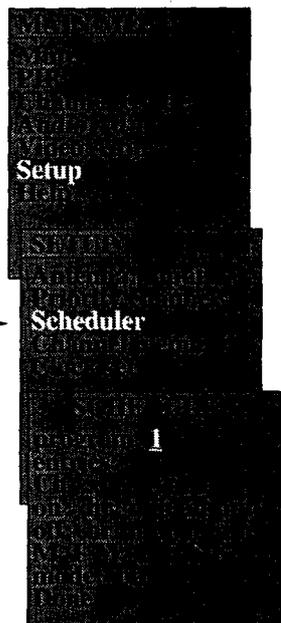
- Select the “once” mode if you want the TV to turn on and play the program once.
- Select the “rpt. weekly” mode if you want the TV to turn on and play the program every week at the same time.

Programming the Scheduler

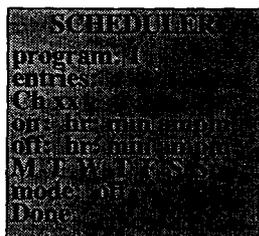
- 1 Display the SCHEDULER menu on the TV screen.

Note: The clock must be set before you can program the SCHEDULER. Details are on page 7.

- 1 Press the MENU button to display the MAIN MENU.
- 2 Repeatedly press the + or – button to highlight Setup in white.
- 3 Press the MENU button again to display the SETUP menu.
- 4 Repeatedly press the + or – button to highlight Scheduler in white.
- 5 Press the MENU button again to display the SCHEDULER menu.

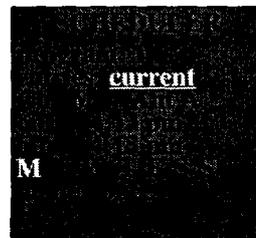


- 2 Select a program number (1, 2, or 3). Press the MENU button to highlight program: 1. Repeatedly press the + or – button to select program: 1, 2, or 3. Press the MENU button again to select (remove highlight) the program number.

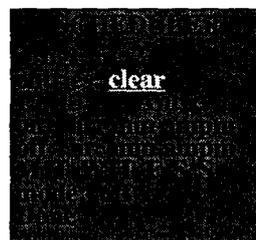


- 3 **Optional:** Select an entry (current or clear). Repeatedly press the + or – button to select (underline) entries. Then press the MENU button to highlight entries and repeatedly press the + or – button to select clear, current, or a blank space for no entry.

- If you select entries: current, when you press the MENU button, the channel number and antenna input you are tuned to, current time, and day of the week will automatically appear. The mode function will be set to once.



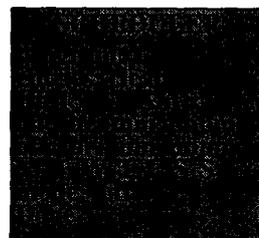
- If you select entries: clear, when you press the MENU button, the information in the SCHEDULER for the program number selected will be cleared.



- If you do not want the current information entered automatically or to clear the scheduler, select entries: (blank).

Press the MENU button to exit (remove highlight) the entries function.

- 4 Enter the channel number. Press the + button to select (underline) Ch. Then press the MENU button to enter (highlight) the Ch function. Repeatedly press the + button to enter a higher channel number or the – button to enter a lower channel number. Press the MENU button to exit (remove highlight) the Ch function.

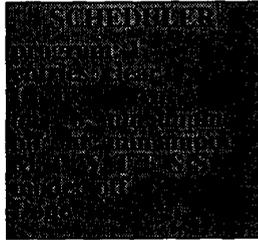


- 5 Select an antenna input (A or B). Press the + button to select (underline) the Ant function. Then repeatedly press the MENU button to select Ant A or Ant B. Details about antenna A and B are on page 41.

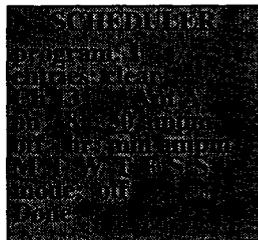


6 Set the time you want the TV to turn on.

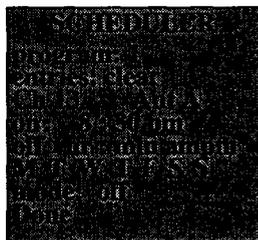
- 1 Press the + button to select (underline) the on: hr function. Then press the MENU button to enter (highlight) the on: hr function. Repeatedly press the + button to enter a higher hour or the – button to enter a lower hour. Press the MENU button to exit (remove highlight) the hr function.



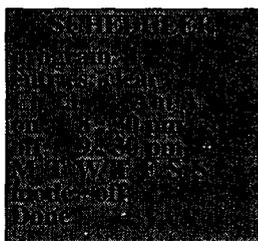
- 2 Press the + button to select (underline) the on: min function. Then press the MENU button to enter (highlight) the on: min function. Repeatedly press the + button to enter higher minutes or the – button to enter lower minutes. Press the MENU button to exit (remove highlight) the min function.



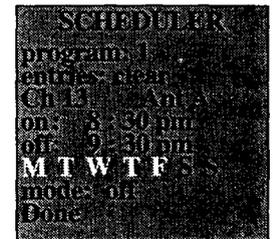
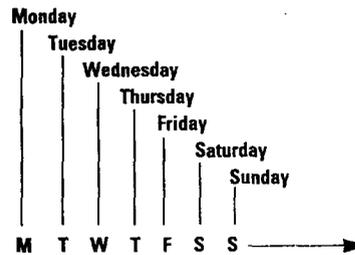
- 3 Press the + button to select (underline) the ampm function. Then press the MENU button to select am or pm.



7 Set the time you want the TV to turn off. Repeat the steps above to enter the off time.

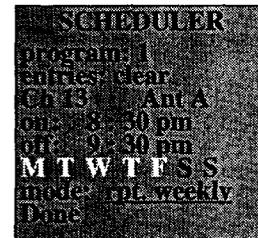


- 8 Select the day or days of the week you want the TV to turn on. Press the + button to select (underline) the day. Press the MENU button to highlight the day. Then press the + button to move to the next day. Do this for each day of the week that you want the program to come on. For example, if you want a program to come on Monday through Friday, highlight M, T, W, T, and F.



- 9 Program the TV to play your program one time or to repeat it every week.

Press the + button to select (underline) the mode function. Then repeatedly press the MENU button to select off, once, or rpt. weekly.



- Select mode: once if you want your program to play one time.
- Select mode: rpt. weekly if you want the program to play every week at the same time.
- Select mode: off if you do not want the program to play. This is useful if you have programmed the TV to come on at the same time every week and you are going to be away. When you return, you can set the mode function back to rpt. weekly.

- 10 Follow steps 1 through 9 to enter two more programs in the scheduler if desired. When you are finished, repeatedly press the + or – button to select (underline) Done and press the MENU button to remove the SCHEDULER from the screen.

Note: You can also press the CLEAR button on the master remote to quickly remove the SCHEDULER from the screen. After a few seconds, the SCHEDULER will disappear from the screen if no button is pressed.

Programming Channel Memory Scan List

The channel memory scan list is the list of channel numbers your TV will stop on when you press the CHANNEL up or down button. You can program any list of channels into the channel memory.

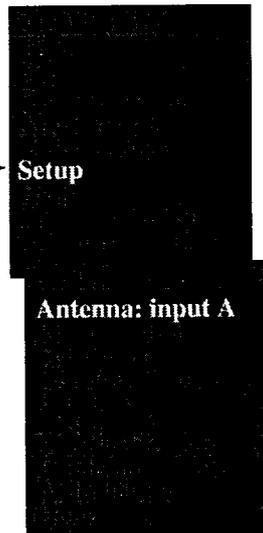
The quickest way to program the channel memory is to use the AutoProgram function. The TV will automatically cycle through all channels and place active channels into the channel memory scan list.

First follow the instructions below to AutoProgram channels, and then add or erase individual channels as desired.

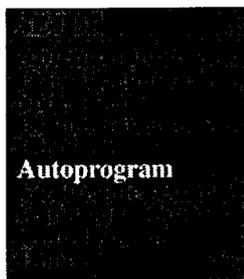
AutoProgramming Channels into Channel Memory with menus

- 1 Connect home antenna(s) and/or cable-TV system to your set.
- 2 Display the SETUP menu on the TV screen.

- 1 Press the MENU button to display the MAIN MENU.
- 2 Repeatedly press the + or – button to highlight Setup in white.
- 3 Press the MENU button again to display the SETUP menu.



- 3 Press the + or – button to highlight the AutoProgram function in white.



- 4 Press the MENU button to start the TV autoprogramming. The TV will first program all channels for ANT A input and then program all channels for ANT B input (even if you have only one antenna input connected). The TV will display the Active Channels menu on the screen. After a few seconds, the Active Channels menu will display information about the channel memory scan list for ANT A and ANT B.



Notes: The AutoProgram function will place into memory active channels that have a valid signal at the time you AutoProgram your TV. Occasionally an active channel may be missed if its signal is very weak or the channel happened to be “off the air” during AutoProgramming. An inactive channel may be included in the channel memory scan list if there happens to be some sort of “noise” or “stray signal” on the channel during AutoProgramming.

Signals from sources connected to the INPUT jacks on the back will not be AutoProgrammed. Channel 91 (INPUT 1) and channel 92 (INPUT 2) can be added to the channel memory scan list.

The TV automatically senses whether you have connected a home antenna (air) or cable-TV system (cable) to the ANT inputs and adjusts the Cable/air function when it AutoPrograms. If you should ever need to override the automatic setting, display the SETUP menu, highlight the Cable/air function, and press the MENU button to change the setting.

- 5 When the TV has finished cycling through both antenna inputs (A and B), you can check to see what channels are in the ANT A channel memory scan list by pressing the CHANNEL up or down button. Your set will stop on each of the channels in the channel memory scan list. To check the channels in the ANT B scan list, press the ANT (antenna) button on the master remote or display the SETUP menu and press the MENU button to change the Antenna: input A/B function to Antenna: input B. Then press the CHANNEL up or down button to see the channels in memory for antenna input B.

Note: If the TV does not cycle through all the channels programmed into channel memory when you press the CHANNEL up or down button, make sure the Channels: normal/priority function in the MAIN MENU is set to normal. Details are on page 42.

Adding and Erasing Channels in Channel Memory with menus

1 Display the CHANNEL MEM (memory) menu on the TV screen.

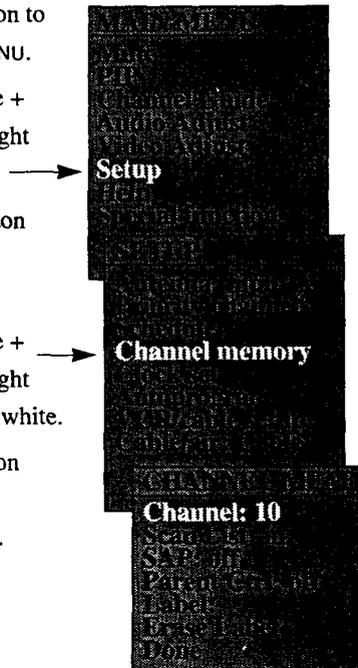
1 Press the MENU button to display the MAIN MENU.

2 Repeatedly press the + or - button to highlight Setup in white.

3 Press the MENU button again to display the SETUP menu.

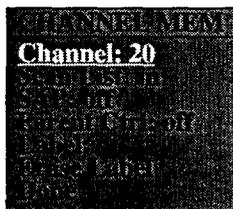
4 Repeatedly press the + or - button to highlight Channel memory in white.

5 Press the MENU button again to display the CHANNEL MEM menu.

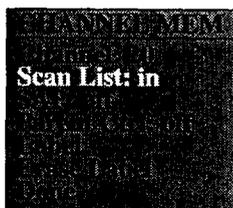


2 To enter the channel you want to add or erase from the channel memory scan list, press MENU to select (underline) the Channel function. Then press + for a channel with a higher number or - for a channel with a lower number.

Note: The channel number to which the TV is currently tuned will automatically appear in the Channel function.

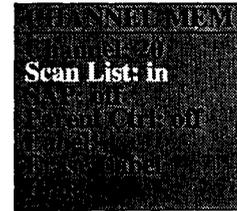


3 Press MENU to exit (remove underline) the Channel function, and then press + or - to highlight the Scan List: in/out function.

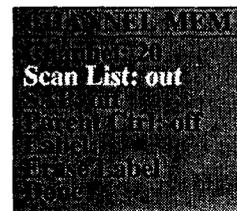


4 Press MENU to add (Scan List: in) or erase (Scan List: out) the selected channel in the channel memory scan list.

- To add a channel, press MENU to change the Scan List: in/out function to Scan List: in.



- To erase a channel, press MENU to change the Scan List: in/out function to Scan List: out.



5 When you are finished, press the + or - button to highlight Done and press the MENU button.

Note: After a few seconds, the CHANNEL MEM menu will automatically disappear from the screen if no button is pressed. Pressing the CLEAR button on the master remote control will quickly remove the menu from the TV screen.

Adding Video Input Channels to the Channel Memory Scan List

You can add video input channels (91 and 92) to the channel memory scan list. If you have a video device (such as a VCR, camcorder, or laser disc player) connected to the INPUT jacks on the back of the TV, you can view its signal by pressing the INPUT button, selecting channel 91 or 92 with two number buttons on the master remote, or adding channels 91 and 92 to the channel memory scan list.

Add channel 91 to the channel memory scan list to view the signal from INPUT 1 and add channel 92 to view the signal from INPUT 2. Adding channels 91 and 92 to channel memory allows access to the video inputs by pressing the CHANNEL up or down buttons.

Channel Labeling

The channel labeling function lets you enter labels (names) for each channel number. The label you enter will then appear in the channel number display below the channel number. You can select from 107 built-in labels or create your own label (up to five characters) for each channel.

Labeling Channels with menus

1 Display the CHANNEL MEM menu on the TV screen.

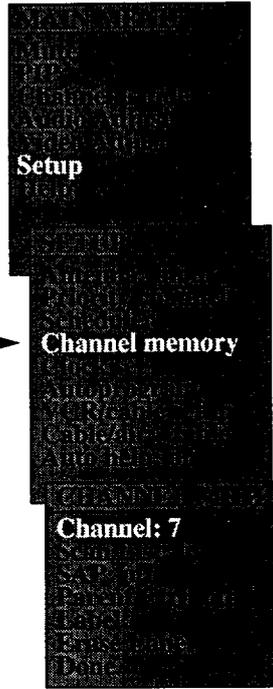
1 Press the MENU button to display the MAIN MENU.

2 Repeatedly press the + or - button to highlight Setup in white.

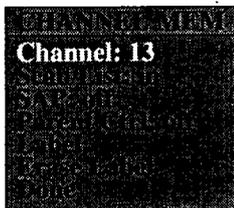
3 Press the MENU button again to display the SETUP menu.

4 Repeatedly press the + or - button to highlight Channel memory in white.

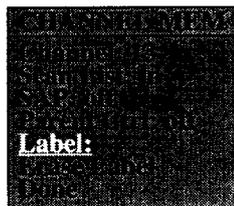
5 Press the MENU button again to display the CHANNEL MEM menu.



2 The currently tuned channel will appear in the Channel function. Enter the number of the channel you want to label by pressing the MENU button to select (underline) the Channel function. Then press + for a higher channel or - for a lower channel. Press the MENU button again to exit (remove underline) from the Channel number .



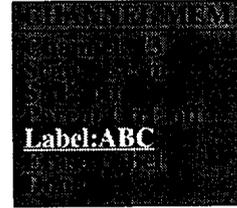
3 Press the + or - button to highlight the Label function. Then press the MENU button to select (underline) the Label function.



4 Select one of the built-in labels or create your own label (up to four characters).

Select a built-in label

1 Press the + or - button to display one of the alphabetical built-in labels. Press + to move to the next label in the list or press - to return to the previous label.



2 Press the MENU button to select the label (remove underline).

Note: Several of the built-in channel labels for standard channels have art that will automatically appear in the channel display area along with the channel number and label. These labels are followed by an asterisk in the chart below.

3 Press the + or - button to highlight DONE and then press the MENU button to remove the menu from the screen.

Chart of Built-in Channel Labels

A&E*	Dallas	Learning	Sci-Fi
ABC*	Denver	Lifetime*	Scores
ACTS	Discovery*	Local	Seattle
All News	Disney*	Local Ads	SelecTV
AMC	Drive-In	Los Angeles	Shopping
America	E!	Miami	Showtime*
Atlanta	ESPN*	Movie	Smart TV
BET*	EWTN	MTV*	Sports
Boston	Family*	Music	Stardust
BRAVO	First Run	Nashville	Starion
Business	Fitness	NBC*	Sunshine
C-SPAN	FNN	New York	Superstation
C-SPAN II	Fox*	News	TBS*
Calendar	GamePort	Nickelodeon*	TMC
CBS*	Government	Nintendo	TNN*
Chicago	GuestCine1	Nostalgia	TNT*
Cinemax*	GuestCine2	Pay-View	Travel
Classics	HA!	PBS*	USA*
CMT*	HBO*	Playboy	VCR
CNBC*	HBO Comedy	Prevue	VCR1
CNN*	Headline*	Prime Tick	VCR2
Comedy	HomeSports	QVC*	VH-1*
Community	HomeTeam	Radar	VISN
Country	HSC	Religious	Weather*
Court TV	Independent	Request*	WGN*
CTN	Indianapolis	Request2	WPIX*
CVN	Laser Disc	Satellite	You Enter

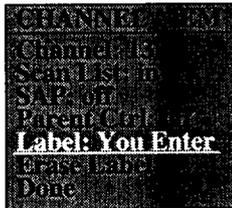
*This label, when stored in the channel memory, will be accompanied by on-screen art whenever you change channels or press the TV or DISPLAY button on the master remote.

(continued on next page)

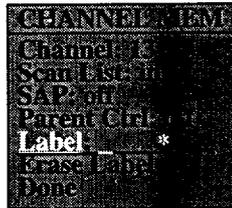
Create your own label

- 1 Press the + or – button to select **Label: You Enter** and create your own label (up to five characters) using the built-in characters.

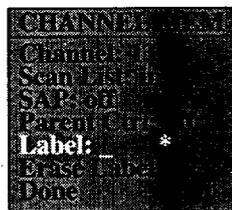
A B C D E F G H I J K L M N O P Q R S T
U V W X Y Z a b c d e f g h i j k l m n o p q r
s t u v w x y z 0 1 2 3 4 5 6 7 8 9 . - (Blank Space)



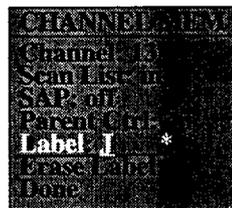
- 1 Press the MENU button when **Label: You Enter** is underlined to display the following.



- 2 Press the MENU button again to select the first position.



- 3 Press the + or – button to display one of the built-in characters. Then press MENU to enter the character.



- 4 Press the + button to move to the next position. Repeat steps 2 and 3 above until you have entered up to five characters in your label.

Notes: To erase a character, enter a blank space.

If you do not press a button within a few seconds, the CHANNEL MEM menu will disappear from the screen and you will have to re-enter the characters.

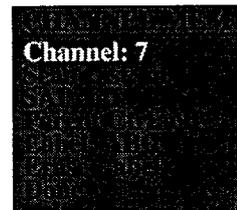
- 5 When you are finished, press the + button to move the underline highlight to the asterisk (*), and press the MENU button (remove underline) to enter your label.

- 6 Continue to label channels by entering the channel number in the Channel function and selecting a label with the Label function. When you are finished, highlight Done and press the MENU button.

Erasing Channel Labels with menus

- 1 Display the CHANNEL MEM menu on the TV screen. To erase a channel's label, enter the number of the channel in the Channel function. The currently tuned channel will automatically appear in the Channel function.

Enter channel number here →



- 2 Press the + or – button to highlight the Erase Label function. Then press the MENU button to erase the label.



- 3 When you are finished, press the + or – button to highlight Done and then press the MENU button.

Note: After a few seconds, the CHANNEL MEM menu will automatically disappear from the screen if no button is pressed. You can also quickly remove the menu by pressing the CLEAR button on the master remote control.

Parental Control (SETUP Menu)

Parental control lets you lock out any channels that you do not want your children to watch. The channels you lock out can not be accessed from the front of the TV. The channels are still accessible using either remote control. Just hide the remote controls if you do not want your children to access the locked out channels.

Activating Parental Control with menus

1 Display the CHANNEL MEM menu on the TV screen.

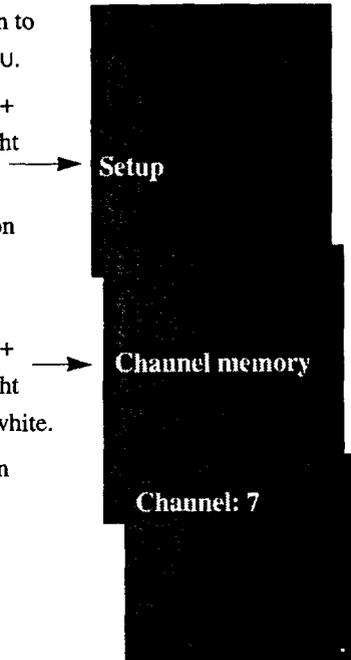
1 Press the MENU button to display the MAIN MENU.

2 Repeatedly press the + or – button to highlight Setup in white.

3 Press the MENU button again to display the SETUP menu.

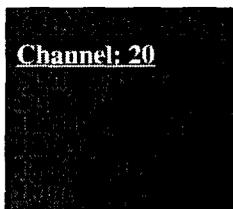
4 Repeatedly press the + or – button to highlight Channel memory in white.

5 Press the MENU button again to display the CHANNEL MEM menu.

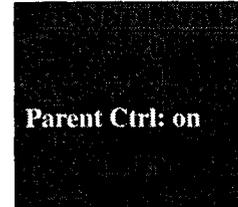


2 Enter the channel you want to lock out. Press MENU to select (underline) the Channel function. Then press + for a channel with a higher number or – for a channel with a lower number.

Note: The currently tuned channel number will automatically appear in the Channel function.

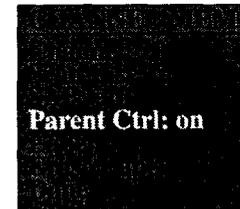


3 Press MENU and then press + or – to highlight the Parent Ctrl: on/off function.

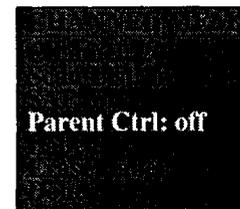


4 Press MENU to turn the Parent Ctrl: on/off function on or off.

- When the Parent Ctrl: on/off function is set to on, the channel will be locked out.



- When the Parent Ctrl: on/off function is set to off, the channel will *not* be locked out.

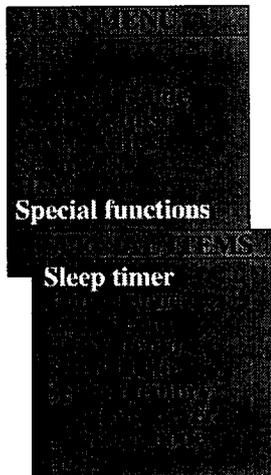


5 When you are finished, press the + or – button to highlight Done and press the MENU button.

Note: After a few seconds, the CHANNEL MEM menu will automatically disappear from the screen if no button is pressed. To quick remove the menu from the TV screen, press the CLEAR button on the master remote control.

SPECIAL ITEMS (Basic Menu)

- 1 Press the MENU button to display the MAIN MENU.
- 2 Repeatedly press the + or – button to highlight Special functions in white.
- 3 Press the MENU button again to display the SPECIAL ITEMS menu.



Repeatedly press the – button to move the highlight down (one item per press).

Repeatedly press the + button to move the highlight up (one item per press).

Press the MENU button again to enter or change the highlighted function.

After a few seconds, the SPECIAL ITEMS menu will disappear from the screen if no button is pressed. To exit the menu quicker, highlight Done and then press MENU.

Sleep timer: The sleep timer can be programmed to automatically turn off your TV after a period of up to nine hours and 30 minutes. This is useful if you want to watch TV for an hour or so before going to bed. *Details are on page 52.*

Time function: The Time function lets you set intervals for the time to automatically appear on the TV screen. You can set the Time function for 1, 5, 15, 30, or 60 minutes.

To set the time function:

- 1 Display the SPECIAL ITEMS menu, and repeatedly press the + or – button to highlight the Time function.
- 2 Repeatedly press the MENU button to select 1 min, 5 min, 15 min, 30 min, or 60 min. The time will automatically appear on the TV screen at the time interval you select. For example, if you select 5 min, the time display will appear on the TV screen every five minutes.

Note: Select Time : none if you do not want the time display to automatically appear.



Time will automatically appear on TV screen every 5 minutes

Auto demo, IDTV demo, and Sleep demo: These functions can be activated to let your TV automatically demonstrate key features.

- Auto demo displays a variety of your TV's special features including IDTV (Improved Definition TV) and PIP (Picture-In-Picture).
- IDTV (Improved Definition TV) demo displays a split screen simulation comparing normal TV to IDTV.
- Sleep demo demonstrates how the sleep timer works.

To start the demo functions:

- 1 Display the SPECIAL ITEMS menu, and repeatedly press the + or – button to highlight the demo function you want to see.

Highlight Auto demo to see a demonstration on the TV's special features.



Highlight IDTV demo to see a demonstration of Improved Definition TV.

Highlight Sleep demo to see a demonstration of the sleep timer.

- 2 Press the MENU button to start the demonstration. Press any button on the front panel of the TV or remote control to stop the demonstration.

Setup memory function: This function lets you save and recall your personalized settings for video and audio. It restores the settings to the factory settings. Press + or – to highlight Setup memory in white, and then press MENU to display the MEMORY MENU. *Details are on pages 38-39.*

1 Press + or – to highlight Setup memory function.

2 Press MENU to display the MEMORY MENU.



Caption and Caption mode: These functions lets you display the audio portion of a program as text on the TV screen. This is useful to the hearing impaired or anyone who wants to watch a program without sound. *Details are on page 30.*

The sleep timer can be programmed to automatically turn off your TV after a period of up to 9 hours and 30 minutes. This is useful if you want to watch TV for an hour or so before going to bed.

Setting the Sleep Timer with menus

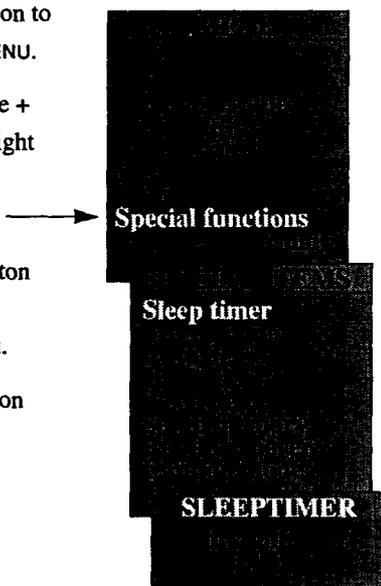
1 Display the SLEEPTIMER menu on the TV screen.

1 Press the MENU button to display the MAIN MENU.

2 Repeatedly press the + or - button to highlight Special functions in white.

3 Press the MENU button again to display the SPECIAL ITEMS menu.

4 Press the MENU button again to display the SLEEPTIMER menu.



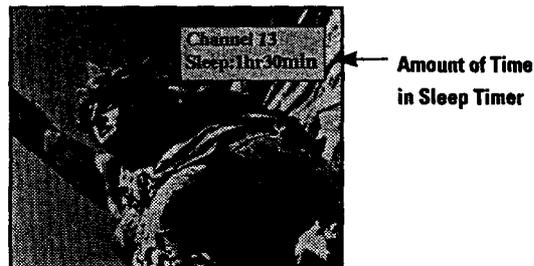
2 Press the + button to enter the amount of time you want the TV to stay on. Every time you press the + button, the time increases 30 minutes (up to 9 hours and 30 minutes). Press the - button to decrease the time 30 minutes.



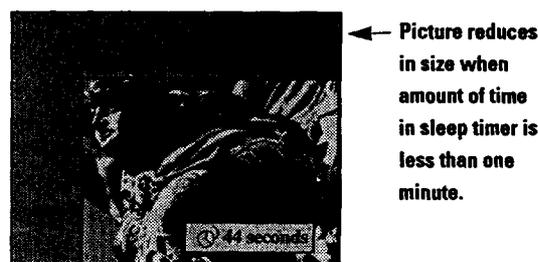
3 Press the MENU button to remove the SLEEPTIMER display from the TV screen.

Note: After a few seconds, the SLEEPTIMER menu will automatically disappear from the screen if no button is pressed. To quickly remove the SLEEPTIMER from the screen, press the CLEAR button on the master remote control.

4 The sleep timer will begin to count down to zero. The amount of time in the SLEEPTIMER menu will appear with the channel number display on the TV screen whenever you change channels or press the TV or DISPLAY button on the master remote control.



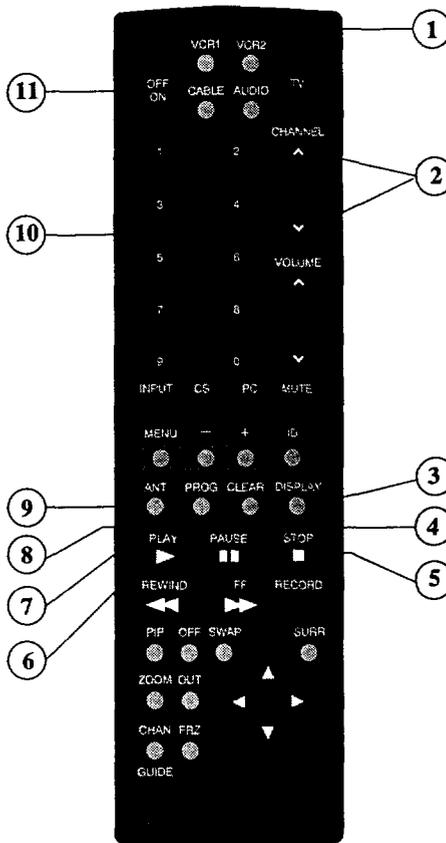
5 When the sleep timer counts down to one minute (0:01), a display will appear on the bottom of the TV screen and the picture will begin to get smaller. When the display reaches 0:00, the TV will turn off. If you want the TV to stay on when this display appears, press the TV button on the master remote (or the MENU button on the simplified remote). The sleep timer will be cancelled. To add more time to the sleep timer when the countdown display appears, reset the SLEEPTIMER menu.



Cancelling the Sleep Timer

To cancel the sleep timer, display the SLEEPTIMER menu and press the - button until the display reads 0:00.





Remote Buttons That Control ProScan LaserDisc Players

The advanced ProScan universal master remote control can also control a ProScan LaserDisc player with the VCR2 button.

To control a compatible ProScan LaserDisc player, first press the VCR2 button to put the remote control in the "LaserDisc" mode. The buttons shown above will then operate the LaserDisc player. The buttons may not operate all of the functions on the LaserDisc player. You may only be able to control some of your LaserDisc player's functions.

1 VCR2 Button: Press to put the remote control in the "LaserDisc mode" so other buttons will control the player. Press the TV button to put the remote back into the "TV mode".

2 CHANNEL Up and Down Buttons:

- CHANNEL up button: Same as CHAPTER/TRACK SEARCH ►► button on LaserDisc player. Press to search for the beginning of a certain chapter (or track) on a disc that is playing or skip to the beginning of the next chapter (or track).
- CHANNEL down button: Same as CHAPTER/TRACK SEARCH ◄◄ button on LaserDisc player. Press to return to the beginning of a disc that is playing or return to a previously played chapter (or track).

3 DISPLAY Button: Press to display information about the disc that is playing.

4 CLEAR Button: Press to clear search operations and digits entered incorrectly for special operations.

5 STOP Button: Press to stop any operation when a disc is playing. Press when the disc player is stopped to open the disc table.

6 PAUSE Button: Press to pause the disc that is playing. Press again to start the disc playing.

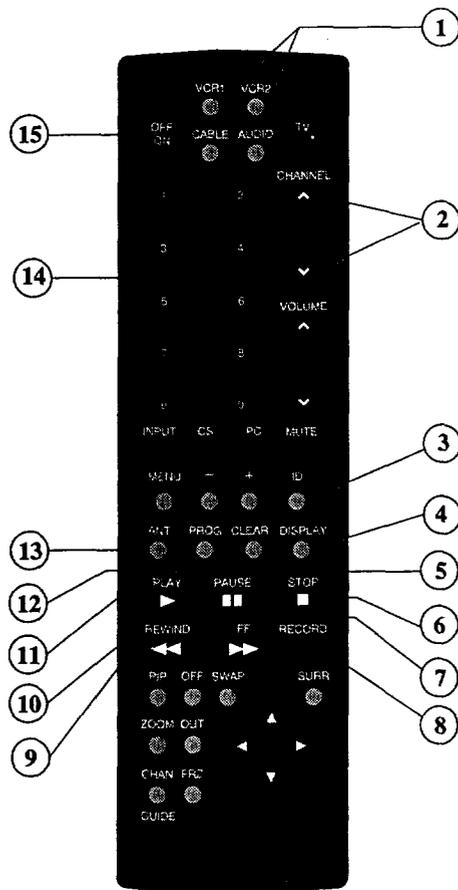
7 PLAY Button: Press to start a disc playing.

8 PROG (Program) Button: Press to display the LaserDisc player's program menu on the TV screen.

9 ANT (Antenna) Button: Same as DIGITAL/ANALOG button on LaserDisc player's remote control.

10 Number and CS Buttons: Press these buttons to search for a particular chapter (or track) on a disc that is playing. These buttons are also used to enter information for special operations. The CS button is the same as the 10 button on the LaserDisc player.

11 OFF/ON Button: Press to turn the LaserDisc player on or off.



Remote Buttons That Control ProScan VCR's

The advanced ProScan universal remote controls your TV and up to two compatible ProScan brand VCR's. The VCR2 button can also control a compatible ProScan LaserDisc player.

To control a compatible ProScan VCR, first press the VCR1 or VCR2 button to turn on the VCR and put the remote in the "VCR Mode". The buttons shown above will then control the VCR.

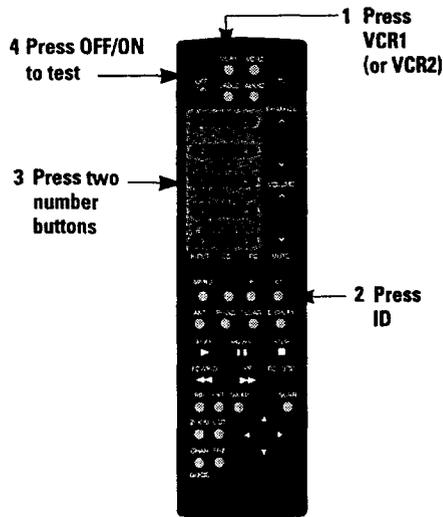
The buttons shown below do not operate all functions on all VCR's. You may only be able to control your VCR's basic functions.

- ① **VCR1 and VCR2 Buttons:** Press to turn on VCR and put remote in "VCR Mode" so other buttons will control the VCR. Press the TV button to put remote back into "TV Mode".
- ② **CHANNEL Up and Down Buttons:** Press to select next higher or lower channel in VCR's channel memory.
- ③ **ID Button:** Press when programming remote to control other brands of VCR's.
- ④ **DISPLAY Button:** Press to display VCR's normal displays.

- ⑤ **CLEAR Button:** Use when setting the VCR's clock and programming its timer.
- ⑥ **STOP Button:** Press to stop whatever VCR is doing: playing, recording, rewinding, or fast forwarding.
- ⑦ **PAUSE Button:** Press to pause play or record mode. Press again to release pause.
- ⑧ **RECORD Button:** Press to record. It is not necessary to press PLAY and RECORD.
- ⑨ **FF (Fast Forward) Button:** Press while VCR is stopped to fast forward tape. Press while VCR is playing to search forward.
- ⑩ **REWIND Button:** Press while VCR is stopped to rewind tape. Press while VCR is playing to search backward.
- ⑪ **PLAY Button:** Press to start tape playing.
- ⑫ **PROG (Program) Button:** Use when setting the clock and programming the timer.
- ⑬ **ANT (Antenna) Button:** Same as TV/VCR switch on VCR.
- ⑭ **Number Buttons:** Press two numbers to select VCR channel (up to channel "99"). Press a "0" before a single-digit channel number.
- ⑮ **OFF/ON Button:** Press to turn VCR off and on after the VCR1 or VCR2 button is pressed.

Controlling Other Brands of VCR with Remote

To program the remote to control another brand of VCR, just press VCR1 (or VCR2), then ID, then the two-digit code number for your brand of VCR. Although most VCR's are compatible, the TV's remote may not be able to control every VCR brand and model depending on the VCR's age and remote control system.



Programming Remote To Control Other Brands of VCR's

Refer to the chart at the right to find the code number that corresponds to the brand name of your VCR. Keep this number in mind. If more than one number is listed, you may need to try each one separately until you find the one that works.

- 1 Press VCR1 or VCR2 button on remote (depending on which button you want to program for that VCR). You can program each button to control a different VCR.
- 2 Press ID button on remote.
- 3 Press two number buttons (first one, then the other) to enter the code number for your brand of VCR. You must press the two number buttons within three seconds of pressing ID.
- 4 Point the remote at the VCR, and press the OFF/ON button to test the code number. If the right number was entered, the VCR should turn on. If the VCR does not react to the remote, repeat steps 1 thru 4 with another code number.

Note: Some older VCR's do not have an OFF/ON switch on their remote controls and cannot be turned on and off remotely. If you have this type of VCR, you can test the code number by pressing the CHANNEL button instead of the OFF/ON button. Make sure the VCR is already turned on when you test the code number.

Operating Notes: After the remote is programmed, it will turn on the VCR whenever you press VCR1 (or VCR2) and then OFF/ON.

You'll be able to control the VCR whenever the remote is in the "VCR mode". To put the remote in the "VCR mode", press the VCR1 or VCR2 button (depending on which button you programmed). The other VCR buttons (such as PLAY, PAUSE, STOP, REWIND, FF, and RECORD) will control the VCR when the remote is in the "VCR mode".

To change channels on the VCR, press VCR1 (or VCR2), then CHANNEL up or down. To turn off the VCR, press VCR1 (or VCR2), then OFF/ON. This remote will control the basic functions of compatible VCR's. It will not be able to control the advanced functions of all brands of VCR's. You may have to reprogram your remote if you change its batteries.

Notes About Controlling Two VCR's

This remote can control two VCR's independently as long as each VCR operates on a different remote transmitting code.

If neither of your VCR's have switchable code capabilities, you still may be able to use the VCR1/VCR2 feature to control two VCR's of the same brand since many older VCR's use remote codes that are different than newer VCR's. You may want to experiment to see what works with your particular VCR's.

VCR Brand	Code(s)
Aiwa	15
Akai	03, 22, 23
Audio Dynamics	14, 16
Broksonic	10
Canon	08
Capehart	01
Citizen	09
Craig	12
Curtis Mathes	00, 08, 15
dbx	14, 16
Dimensia	00
Emerson	10, 20, 34
Fisher	12, 18, 19
Funai	15
GE	00, 07, 08, 32
Goldstar	09
Hitachi	05, 35, 36
Instant Replay	08
JCPenney	02, 05, 08, 14, 16, 30
JVC	02, 14, 16, 30
Kenwood	02, 14, 16, 30
Magnavox	08, 29
Marantz	02, 14, 16, 29, 30
Marta	09
Memorex	08, 12
MGA	04, 27
Minolta	05
Mitsubishi	04, 27
Montgomery Ward	06
Multitech	07, 15, 32
NEC	02, 14, 16, 30
Panasonic	08
Pentax	05
Philco	08, 29
Philips	08, 29
Pioneer	05
ProScan	00
Quasar	08
RCA	00, 05, 07, 28, 35, 37
Realistic	02, 06, 08, 12, 15
Samsung	07, 32
Sanyo	02, 12
Scott	04, 13
Sears	02, 05, 18, 19
Sharp	06, 24
Shintom	31
Sony	17, 26, 38
Sylvania	08, 15, 29
Symphonic	15
Tashiko	09
Tatung	30
Teac	15, 30
Technics	08
Teknika	21
Toshiba	05, 13
Vector Research	14, 16
Video Concepts	14, 16
Wards	06, 25
Yamaha	02, 14, 16, 30
Zenith	11, 17

Note: Refer to the information sheet packed with your remote control for the latest list of brand names and code numbers. Because this list is constantly growing, the information sheet packed with your remote control may be a later version of this list and contain additional brands and/or code numbers.

Programming Remote to Control Audio Equipment

The digital remote control that came packed with your TV is also capable of controlling a compatible audio component.

To program the remote just press the AUDIO button, then press the ID button, then enter the two-digit code number for your brand of audio equipment from the chart below.

1 Refer to the chart below to find the code number that corresponds to the brand name of your audio equipment. If more than one number is listed, you may need to try each one separately to find the one that works.

2 Press the AUDIO button on the remote.

3 Press ID button on the remote.

4 Press two number buttons (first one, then the other) to enter the code number for your brand of audio equipment.

Note: You must press the two number buttons within three seconds of pressing the ID button.

5 Point the remote at the audio equipment and press the OFF/ON button to test the code number.

- If the right number was entered, the audio equipment will turn on.
- If the audio equipment does not react to the remote, repeat steps 1 thru 5 with another code number.

Operating Notes:

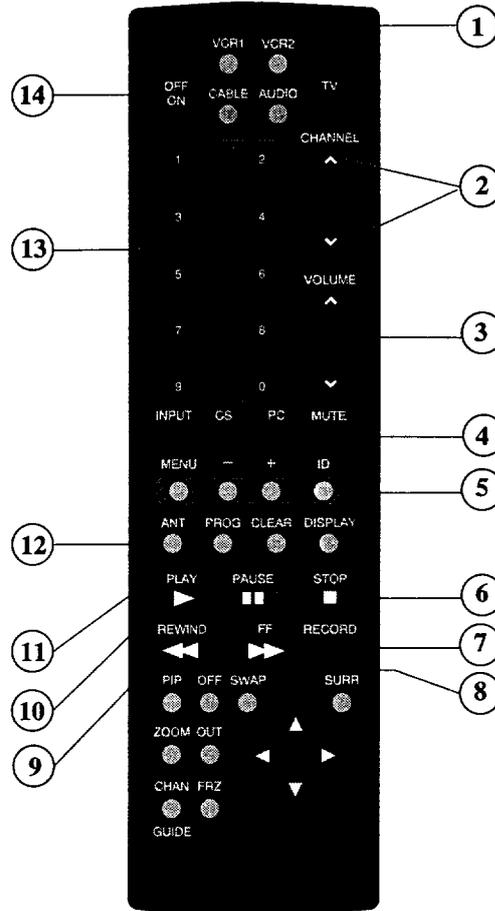
After the AUDIO button is programmed, the buttons described on the next page will operate the basic functions of most audio equipment. Depending on the age, brand, model, and type of audio equipment, some models may not be able to respond to all the function buttons listed. You will want to experiment with each button to determine the exact function for your component.

Audio Equipment	Type of Audio Equipment and Code(s)					
	AMP	AM/FM	CD	TAPE	PHONO	AUX
ads	01					
Akai	02,08					
Dimensia		03	07	06	05	04
Dynamic Bass		29	25	26,27	28	
Fisher	23					
JVC	16	30,35	32	33,34		31
Kenwood	17					
Kyocera	09					
Marantz	22					
Mitsubishi	15					
Nakamichi	20					
Panasonic	12	38	36	37		
Pioneer	14	42	39	40,41		
RCA	24	03	07,43,44	06	05	04,54
Sansui			45			
Sherwood	11,13					
Sony	21	49	46	48,53	47	
Teac	10					
Technics		52	50	51		
Yamaha	18,19					

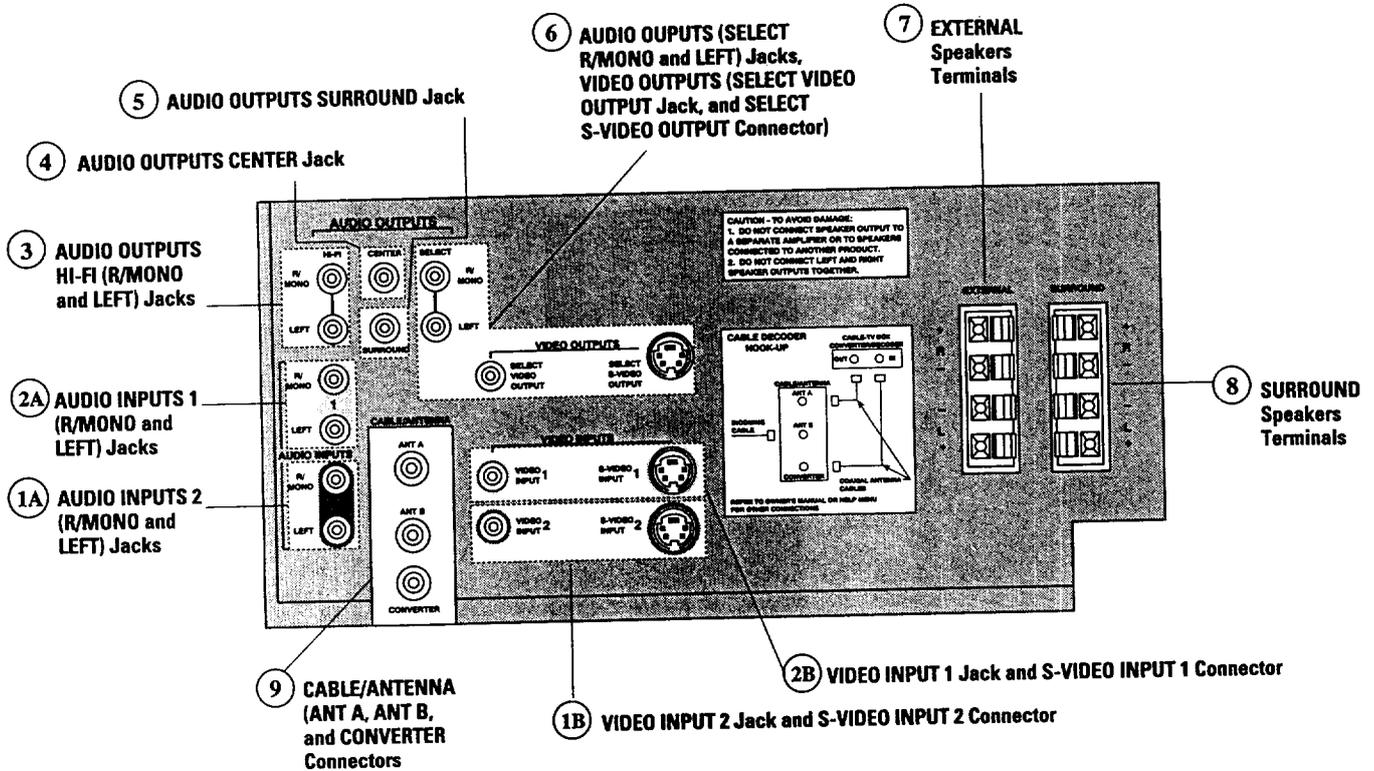
Note: Refer to the information sheet packed with your remote control for the latest list of brand names and code numbers. Because this list of brand names is continually growing, the information sheet packed with your remote control may be a later version of this list and contain additional brands and/or code numbers.

Remote Buttons that Control Audio Equipment

After the AUDIO button is programmed, the buttons described below will operate the basic functions of most audio equipment. Depending on the age, brand, model, and type of audio equipment, some models may not be able to respond to all the function buttons listed. You will want to experiment with each button to determine the exact function for your component.



- ① **AUDIO Button:** Press to put remote in "Audio Mode" so other buttons will control the audio component. Some components will turn on automatically when you press the AUDIO button. Press the TV button to put remote back into "TV Mode".
- ② **CHANNEL Buttons:** Press to select the next higher or lower channel in the component's channel memory.
- ③ **VOLUME Buttons:** Press to change volume level.
- ④ **MUTE Button:** Press to quickly reduce sound to its minimum level. Press MUTE again or VOLUME up to restore the sound.
- ⑤ **ID Button:** Press when programming remote to control audio equipment.
- ⑥ **STOP Button:** Press to stop whatever the component is doing: playing, recording, rewinding, etc.
- ⑦ **RECORD Button:** Press to start recording.
- ⑧ **FF (Fast Forward) Button:** Press while component is stopped to fast forward tape.
- ⑨ **REWIND Button:** Press while component is stopped to rewind tape.
- ⑩ **PAUSE Button:** Press to pause play or record. To release pause, press again.
- ⑪ **PLAY Button:** Press to start component playing.
- ⑫ **ANT (Antenna) Button:** Performs various functions depending on the type of equipment. Experiment with this button.
- ⑬ **Number Buttons:** Press two numbers to directly select a channel.
- ⑭ **OFF/ON Button:** Press to turn on component. Press again to turn off. Some components will turn on automatically when you press the AUDIO button.



- 1A AUDIO INPUTS 2 (R/MONO and LEFT) Jacks, and
- 1B VIDEO INPUT 2 Jack, and S-VIDEO INPUT 2 Connector

These AUDIO and VIDEO INPUT 2 jacks provide for direct connection of video devices (such as VCR's, camcorders, and laser disc players) or compatible home computers and TV games with audio/video outputs.

The S-VIDEO INPUT 2 connector allows for direct connection of an S-Video device to receive the full benefit of the S-Video format. An optional S-Video cable is required.

Notes: Be sure to also connect the audio cables. The S-Video cable carries only video.

If you are planning to view the signal from INPUT 2 on the small picture during picture-in-picture operation, be sure to also connect the normal video cable. S-Video video can not be viewed on the small picture.

Select channel 92 on the TV to see the signals from a device connected to the INPUT 2 jacks. Press CHANNEL up or down, or repeatedly press the INPUT button or two number buttons on the master remote control to select channel 92.

Connections details are on pages 66-69.

- 2A AUDIO INPUTS 1 (R/MONO and LEFT) Jacks, and
- 2B VIDEO INPUT 1 Jack, and S-VIDEO INPUT 1 Connector

These AUDIO and VIDEO INPUT 1 jacks provide for direct connection of video devices (such as VCR's, camcorders, and laser disc players) or compatible home computers and TV games with audio/video outputs.

The S-VIDEO INPUT 1 connector allows for direct connection of an S-Video device to receive the full benefit of the S-Video format. An optional S-Video cable is required.

Notes: Be sure to also connect the audio cables. The S-Video cable carries only video.

If you are planning to view the signal from INPUT 1 on the small picture during picture-in-picture operation, be sure to also connect the normal video cable. S-Video video can not be viewed on the small picture.

Select channel 91 on the TV to see the signals from a device connected to the INPUT 1 jacks. Press CHANNEL up or down, or repeatedly press the INPUT button or two number buttons on the master remote control to select channel 91.

Connections details are on pages 66-69.

- ③ **AUDIO OUTPUTS HI-FI (R/MONO and LEFT) Jacks** feed volume-controlled stereo audio out from whatever is displayed on the TV screen. Allows connection of an external audio amplifier and still lets you adjust sound level with the TV's remote. Optional speakers and amplifier are required. *Connection details are on page 70.*
- ④ **AUDIO OUTPUTS CENTER Jack** feeds volume-controlled "center-sound" audio out from whatever is displayed on the TV screen. Allows connection of audio amplifier in case you want to drive "center-channel" sound louder than the TV speakers will allow. Prologic or Dolby 3 stereo audio mode must be turned on to hear the "center-channel" sound (optional speakers and amplifier are required). *Connection details are on page 71.*
- ⑤ **AUDIO OUTPUTS SURROUND Jack** feeds volume-controlled surround-sound audio from whatever is displayed on the TV screen. Allows connection of audio amplifier in case you want to drive the surround speakers louder than the SURROUND speaker terminals will allow. Prologic, prologic phantom, matrix surround, hall surround, or stadium surround audio mode must be turned on to hear the "surround" sound. Optional speakers and amplifier are required. *Details are on page 71.*
- ⑥ **AUDIO OUTPUTS (SELECT R/MONO and LEFT) Jacks, and VIDEO OUTPUTS (SELECT VIDEO OUTPUT Jack and SELECT S-VIDEO OUTPUT Connector)** provide fixed level audio and video output from whatever is displayed on the TV screen (including the video signal from the SELECT S-VIDEO OUTPUT connector). They provide audio and video signals suitable for recording. These can be used for several applications such as:
- VCR editing with two or three VCR's (page 67).
 - Recording TV programs onto a camcorder (page 69).
 - Recording cable-TV programs onto a VCR that is not cable ready (page 67).
 - Recording audio onto an audio cassette tape recorder (page 70).
- Notes:** Remember that the signal coming out of these jacks is whatever you see (and/or hear) on the TV screen. So, whatever you want to record must be displayed on the TV screen during recording. The menus and displays (such as clock and channel number) that are on the screen can not be recorded.
- To record from an S-VHS component, you must also connect an optional S-Video cable from the SELECT S-VIDEO OUTPUT connector on the TV to the S-VHS INPUT connector on the VCR.

- ⑦ **EXTERNAL Speakers Terminals** permit direct connection of optional external speakers. *Connection details are on pages 72-73.*
- Important:** To hear sound from the external speakers, they must be turned on using the Speakers: int/ext/off function on the AUDIO ADJUST SETUP menu for the audio mode you have selected. *Details are on pages 28-36.*
- ⑧ **SURROUND Speakers Terminals** permit direct connection of auxiliary speakers for surround-sound effects. Prologic, prologic phantom, matrix surround, hall surround, or stadium surround audio mode must be selected, and the Rear spkr: on/off function on the AUDIO ADJUST SETUP menu for that mode must be set to Rear spkr: on to hear the "surround" sound. Optional speakers are required. *Details on connecting speakers are on pages 72-73.*
- Note:** 8-ohm speakers should be used.
- ⑨ **CABLE/ANTENNA (ANT A, ANT B, and/or CONVERTER) Connectors** are used when attaching either a home antenna and/or a cable-TV system to your TV. *Connection details are on pages 61-65.*

Caution: When using TV games, computers, and similar products with your TV, keep the contrast function at a low setting. If a fixed (non-moving) pattern is left on the screen for long periods of time at a high contrast setting, the image can be permanently imprinted onto the picture tubes. These types of imprints are not covered by your warranty because they are the result of misuse.

Compatible Components

A wide variety of compatible VCR's, camcorders, and LaserDisc players are available. Check with your dealer for details.

Other brands of components can also be connected to your TV. Refer to the component owner's manual for the manufacturer's recommended hookup instructions.

Positioning Components on Shelves in a Rack or Stand

If you are connecting several components and plan to use a stand or component rack, follow these general rules when arranging your components.

If the components are arranged horizontally, allow at least an inch or two of space between them so air can circulate freely. This will also provide some space between the devices to minimize interference.

If components are arranged vertically on shelves, place the stereo amplifier at the top so that heated air rising from it will not pass around the other components.

Do not block the ventilation holes in the components. If components are placed on rugs or deep-pile mats, the ventilation holes in the bottoms may be blocked and overheating could result.

Turn Off Power Before Connecting Components

Always turn off power to all components before you connect or disconnect any cables. This will protect your components from possible electrical surges that could damage your equipment.

This is a good practice for all your audio and video components – TV's, VCR's, audio systems, computers, etc.

Position Speakers to Avoid Interference

Placing external speakers with unshielded magnets too close to the TV may result in the speaker magnets affecting the quality of the picture. Such speakers should be located at least eight inches away.

If unshielded speakers are too close to the TV, misconvergence may happen (colors along sides may shift). If this happens move the speakers farther away from the TV. If this does not correct the problem, you may need to converge the TV *as described on page 5*.

Plugging in Power Cords

Do not plug your TV's power cord into another component's outlet (switched or unswitched). Your TV should only be plugged into a wall outlet or suitable power strip outlet.

Do not plug any power cord into a wall outlet until you are finished making connections.

Many components have "convenience outlets" on their back panels so you can plug power cords from other components into a "convenience outlet" instead of a wall outlet. Usually these outlets will be labeled either "switched" or "unswitched".

If the outlet is labeled "switched", that means power to the outlet will be switched off when the component's power button is switched off.

If the outlet is labeled "unswitched", that means power will always be available at that outlet, even when the component is turned off.

Depending on the size of your system, you may prefer to use an extension cord or a "multiple adapter" to get enough outlets for all your components.

The power cords on your ProScan components are "polarized" (one blade is wider than the other). Be sure the extension cord or multiple adapter is also polarized. The plug should fit in the outlet only one way.

Position Cables to Avoid Hum

The possibility of picking up hum (interference noise) in the audio/video cables will be reduced if you keep them away from the back of the TV. Route the cables to the sides of the TV's back panel instead of straight down the middle.

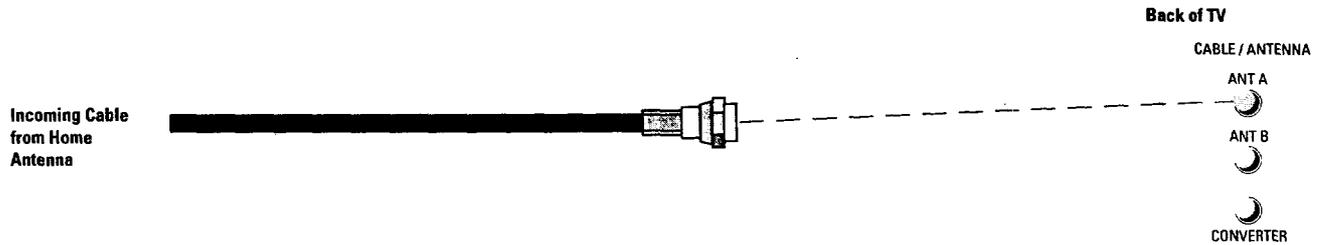
All cable plugs should be firmly seated in the jacks where they connect to the equipment. If a plug is not connected firmly, audio hum or smeared video may result.

If your antenna cable is flat twin-lead cable, try to keep it away from the audio/video cables as much as possible. Excess flat, twin-lead cable should be cut off instead of coiled behind the TV. Round, coaxial, antenna cable is usually shielded and can be coiled or placed next to audio/video cables without causing interference.

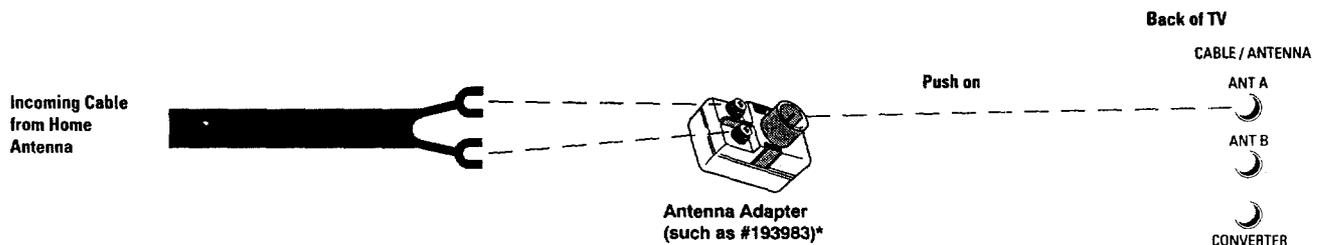
Home Antenna Connections

Follow one of the steps below to connect an indoor or outdoor antenna to your TV *if you do not have a cable-TV system.*

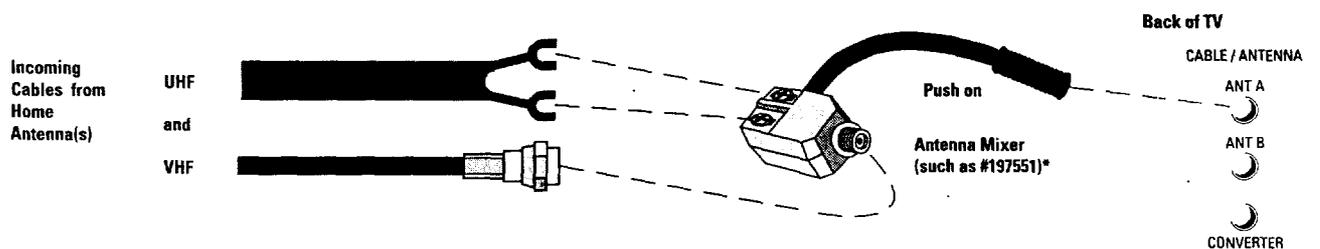
- A.** If your home antenna cable is a 75-ohm, round, coaxial cable that carries only VHF (channels 2-13), only UHF (channels 14-69), or VHF and UHF channels, connect it to your set like this:



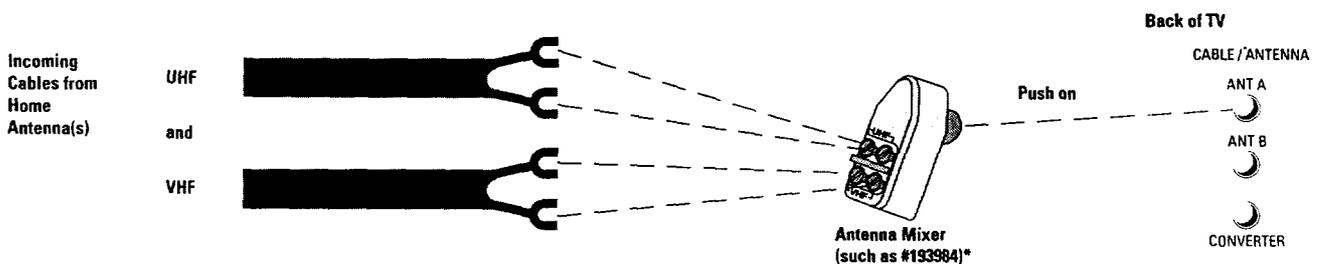
- B.** If your home antenna cable is a 300-ohm, flat, twin-lead cable that carries only VHF (channels 2-13), only UHF (channels 14-69), or VHF and UHF channels, connect it to your set like this:



- C.** If your home antenna cable(s) are a 75-ohm, round, coaxial cable that carries VHF (channels 2-13) and a 300-ohm, flat, twin-lead cable for UHF (channels 14-69), connect it to your set like this:



- D.** If the antenna cables coming from your home antenna(s) are two 300-ohm, flat, twin-lead cables as shown here, connect them to your set like this:



Note: Be sure to connect the UHF antenna cable to the UHF screws on the Antenna Mixer and the VHF antenna cable to the screws marked VHF.

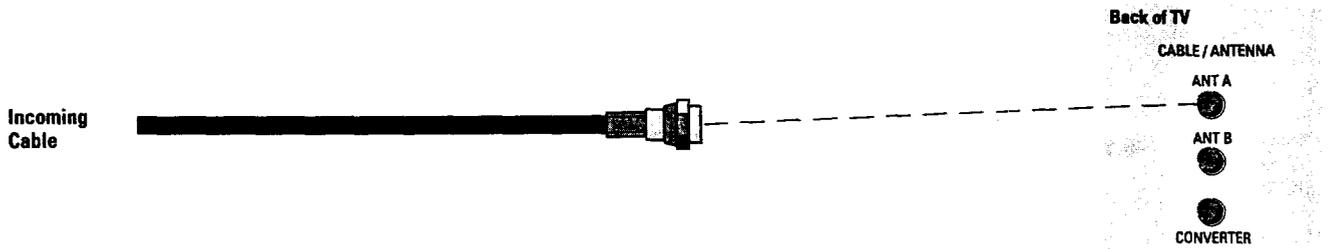
* Optional accessory available from your dealer or electronics supply store. Mail order form is on page 75.

Tip: you can Home Antenna

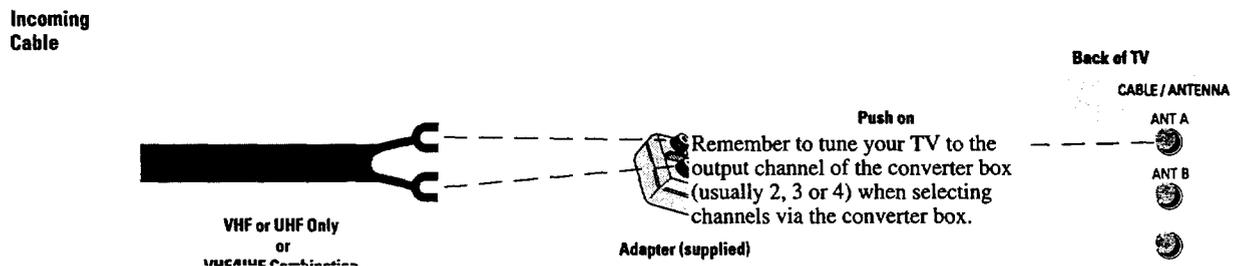
Cable TV Connections

Follow one of these steps to connect a cable-TV system to your TV instead of a home antenna. Since cable-TV systems vary, you may wish to consult your local cable-TV company for additional information.

A. Follow this diagram if your cable company does not require a converter/decoder box (no scrambled channels):



B. Follow this diagram if your cable company requires a converter/decoder box that can be controlled by remote control. Most brands of remote-controllable boxes can be controlled by the remote that came packed with your TV. Details for programming your TV's remote to also control the converter/decoder box are on page 64. See diagram D if you want to connect a VCR.



C. Follow this diagram if your cable company requires a converter/decoder box that can not be controlled by remote control:

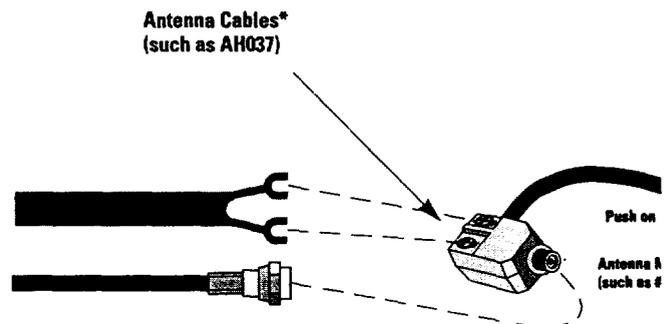
Scrambled Cable-TV Channels

Some cable-TV decoders require that you manually switch from regular to scrambled channels on the decoder whenever you wish to view the premium pay channels. By connecting the decoder to the ANT A input and CONVERTER output on your TV and leaving the decoder box set to the scrambled channel, you can switch between the scrambled and unscrambled channels by using the TV's remote control.

Simply press the ANT (antenna) button on the remote control to switch between the scrambled and unscrambled channels.

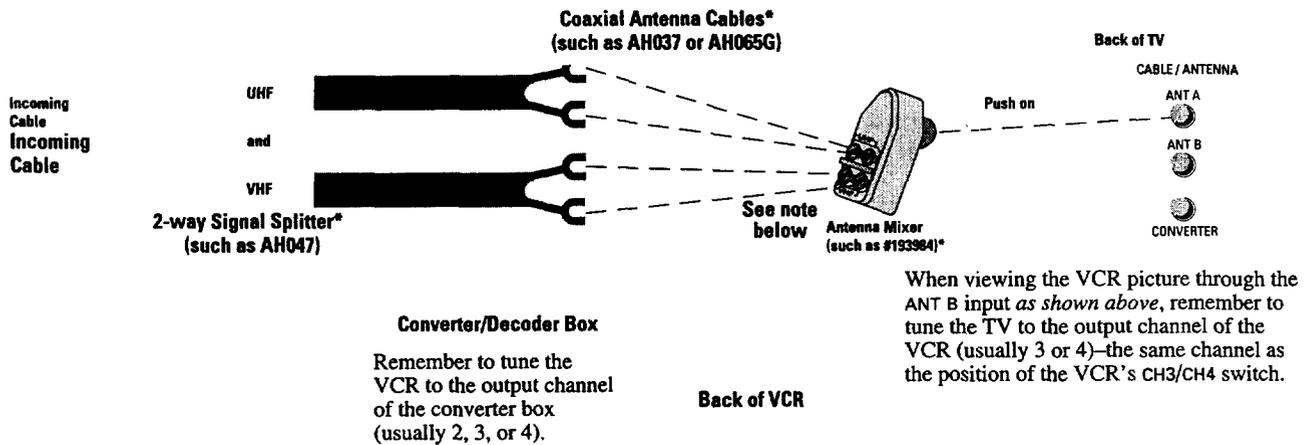
Unscrambled cable channels will come through the ANT B input. Antenna B will appear in the channel number display whenever you are tuned to the input from ANT B.

The scrambled channel from the decoder box will come through the ANT A input. Be sure to leave the decoder box set to the scrambled channel, and remember to tune your TV to the output channel of the converter box (usually 2, 3, or 4).



* Optional accessory available from your dealer or electronics supply store. Mail order form is on page 75.

D. Follow this diagram if your cable company requires a converter/decoder box for premium channels and you also want to connect a VCR.



Most cable companies that require use of a converter/decoder box only require the box for scrambled premium channels like HBO or Showtime. All the other cable-TV channels can usually be viewed without the converter box. Therefore, by using a signal splitter, you can send the incoming cable-TV signals directly to the TV and also through the converter/decoder box and VCR as shown above.

You can easily switch between the signals coming into the ANT A connector and the ANT B connector by pressing the ANT (antenna) button on the master remote control. Antenna B will appear in the channel number display when you are seeing the signal from the ANT B input.

The cable-TV channels that are not scrambled can then be seen whenever the TV is receiving the ANT A signals. The cable-TV channels that are scrambled can then be seen through the converter box and then through the VCR whenever the TV is receiving the ANT B signals. Most VCR's will feed the signal through their antenna jacks even when the VCR is turned off. This allows you to watch scrambled channels from the converter box without having to turn on the VCR.

This connection can be useful because it will let you record a scrambled channel on the VCR at the same time you are watching an unscrambled channel through the ANT A connector on the TV.

Note: You can also connect the VCR's AUDIO and VIDEO OUT jacks to the TV's AUDIO and VIDEO IN jacks as shown on page 66. The audio/video connections are necessary for stereo playback from the VCR. To see the signals from the VCR that are going into the TV's INPUT jacks, select TV channel 91 if you connected the VCR to the INPUT 1 jacks or select channel 92 if you connected the VCR to the INPUT 2 jacks.

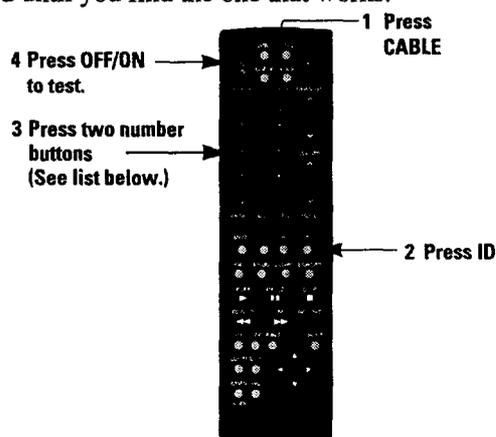
(Optional S-VHS VCR's) To take advantage of the S-VHS (Super Video) format, also connect the VCR's S-VHS OUT connector to the TV's S-VIDEO INPUT 1 or 2 connector (the same one to which you connected the normal audio and video). When you select channel 91 or 92, the TV will automatically select S-VHS video if it is available.

* Optional accessory available from your dealer or electronics supply store. Mail order form is on page 75.

Programming Remote to Control Cable Box

If your cable box has its own remote to change channels, you will probably be able to program the TV's remote to control both the TV and the cable box.

The TV's remote is designed to control several brands of cable boxes. To program the remote, just press CABLE, then ID, then the two-digit code number for your brand of cable box. Refer to the chart below to find the code number for your cable box. Press the OFF/ON button next to confirm operation. You may need to try each of the code numbers listed until you find the one that works.



Brand of Cable-TV Box	Code Number(s)
Anvision	07, 08
Cablestar	07, 08
Eagle	08
Eastern International	02
General Instrument	04, 05, 15, 23, 24, 25, 30, 36
Hamlin	12, 13, 34
Hitachi	37, 43
Jerrold	04, 05, 15, 23, 24, 25, 30, 36
MACOM	37, 43
Magnavox	07, 08, 19, 26, 28, 29, 32, 33, 40, 41
NSC	09
Oak	01, 16, 38
Oak Sigma	16
Panasonic	27, 39
Philips	07, 08, 19, 26, 28, 29, 32, 33, 40, 41
Pioneer	18, 20
Randtek	07, 08
RCA	27
Regal	12, 13
Regency	02
Scientific Atlantic	03, 22
Sylvania	11
Teknika	06
Texscan	10, 11
Tocom	17, 21
Unika	31
Viewstar	07, 08, 19, 26, 28, 29, 32, 33, 40, 41
Zenith	14, 42

Note: Refer to the information sheet packed with your remote control for the latest list of brand names and code numbers. Because this list is constantly growing, the information sheet packed with your remote control may be a later version of this list and contain additional brands and/or code numbers.

After the TV's remote is programmed, you will be able to turn on the cable box by pressing CABLE then OFF/ON. You can change channels on the cable box by pressing the CHANNEL buttons whenever the remote is in the "cable mode". To put the remote in the "cable mode", press the CABLE button. Press the TV button to put the remote back into the "TV mode" so the remote buttons will control the TV again.

Programming Remote To Control Cable Box with master remote control only

Refer to the chart at the left to find the code number that corresponds to the brand name of your cable box. Keep this number in mind. If more than one number is listed, you may need to try each one separately until you find the one that works.

- 1 Press CABLE button on remote.
- 2 Press ID button on remote.
- 3 Press two number buttons (first one, then the other) to enter the code number for your brand of cable box.

Note: You must press the two number buttons within three seconds of pressing the ID button.
- 4 Point the remote at the cable box and press the OFF/ON button to test the code number.
 - If the right number was entered, the cable box should turn on. Pressing the CHANNEL buttons should then also change channels on the cable box.
 - If the cable box does not react to the remote (or if the remote turns on the cable box but does not change channels), repeat steps 1 through 5 with another code number.

Operating Notes: After the remote control is programmed, it will turn on the cable box whenever you press CABLE and then OFF/ON. To turn off the cable box, press CABLE, then OFF/ON. To change channels on the cable box, press CABLE then CHANNEL up or down.

After you program the remote control, you can use the VCR/cable Setup function on the SETUP menu to automatically turn on the cable box and tune the TV to the correct channel for the cable box when you press the CABLE button. *Details are on page 43.*

Cable-TV Operation

Your new TV is designed to receive up to 181 channels in the U.S.A. including 125 unscrambled cable channels (see chart at right). To use this TV with a cable-TV system, confirm that the cable-TV system is properly connected to your TV. Since cable systems vary, you may wish to consult your local cable-TV company for additional information.

If your cable-TV company follows EIA/NCTA channel-identification standards, most of the channels offered by your cable company will be identified by channel numbers that are identical to those on your TV. For example, if your cable-TV system has programs on cable channel 20, you can choose this channel by selecting channel 20 on your TV.

If your cable company offers cable channels 90, 91, or 92 you can tune them by selecting the TV channels *shown below*.

If your cable company offers this cable channel:	Tune your TV to this channel:
90	126*
91	127*
92	128*

* To tune cable channels 100 through 128, press and hold number button "1" until "1--" appears on the screen, then enter the other two numbers.

Some cable-TV companies do not follow the EIA/NCTA standards and instead assign their own channel identification. For example, some use the standard broadcast channel numbers (2-13) for channels 2-13, but identify their other channels with letters. If your cable company does not follow the EIA/NCTA standards, ask them for a cross reference that shows to which channels you should tune your TV to receive their cable-TV channels.

Not all cable-TV channels will be active on your particular cable-TV system. Also some cable companies may require the use of a decoder with their cable-TV system. Consult your cable company or local dealer for details.

Scrambled Cable-TV Channels

Some cable companies offer scrambled "premium-pay" channels. Descrambling these signals for normal viewing requires the use of a descrambler device (cable box) which is generally provided by the cable company.

How you connect the cable box to your TV depends upon whether or not the cable box can be controlled by remote control. The TV's remote can also control most brands of cable boxes, so if your cable box is remote controllable, you will want to connect it as *shown in Diagram B on page 62*. Instructions for programming the TV's remote to control the cable box *are on page 64*.

If your cable box can not be controlled by remote control, you will still be able to remotely switch between a scrambled channel and unscrambled channels with the connection *shown in Diagram C on page 62 or in Diagram D on page 63*.

The chart below lists the "total" broadcast (off-air) and cable channel count.

Channels	Off Air	Cable
• Low VHF A-8 (Channel 01)	-	1
• VHF (Channels 2-13)**	12**	12**
• UHF (Channels 14-69)	56	-
• Low Midband A-5 thru A-1 (Channels 95-99)***	-	5***
• Midband (Channels 14-22 or A-1)	-	9
• Superband (Channels 23-36 or J-W)	-	14
• Hyperband (Channels 37-64 or W+1 to W+28)	-	28
• Ultraband (Channels 65-94 and 100-125 or W+29 to W+84)	-	56
Total**	68	125

** VHF is only counted once in total channel count because you can receive channels 2-13 on both "off-air" and "cable" channels. Therefore the total channel count for "off-air" and "cable" is 181 channels (68+125-12=181).

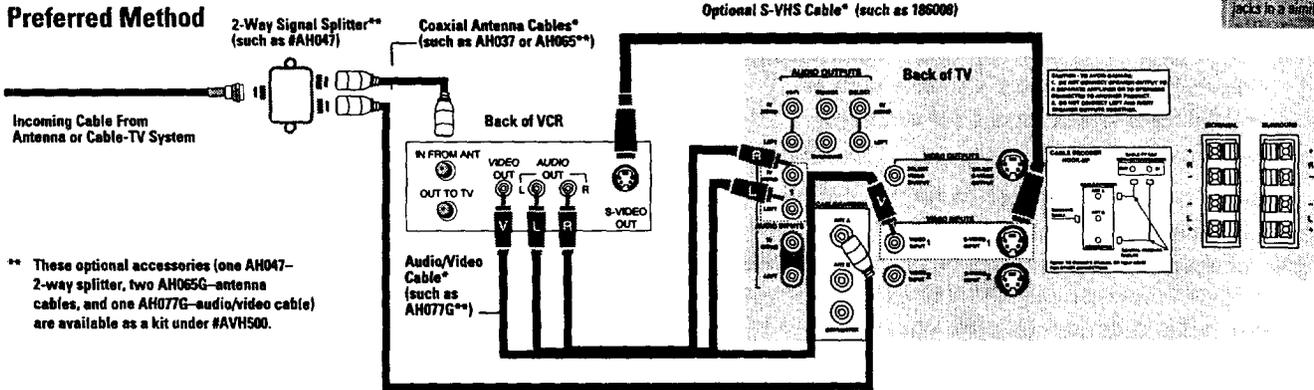
*** Channels 95, 96, and 97 are not applicable in Canada. Therefore the total number of channels for Canada is 178 (68+122-12=178).

VCR Connections

These connections allow you to record TV programs and play back tapes.

Note: A second audio/video device can be connected to the INPUT 2 jacks in a similar manner.

Preferred Method



** These optional accessories (one AH047-2-way splitter, two AH065G-antenna cables, and one AH077G-audio/video cable) are available as a kit under #AVH500.

Shown here is the preferred method of connecting a VCR to your TV if you are in an area with good signal reception. This method uses a 2-way signal splitter to run separate signals to the VCR and TV. This way you can view either TV programs or VCR tapes and not be concerned about the position of the VCR's TV/VCR switch. If your cable company requires a decoder box for premium channels, refer to page 63.

Note: The audio/video connections from the VCR to the TV are required for you to watch tapes being played by the VCR.

Optional S-VHS (Super VHS): If your VCR has an S-VIDEO or S-VHS OUT connector, connect it to the S-VIDEO INPUT 1

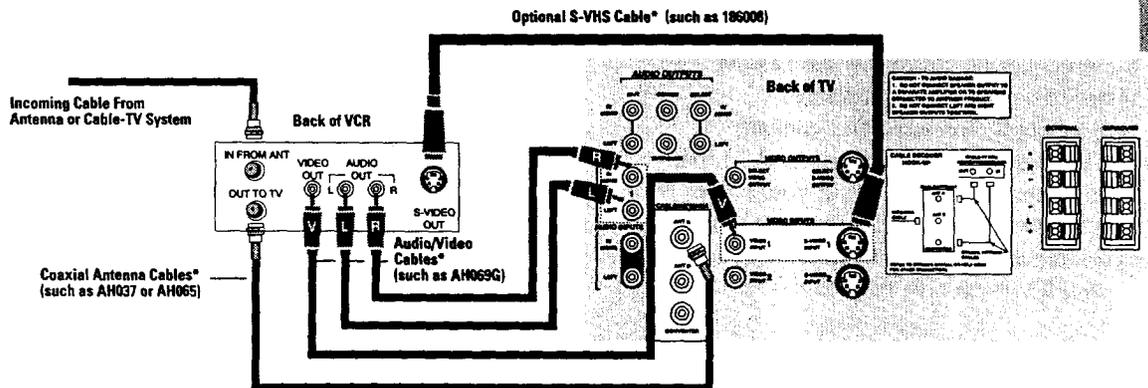
connector on the TV in addition to the other three audio and video cables. An optional S-VHS cable is required. S-VHS can not be viewed on the small PIP (Picture-In-Picture) picture.

Operation: If the VCR is connected to INPUT 1 jacks as shown, select TV channel 91 to view whatever the VCR is playing.

If you connect a second audio/video device to INPUT 2, select TV channel 92 to view whatever the second device is playing.

Note: You can program your TV to automatically select the proper VCR input channel (91 or 92) when you press the VCR1 or VCR2 button. Details are on page 43.

Simplified Method



Note: A second audio/video device can be connected to the INPUT 2 jacks in a similar manner.

Shown here is a simplified method of connecting a VCR to your TV. This method is best for areas with poor signal reception. If your cable company requires a decoder box for premium channels, refer to page 63.

Note: The audio/video connections from the VCR to the TV are optional; however, these additional connections usually produce a better-quality picture during VCR playback. These connections are required for stereo or S-VHS playback from VCR's.

Optional S-VHS (Super VHS): If your VCR has an S-VHS or S-VIDEO OUT connector, connect it to the S-VIDEO INPUT 1 connector on the TV in addition to the other three audio and video cables. An optional S-VHS cable is required. S-VHS can not be viewed on the small PIP (Picture-In-Picture) picture.

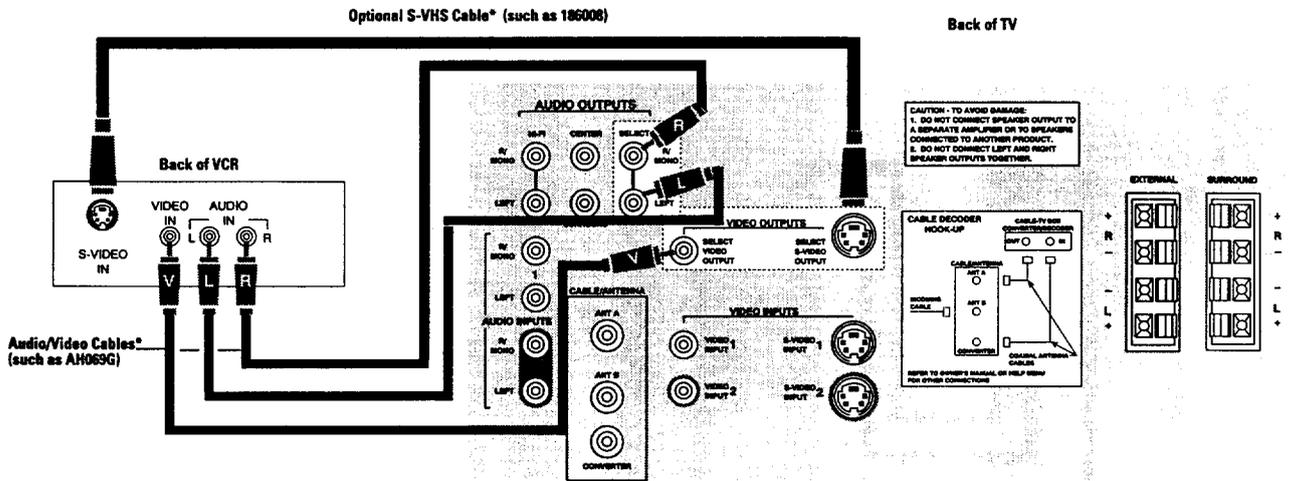
Operation: If the VCR is only connected to the ANT connector (no audio or video cables connected), select TV channel 3 or 4 to see the signal from the VCR (the same channel the CH4/CH3 switch is set to on the VCR).

If the VCR is also connected to the INPUT 1 jacks as shown, select TV channel 91 to view whatever the VCR is playing.

If you connect a second audio/video device to INPUT 2, select TV channel 92 to view whatever the second device is playing.

Note: You can program your TV to automatically select the proper VCR input channel (3, 4, 91, or 92) when you press the VCR1 or VCR2 button. Details are on page 43.

Special Recording onto VCR



This connection only allows you to record on the VCR whatever is currently being displayed on the TV screen except for menus and special effects. This is not a common application for recording with your VCR, but you may find it useful in certain situations. You will also be able to record signals from another VCR (or similar device) that is connected to the TV's INPUT 1 or INPUT 2 jacks.

The TV must remain turned on during recording. If you change channels on the TV, the channel change will be recorded on the VCR tape unless you pause the VCR during recording.

Because your TV is cable-compatible, this application may be used to record cable-TV programs from the TV onto a VCR that is not cable-compatible.

You may also want to use this connection to dub or edit VCR tapes with two or three VCR's. By connecting one VCR (or camcorder) to the INPUT 1 jacks and another VCR (or camcorder) to the INPUT 2 jacks, you will be able to selectively edit and record whatever is playing on the TV screen onto a third VCR (or camcorder) connected as shown here to the SELECT OUT jacks.

If you connect a surveillance system to your TV, you will be able to record what the camcorder is displaying on the TV screen by connecting a VCR (or camcorder) to the SELECT OUT jacks as shown here.

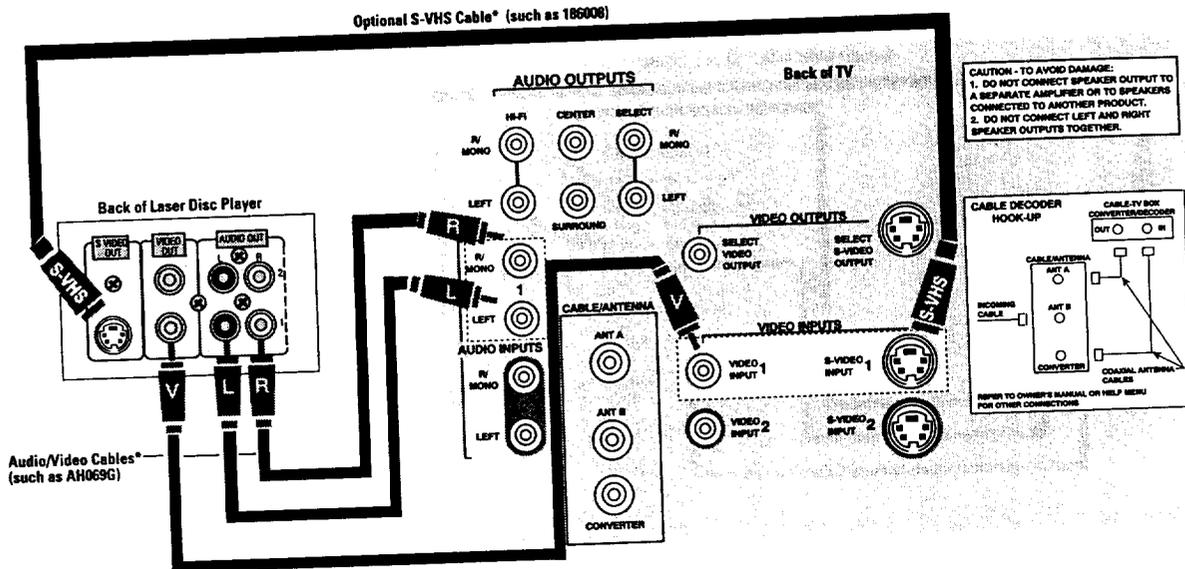
Optional S-VHS (Super VHS): If your VCR has an S-VIDEO or S-VHS IN connector, connect it to the SELECT S-VIDEO OUTPUT connector on the TV in addition to the left and right audio cables. An optional S-VHS cable is required.

Operation: To see the signal from a device connected to the INPUT 1 jacks, select channel 91. Select channel 92 to see the signal from a device connected to the INPUT 2 jacks. The S-video signal will automatically override the regular video signal when it is available.

Notes: Menus and displays like clock and channel do not come through the SELECT OUT jacks.

The inset picture from the picture-in-picture can be recorded from the SELECT OUT jacks.

Laser Disc Player Connections



S-VHS or Standard Laser Disc Player

An S-VHS or standard laser disc player can be connected directly to your TV. If you have another device, such as a VCR connected to the INPUT 1 jacks, you can connect the player to the INPUT 2 jacks.

If you have an S-VHS laser disc player, connect the S-VHS video cable to the S-VIDEO INPUT connector on your TV. If you have a standard VHS laser disc player, connect the video cable to the VIDEO INPUT jack of your TV. With either video connection, attach the audio cables to the AUDIO INPUTS (R/MONO and LEFT) audio jacks.

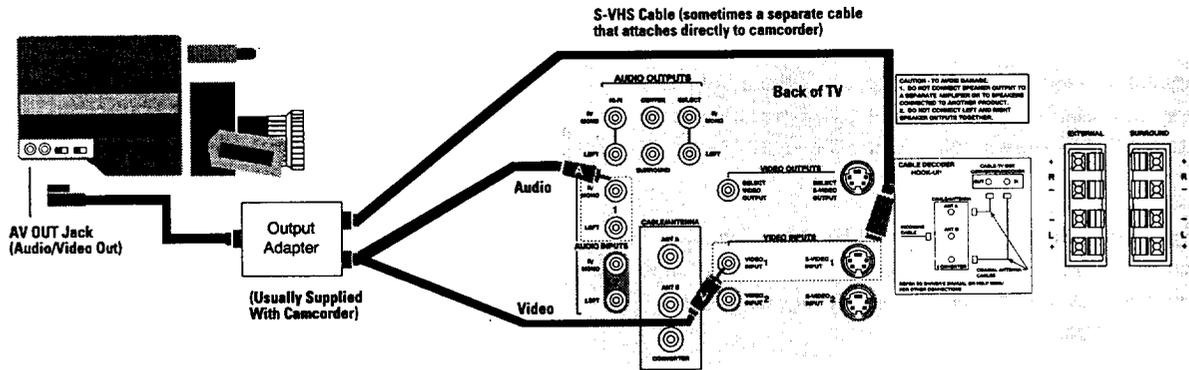
Note: If you are planning on using the signal from these inputs in the small picture during PIP (Picture-In-Picture) operation, be sure to also connect the normal video cable. S-VHS video can not be viewed on the small PIP picture.

Operation: If the player is connected to the INPUT 1 jacks, select TV channel 91 to view whatever the player is playing.

If the player is connected to the INPUT 2 jacks, select TV channel 92 to view whatever the player is playing.

Note: If you connect a ProScan LaserDisc player that responds to the VCR2 button on the remote control, you can program your TV to automatically select the proper input channel (91 or 92) when you press the VCR2 button. *Details are on page 43.*

* Optional accessories are available from most dealers and electronics supply stores. *Mail order form is on page 75.*



S-VHS or Standard VHS Camcorder (Playback)

This connection allows you to play back tapes in the camcorder and watch them on the TV.

An S-VHS or standard camcorder can be connected directly to your TV. If you have another device, such as a VCR connected to the INPUT 1 jacks, you can connect the camcorder to the INPUT 2 jacks.

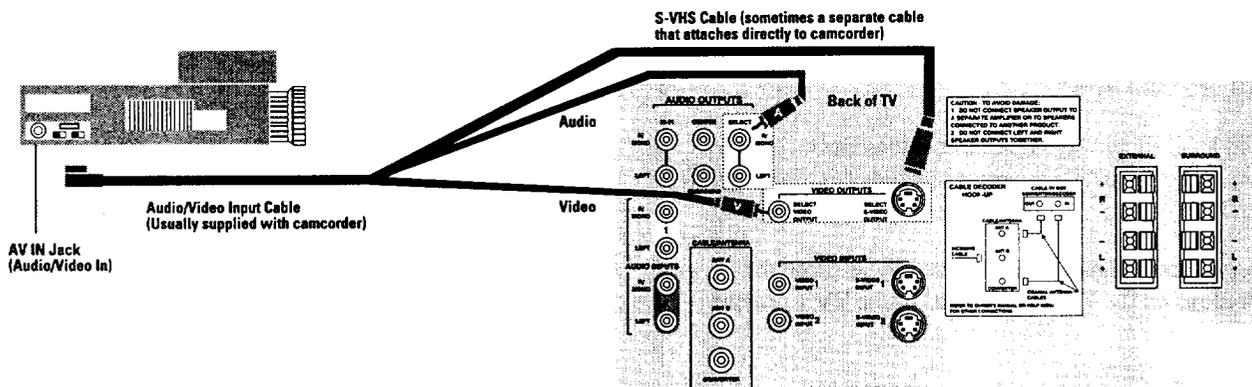
If you have an S-VHS camcorder, connect the S-VHS video cable to the s-VIDEO INPUT connector on your TV. If you have a standard VHS camcorder, connect the video cable to the VIDEO INPUT jack on the back of your TV. With either video connection, attach the audio cable to the AUDIO INPUTS 1 R/MONO audio jack.

Notes: If your camcorder has stereo audio cables, connect left to LEFT and right to R/MONO.

If you are planning on using the signal from an S-VHS camcorder in the small picture during PIP (Picture-In-Picture) operation, be sure to also connect the normal video cable. S-VHS can not be viewed on the small PIP picture.

Operation: If the camcorder is connected to the INPUT 1 jacks, select TV channel 91 to view whatever the camcorder is playing.

If the camcorder is connected to the INPUT 2 jacks, select TV channel 92 to view whatever the camcorder is playing.



S-VHS or Standard VHS Camcorder (Recording)

This connection allows you to record onto the camcorder whatever is currently being displayed on the TV screen. You will also be able to record signals from a VCR (or similar device) that is connected to the TV's INPUT 1 or INPUT 2 jacks.

The TV must remain turned on during recording. If you change channels on the TV, the channel change will be recorded on the camcorder tape unless you pause the camcorder during recording.

You may also want to use this connection to dub or edit VCR tapes with two or three camcorders (or VCR's). By connecting one camcorder (or VCR) to the INPUT 1 jacks and another camcorder (or VCR) to the INPUT 2 jacks, you will be able to selectively edit and record whatever is playing on the TV screen onto a third camcorder connected as shown here to the SELECT OUT jacks.

If you connect a surveillance system to your TV, you will be able to record what the camera is displaying on the TV screen by connecting another camcorder (or VCR) to the SELECT OUT jacks as shown here.

Optional S-VHS (Super VHS): If your camcorder has an S-VHS IN connector, connect it to the SELECT S-VIDEO OUTPUT connector on the TV in addition to the audio cables.

Operation: To see the signal from a device connected to the INPUT 1 jacks, select channel 91. Select channel 92 to see the signal from a device connected to the INPUT 2 jacks.

Note: Menu and displays like clock and channel do not come through the SELECT OUT jacks.

The small picture from picture-in-picture can be recorded from the SELECT OUT jack.

* Optional accessories are available from most dealers and electronics supply stores. Mail order form is on page 75.

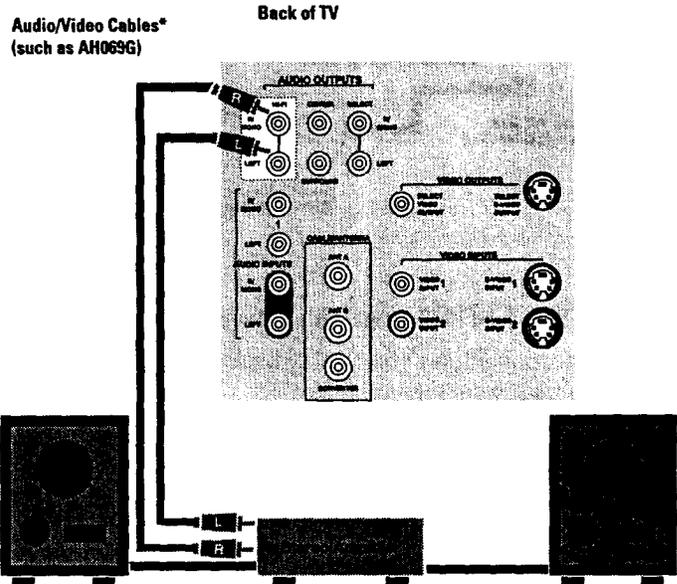
Audio Amplifier

If your amplifier is not part of a "system" that has its own remote, connect it to the TV as shown here. (If the amplifier is part of a system that has its own remote, you may choose to connect it to the TV as shown below using the SELECT OUT jacks.)

With the connection shown here, you will be able to change and mute volume with the TV's remote control. You will also be able to remotely control the audio tone by adjusting the TV's graphic equalizer.

Connection: Connect the AUDIO OUTPUTS HI-FI OUT (R/MONO and LEFT) jacks to the corresponding input jacks (such as AUX, TUNER, CD, or TAPE MONITOR) on the stereo amplifier. Do not use the PHONO jacks. If your amplifier is not stereo (mono), connect it to the TV's R/MONO jack. Consult the amplifier owner's manual for the manufacturer's recommended hookup.

Operation: If desired, turn off the TV's internal speakers using the Speakers: int/ext/off function on the AUDIO ADJUST SETUP menu for the audio mode you have selected. *Details are on pages 24-36.* Adjust the amplifier for normal listening. You can also control sound with the VOLUME and MUTE buttons on the TV's remote.



Audio Cassette Recorder or Amplifier

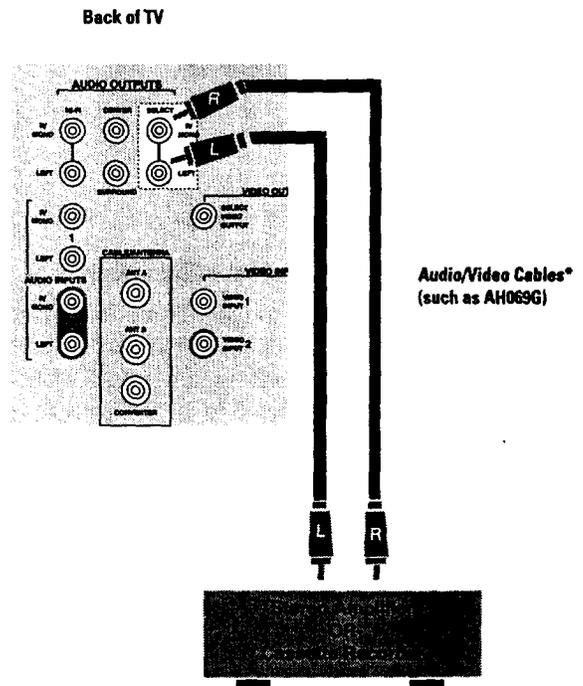
If your amplifier is part of a "system" that has its own remote control, connect it to the AUDIO OUTPUTS SELECT (R/MONO and LEFT) jacks as shown here.

The "fixed level" audio signal present at these jacks is also ideal for connecting an audio cassette recorder to record audio from the TV.

This constant audio signal is not affected by pressing the volume buttons on the TV's front panel or the TV's remote control.

Connection: Connect AUDIO OUTPUTS SELECT (R/MONO and LEFT) jacks to the corresponding input jacks (such as AUX, TUNER, CD, or TAPE MONITOR) on the stereo amplifier or cassette recorder. Do not use the PHONO jacks. If your amplifier is not stereo (mono), connect it to the TV's R/MONO jack. Consult the equipment owner's manual for the manufacturer's recommended hookup.

Operation: Select a TV channel and turn down the sound on the TV, or turn off the TV's internal speakers using the Speakers: int/ext/off function on the AUDIO ADJUST SETUP menu for the audio mode you have selected. *Details are on pages 24-36.* Adjust sound with controls on the amplifier or cassette recorder. If the amplifier or cassette recorder is part of a "system" that has its own remote, use the system's remote to adjust sound.



*Optional accessories are available from most dealers and electronics supply stores. Mail order form is on page 75.

Surround Sound Audio

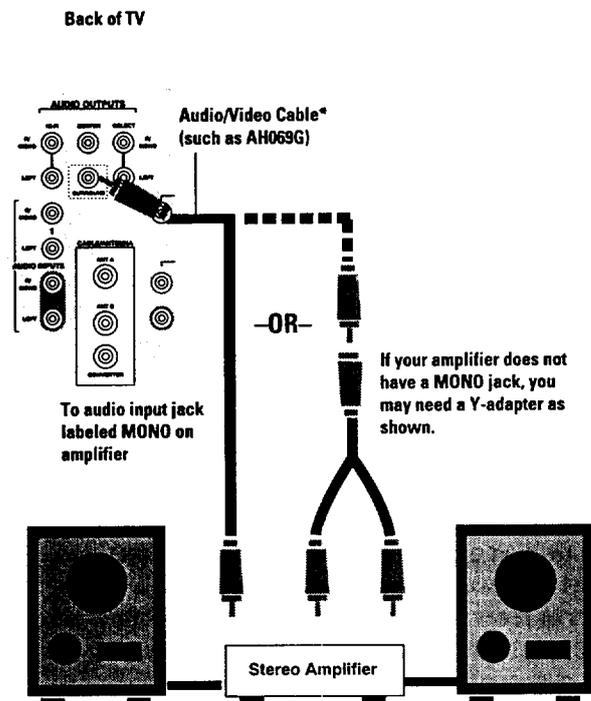
Connecting an amplifier to the AUDIO OUTPUTS SURROUND jack gives you the ability to get more surround-sound audio volume than the SURROUND speakers terminals will allow.

With the connection shown here, you will be able to adjust the volume of the surround sound audio by using the Rear volume function on the AUDIO ADJUST SETUP menus for prologic, prologic phantom, matrix surround, hall surround, and stadium surround audio modes as described on pages 32-36.

Connection: Connect the AUDIO OUTPUTS SURROUND jack to the input jack labeled MONO (such as AUX, TUNER, CD, or TAPE MONITOR) on the stereo amplifier. Do not use the PHONO jack. If your amplifier does not have a MONO jack, you may need a Y-adaptor (available from most electronics supply stores) to hear sound from both channels. Consult the amplifier owner's manual for the manufacturer's recommended hookup.

Note: If desired, you can connect one set of surround speakers to the TV and another set of surround speakers to an amplifier that is connected to the TV's AUDIO OUTPUTS SURROUND jack.

Operation: Select prologic, prologic phantom, matrix surround, hall surround, or stadium surround audio as described on pages 32-36. Adjust the volume of the surround-sound audio to the mid-range by using the Rear volume function on the AUDIO ADJUST SETUP menu for the audio mode you have selected. Adjust the amplifier so that the surround audio is at a normal listening level.



Center Sound Audio

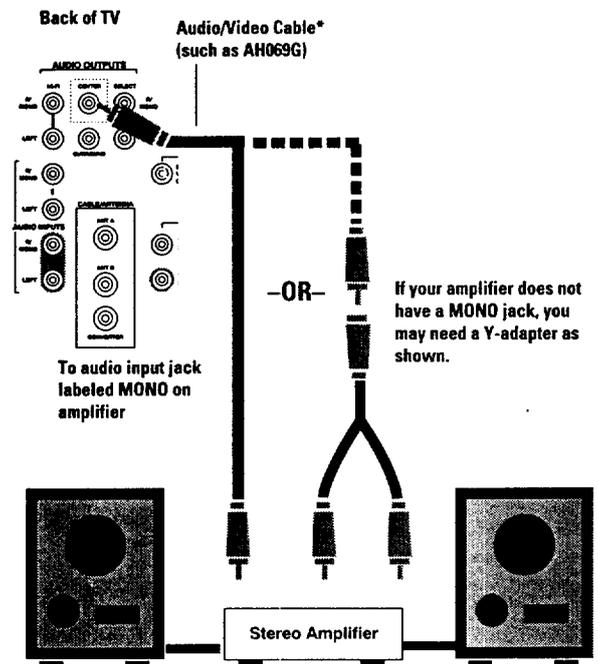
Connecting an amplifier to the AUDIO OUTPUTS CENTER jack gives you the ability to get more center-sound audio volume than the TV will allow.

With the connection shown here, you will be able to adjust the volume of the center sound audio by using the Center volume function on the AUDIO ADJUST SETUP MENUS for Dolby 3 stereo or prologic audio modes as described on pages 31-33.

Connection: Connect the AUDIO OUTPUTS CENTER jack to the input jack labeled MONO (such as AUX, TUNER, CD, or TAPE MONITOR) on the stereo amplifier. Do not use the PHONO jack. If your amplifier does not have a MONO jack, you may need a Y-adaptor (available from most electronics supply stores) to hear sound from both channels. Consult the amplifier owner's manual for the manufacturer's recommended hookup.

Operation: Select Dolby 3 stereo or prologic audio as described on pages 31-33.

Adjust the volume of the center sound audio to the mid-range by using the Center volume function on the AUDIO ADJUST SETUP menu for the audio mode you have selected. Adjust the amplifier so that the center audio is at a normal listening level.



* Optional accessories are available from most dealers and electronics supply stores. Mail order form is on page 75.

Speaker Connections

You can connect up to four additional speakers to the back of your TV—two to the EXTERNAL speakers terminals and two more to the SURROUND speakers terminals. If you connect a stereo amplifier or receiver to your TV, you may prefer to connect the speakers to the amplifier or receiver instead of the speaker terminals on the TV.

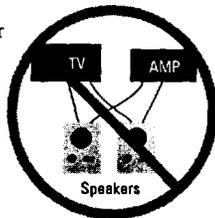
When you connect speakers to the EXTERNAL speakers terminals, be sure to turn on the speakers using the Speakers: int/ext/off or the Ext spkrs: on/off function in the AUDIO ADJUST SETUP menu for the audio mode you have selected. When you select Speakers: ext in the AUDIO ADJUST SETUP menu, the internal speakers are turned off and sound will then come through the external speakers you connected to the EXTERNAL speakers terminals.

To obtain surround-sound effects from the prologic, phantom prologic, matrix surround, hall surround, or stadium surround audio modes, connect two speakers to the SURROUND speakers terminals on the back of the TV and position them at the rear of your viewing area, elevated to standing head level. You may wish to connect a stereo amplifier or receiver to the AUDIO OUTPUTS SURROUND jack to get a volume level of surround sound audio that is higher than the SURROUND speakers terminals will allow.

When you connect speakers to the SURROUND speakers terminals, be sure to turn on the speakers using the Rear spkr: on/off function in the AUDIO ADJUST SETUP menu for the audio mode you have selected. When you select Rear spkr: on, the surround sound will then come through the external speakers you connected to the EXTERNAL speakers terminals.

If you want to connect an amplifier to your TV with its own set of speakers attached to it, you can turn off the TV's speakers using the Speakers: int/ext/off or the Int spkrs: on/off function (depending on which menu you are looking at) in the AUDIO ADJUST SETUP menu for the audio mode you have selected. Setting the Speakers: int/ext/off or the Ext spkrs: on/off function to off will turn off the TV's internal speakers and any speakers connected to the EXTERNAL speakers terminals. Speakers connected to the SURROUND speakers terminals will remain on, so you will be able to create surround-sound effects when using the amplifier.

Caution: Do not connect external speakers to more than one audio source at a time. You can connect a set of speakers to either the TV or the amplifier but not to both at the same time. If you connect the same speakers to both the TV and the amplifier (or to more than one set of terminals), you will probably damage your equipment.



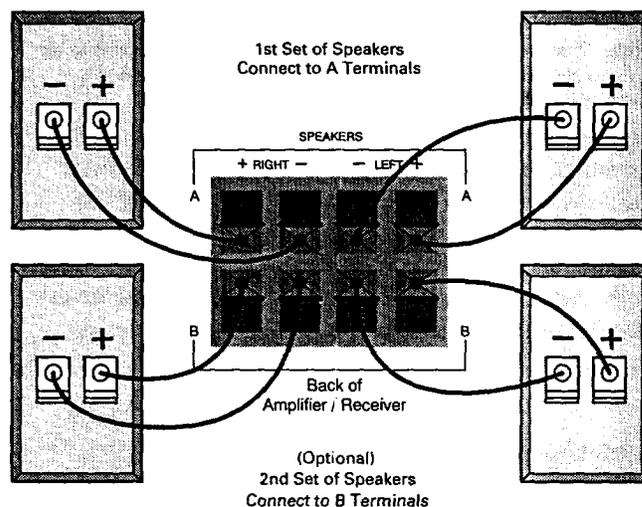
Connecting Speakers to Back of Amplifier or Receiver

If you connect an amplifier or receiver to your TV, connect the speakers to the amplifier/receiver instead of the TV. Sound from the TV will then come through the amplifier/receiver. You can also connect additional surround speakers to the back of the TV, if desired.

The diagram below shows how to connect external speakers to the speaker terminals on the back of a typical amplifier/receiver. Check the owner's manual for your amplifier/receiver if its speaker terminals look different than those shown below.

Notes: After connecting the speaker wire, pull it gently and check that it is connected securely to its terminals.

Do not allow the wire core to protrude from its terminal or contact other wires or terminals. If the cores of two wires touch each other, damage to components could result.



Important Note: When connecting the speaker wire, make sure you connect the (+) terminal on the amplifier or receiver to the (+) terminal on the speaker. One side of the speaker wire is usually marked with a white stripe to help you connect (+) to (+) and (-) to (-). If the (+) and (-) terminals are not matched properly, the speakers will not be "in phase" causing reduction in low frequencies (bass).

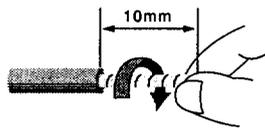
Connecting Speakers to Back of TV

If you connect an amplifier or receiver to your TV, connect the speakers to the amplifier/receiver instead of the TV. You can also connect additional surround speakers to the back of the TV, if desired.

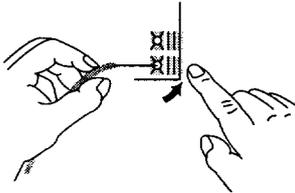
If you do not connect an amplifier or receiver to your TV, you can connect external speakers to the back of the TV to enhance sound from the TV.

The diagram at the right shows how to connect external speakers to the terminals on the back of the TV.

- 1 If necessary, remove the vinyl covering from the ends of the speaker wire and twist the wire core.



- 2 Press and hold down the lever of the speaker terminal while inserting the wire core into the hole. Be sure to connect (+) to (+) and (-) to (-) (explained in the important note in the next column).

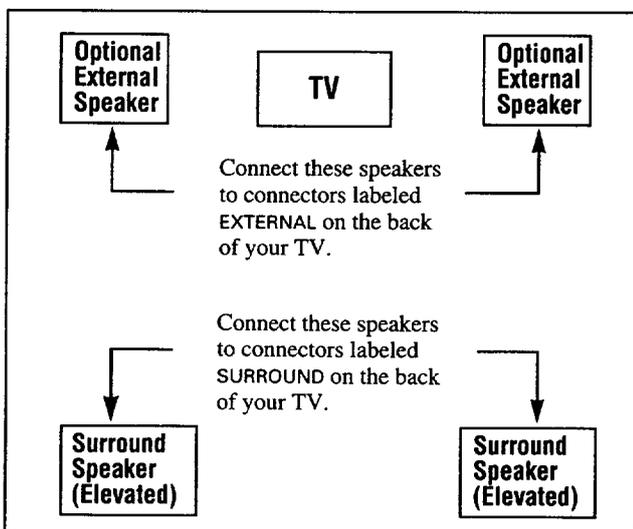


- 3 Release the lever.

Notes: After releasing the lever, pull gently on the wire and check that it is connected securely to its terminal.

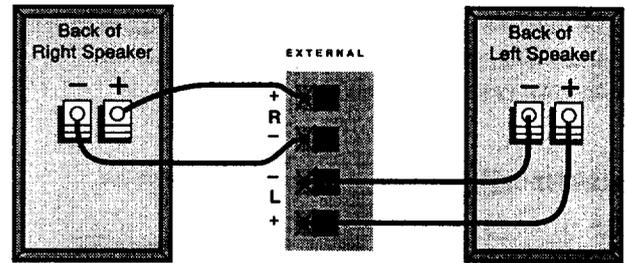
Do not allow the wire core to protrude from its terminal or contact other wires or terminals. If the cores of two wires touch each other, damage to components could result.

General Recommended Speaker Placement for Best Surround Sound

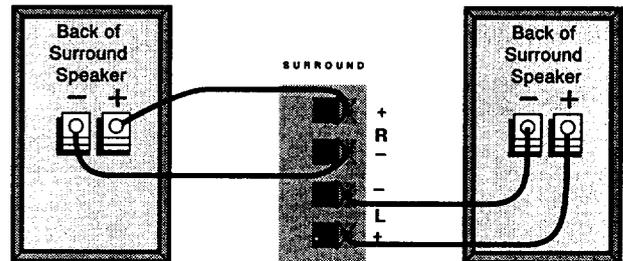


(Details are on pages 22-23 and 32-36.)

EXTERNAL Speakers Terminals



SURROUND Speakers Terminals



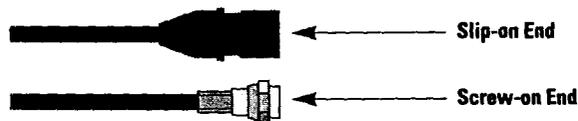
Important Note: When connecting the speaker wire, make sure you connect the (+) terminal on the TV to the (+) terminal on the speaker. One side of the speaker wire is usually marked with a white stripe to help you connect (+) to (+) and (-) to (-). If the (+) and (-) terminals are not matched properly, the speakers will not be "in phase" causing reduction in low frequencies (bass).

Speaker Connections

Optional Accessories

General Accessory Cable Information

Antenna (or cable-TV) connections are made with either coaxial antenna cable or twin-lead cable. Coaxial cables are shielded so they are less susceptible to hum or interference from adjacent cables.



Round 75-ohm coaxial cable



Flat 300-ohm twin-lead cable

Most audio/video connections between components can be made with shielded audio and video cables that have RCA-type phono connectors.

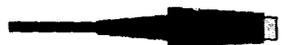


Standard Audio/Video Cable with RCA-type phono plugs (such as AH069G)

Color-Coded Jacks

The jacks on the TV's monitor panel are color-coded for ease of use. The VIDEO jacks are yellow, the right AUDIO jacks are red, and the left AUDIO jacks are white. When connecting components to each other, be sure that you always connect left outputs to left inputs and right outputs to right inputs. If a component has only one output (mono), connect it to the R/MONO INPUT jack.

To connect S-VHS (Super-VHS) components, an S-VHS video cable is required.



S-VHS Cable (such as 186008 or VAA020)

Gold-Plated Jacks and Gold-Tipped Cables

Your ProScan monitor panel is equipped with gold-plated jacks. The gold plating helps prevent oxidation of contacts which provides less signal loss than conventional contacts. A complete line of gold-tipped cables is available to help you obtain optimum performance from your equipment.

The following accessories are available from most ProScan dealers and electronics supply stores in case you want to position your components farther apart or need additional cables.

Antenna Cables



AH037 (3-ft)



Screw-on Cable attaches to the round antenna connectors (called 75-ohm F-type) on the back of your VCR or TV. The ends screw onto the connectors for a secure connection.

Push-on Cable attaches to the round antenna connectors (called 75-ohm F-type) on the back of your VCR or TV. Ends push on for a quick connection.

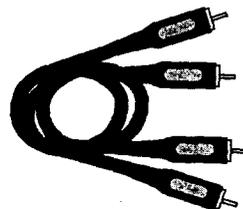
Audio/Video Cables



Standard Audio/Video Cable with RCA-type phono plugs (such as AH069G)



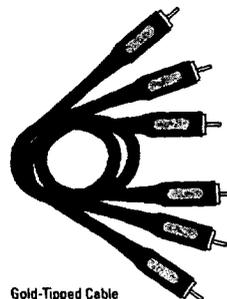
Audio/Video Cable Shielded cable for connecting AUDIO and VIDEO jacks. Has an RCA-type phono plug on each end.



Gold-Tipped Cable AH075G (6-ft)

Monaural VCR Dubbing Cable

Double cable that lets you connect the VIDEO and AUDIO jacks of two VHS VCR's to duplicate tapes. Can also be used to connect a VCR to your TV. Cable is color coded and shielded. Has RCA-type phono plugs on each end.



Gold-Tipped Cable AH077G (6-ft)

Stereo VCR Dubbing Cable

Triple cable that lets you connect the VIDEO and AUDIO jacks of stereo components.

Audio/Video Cables *continued*



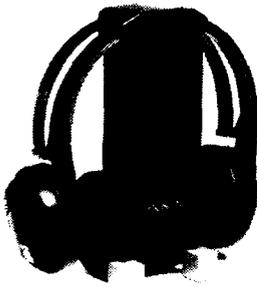
AH037 (3-ft)
AH008 (9-ft)

Stereo Audio Cable
Double gold-tipped cable generally used for connecting stereo audio components.



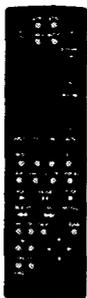
S-VHS Cables
186008 (3-ft)
VAA020 (8-ft)

S-VHS Video Cable has multipin connectors on each end for connecting S-VHS components to your TV. When connecting an S-VHS component to the S-VIDEO jack on your TV, remember to also connect the left and right audio cables to the AUDIO INPUT jacks because the S-VHS cable carries only the picture, not the sound.



PSWH100

Wireless Headphone System PSWH100
Uses RF transmission technology freeing the user from the limits of competitive "line-of-sight" systems. Rechargeable NiCad battery pack provides several hours of continuous operation, and the convenient stand stores and recharges the headset. Volume may be controlled from the headset and the RF tuning frequency may be adjusted for optimum sound performance. Line level audio inputs are compatible with any fixed audio source. The ProScan PSWH100 defines the leading edge in wireless transmission technology.



210827



206799

Remote Controls
These are the remotes that came packed with your TV. Replacements or spares can be ordered as needed.

Detach Here

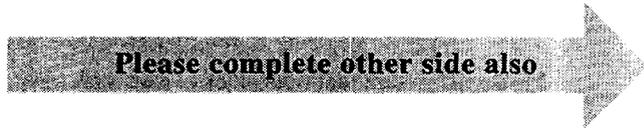
Accessory Order Form for ProScan TV

Description	Part No.	Price	Qty	Total
Screw-on Antenna Cable (3-ft)	AH037	\$3.95		
Signal Splitter	AH047	\$3.99		
Gold-Tipped Antenna Cable (6-ft)	AH065G	\$6.99		
Gold-Tipped Antenna Cable (10-ft)	AH066G	\$8.99		
Gold-Tipped Audio/Video Cable (3-ft)	AH069G	\$5.99		
Gold-Tipped Audio/Video Cable (5-ft)	AH070G	\$7.99		
Gold-Tipped Stereo Audio Cable (3-ft)	AH072G	\$8.99		
Gold-Tipped Dubbing Cable (6-ft)	AH075G	\$10.99		
Gold-Tipped Dubbing Cable (6-ft)	AH077G	\$14.99		
VCR Connection Kit (page 66)	AVH500	\$32.95		
Wireless Headphone System	PSWH100	\$199.95		
S-VHS Video Cable (8-ft)	VAA020	\$29.95		
S-VHS Video Cable (3-ft)	186008	\$27.55		
Antenna adapter	193983	\$ 6.95		
Antenna Mixer (page 61)	193984	\$10.73		
Antenna Mixer (page 61)	197551	\$11.40		
Remote Control (CRK60A)	206799	\$28.05		
Remote Control (CRK62D)	210827	\$69.95		

Prices are subject to change without notice	
Total Merchandise (\$10 Minimum Order)	\$ _____
Sales Tax	\$ _____
We are required by law to collect the appropriate sales tax for each individual state, county, and locality to which the merchandise is being sent.	
Shipping, Handling, and Insurance	\$ 5.00
Total Amount Enclosed	\$ _____
Use VISA or MasterCard preferably. Money order or check must be in U.S. currency only. No COD or CASH.	

Order Form

All accessories are subject to availability.
Where applicable, we will ship a superseding model.



Charge your order on your VISA or MasterCard by filling in below

USE YOUR CREDIT CARD

IMPORTANT: Copy complete account number from your VISA card



□ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □

My card expires: □ □ □ □

IMPORTANT: Copy complete account number from your MasterCard



□ □ □ □ □ □ □ □ □ □ □ □ □ □ □ □

Copy Number above your name on MasterCard

□ □ □ □ □ □

My card expires:

□ □ □ □

AUTHORIZED SIGNATURE

Prices are subject to change without notice.

PLEASE

Print or type your name and address clearly. This will be your mailing label.



A complete and correct order will save you days of waiting.

Name: _____

Street: _____

_____ Apt: _____

City: _____

State: _____ Zip: _____

Please make sure that both sides of this form have been filled out completely.

To order accessories, contact your local ProScan Dealer.

If a dealer is not nearby, you can also follow the instructions below to order by telephone.

United States Orders

To place your order by phone, have your Visa or MasterCard ready and call the toll-free number listed below between 8AM and 8PM Eastern Standard Time. Use this number only to place an order for accessory items listed on this order form.

1 - 800 - 338 - 0376

Most times your order will be shipped UPS within 72 hours of receipt. If ever it is not possible to ship within 30 days, we will notify you with an update on your order and an option to cancel.

To place your order by mail, detach and mail the completed order form with credit card information, money order, or check in U.S. currency (made payable to Thomson Consumer Electronics, Inc.) to the following address.

ProScan Video Accessories
P.O. Box 8419
Ronks, PA 17573

For more information on these accessories (or current prices), write to the following address:

Video Accessories Customer Service
Thomson Consumer Electronics, Inc.
Distributor & Special Products
2000 Clements Bridge Rd
Deptford, NJ 08096-2088

Canadian Orders

To place your order by phone, have your Visa or MasterCard ready and call the toll-free number listed below. Use this number only to place an order for accessory items listed on this order form.

1 - 800 - 338 - 0376 (English)

1 - 800 - 668 - 5507 (French)

Allow 4-6 weeks for delivery. G.S.T. and P.S.T are applicable on all orders.

For more information on these accessories, write to the following address:

ProScan Video Accessories Canada
Thomson Consumer Electronics, Inc.
6540 Tomken Rd
Mississauga, Ontario Canada L5T 2E9

International Orders

This offer is valid only in the 50 United States and Canada. For international orders, please send your request for quotation (not an order) to:

International Customer Service
Thomson Consumer Electronics, Inc.
Distributor & Special Products
2000 Clements Bridge Rd
Deptford, NJ USA 08096-2088

✂ Detach Here

Design Specifications

General Specifications

Color Standard:	NTSC Color
Chassis:	CTC171, solid state IDTV
Power Requirements:	120VAC \pm 10%, 60Hz
Power Consumption:	300W maximum

Remote Control

Model:	CRK62D and CRK60A
Transmission system:	Digitally encoded infrared light
Batteries:	CRK62D: 4 AAA Size CRK60A: 2 AAA Size
Battery Life:	One Year in Normal Use

RF Specifications

Tuning System Type:	Quartz-controlled Multiband Frequency Synthesis
Band Coverage:	VHF channels 2-13 UHF Channels 14-69 EIA Cable Channels 1-125 Complete chart is on page 65.
Frequency Coverage:	54-806 MHz
Tuner Type:	Dual Solid State Tuners
Channel Access:	Programmable Scan Up/Down Direct Access With Master Remote
Channel Indication:	On-Screen
Antenna Inputs:	Two 75-ohm VHF/UHF combined inputs
Sensitivity:	15 μ V VHF, 30 μ V UHF

Video Specifications

Horizontal Luminance Resolution:	Up to 600 Lines (from S-VIDEO input) using wideband video source
Black to White Rise Time	50ns
Luminance Bandwidth:	13 MHz (from S-VIDEO input)
Video Input:	1Vp-p; 75 ohms; negative sync
Video Output:	1Vp-p; 75 ohms; negative sync

Audio Specifications

Frequency Response:	50-20,000 Hz (at rated output)
Stereo System:	Eight modes of operation: MTS Stereo, Expanded Stereo, Dolby*, Dolby* Prologic, Prologic Phantom, and Matrix, Hall, and Stadium Surround.
Stereo/Mono Switching:	Automatic
Audio Input:	450 mV RMS typical, 1 V RMS maximum
Audio Input Impedance:	Greater than 50 kOhms (Stereo); Greater than 25 kOhms (Mono)
Audio Power:	10 watts/channel RMS into 8 ohms \pm 3db with less than 1% THD
Audio Output Selected Outputs:	Output level tracks inputs within +1/-2dB
Outputs To Hi-Fi:	2 V RMS maximum, controlled by volume, mute, equalizer, and balance
Output Impedance:	Surround and Hi-Fi outputs less than 2,500 ohms
Speaker Type: (3-way)	Two 51mm High Frequency Two 2 1/4" x 5" Mid/Range Two 170mm Enclosed Woofers
Speaker Impedance:	Internal, 8 ohms (nominal) External and surround, 8 ohms

*Dolby is a registered trademark of Dolby Laboratories Licensing Corp.

Cleaning and Care

Dust TV as required, using a soft cloth or the dusting attachment of your vacuum cleaner. Occasionally vacuum the ventilation slots in the cabinet to help assure adequate ventilation. Take care not to scratch the plastic surface.

If your TV's cabinet has a textured finish, do not use furniture polish. Because textured finishes are porous, using furniture polish will mar their appearance. They can be easily cleaned with a damp, soft cloth.

To clean the screen, you can wipe it with a damp soft cloth. (A very diluted, mild soap can be used on the screen if it is extremely dirty.) Be careful not to let the liquid run down into the bottom of the screen.

Do not use strong cleaners, polishes, or chemically-treated cloths to clean the screen or cabinet.

All features and specifications are subject to change without notice.

Troubles sometimes are caused by simple “faults” that you can easily correct without the help of a service technician by first checking a few basic remedies.

Before you call or take your unit to an Authorized ProScan TV Servicer, look below for the type of trouble you are experiencing. Then perform the simple checks and adjustments listed for that trouble.

TV will not turn on

- Check to make sure it is plugged in.
- Check the wall receptacle (or suitable power strip) to make sure it is “live” by plugging in something else.
- Maybe batteries in remote control are “dead”.
- Maybe remote control was not aimed at remote sensor.

Controls do not work

- If using master remote control, make sure remote is in “TV Mode” by first pressing TV button.
- Try unplugging set for 15 to 20 minutes and then turning it on again.

Intermittent or no remote

- Maybe something was between the remote and the remote sensor.
- Maybe the remote was not aimed directly at the component (TV, VCR, cable box, etc.) you were trying to control.
- Maybe master remote is not in “TV Mode”. Press the TV button so master remote will control TV.
- Maybe batteries in remote are weak or dead. Try replacing batteries.
- Maybe batteries were installed incorrectly. Try replacing batteries correctly.
- Check to see if remote is working by pressing any button on the remote. If the remote is working, the power indicator on the front of the TV will flicker when you press a button on the remote.

Turns off while playing

- SLEEP TIMER function may have been activated.
- SCHEDULER function may have been activated.
- Electronic protection circuit may have been activated because of a power surge. Wait 30 seconds and then turn on again. If this happens frequently, the voltage in your house may be abnormally high.

Turns on unexpectedly

- SCHEDULER function may have been activated.

SCHEDULER does not turn TV on and off at correct time

- Check SCHEDULER functions. Make sure time (including am or pm) and day of week are entered correctly. SCHEDULER Mode: off/once/rpt. weekly function must be set to once or rpt.weekly.
- Check to make sure CLOCK function is set correctly.

Blank screen (no signal)

- Maybe channel 91 or 92 is selected, but device connected to those INPUT jacks is not turned on.
- Try another channel.
- Wrong antenna input (A or B) selected. Try pressing ANT (antenna) button on master remote. *Details are on page 41.*
- Cable/air function in SETUP menu may have accidentally been changed. *Details are on page 40.*

No sound, picture okay

- Maybe sound is muted. Try pressing VOLUME up button to restore sound.
- Maybe TV’s speakers are turned off. Check Speakers: int/ext/off or Int spkrs: on/off function on AUDIO ADJUST SETUP menu for audio mode selected.

Can not select certain channel

- Channel may not be in channel memory scan list. Try pressing two number buttons.
- Channels: normal/priority function on MAIN MENU set to Channels: priority. *Details are on page 42.*
- If using a VCR, check to make sure the TV/VCR switch on the VCR is in the correct position.
- To select channels 100 through 128, press and hold number button “1” until “1--” appears on the TV screen, then press the other two number buttons. The Cable/air function in the SETUP menu must be set to Cable to select channels higher than 69.

TV picture is fuzzy or details outlined by red, green, or blue

- Use the CONVERGENCE function to realign the projection picture tube. *Details are on page 5.*

Noisy stereo reception

- Maybe a weak station. Set the Mode: stereo/mono function in the STEREO SETUP menu to Mode: mono. *Details are on page 28.*

No picture, no sound but power light is on

- Wrong antenna input (A or B) selected. Try pressing ANT (antenna) button on master remote. *Details are on page 41.*
- Cable/air function on SETUP menu has been accidentally changed. *Details are on page 40.*
- Maybe a vacant channel is tuned.
- For channels 91 and 92, make sure the component connected to those INPUT jacks is turned on.
- If watching VCR (connected only through antenna input), make sure TV is tuned to channel 3 or 4 – same as CH 3/CH 4 switch on VCR. Also check to make sure TV/VCR switch on VCR is in correct position.

Sound okay, picture poor

- Check antenna connections.
- Try adjusting SHARPNESS function to improve weak signals.
- If recording one channel on VCR connected to ANT input and watching another channel on the TV, make sure the VCR's TV/VCR switch is in correct position (VCR indicator turned off).

No picture while using picture-in-picture with VCR, laser disc player, or camcorder.

- If using an S-VHS component, make sure its regular video cable is also connected to the INPUT jack on the TV. S-VHS video can not be viewed on the small picture.
- If using the VCR1 or VCR2 button, make sure it is programmed to select the proper channel *as described on page 43.*

No audio while using picture-in-picture with VCR, laser disc player, or camcorder.

- Be sure to connect audio cables in addition to S-VHS cable. The S-VHS cable carries only video, no audio.

TV shuts off and then comes right back on

- Power interruption may have occurred.
- Automatic shutdown circuit may have been triggered *as described on page 4.*

Limited Warranty

What your warranty covers:

- Any defect in material or workmanship.

For how long after your purchase:

- One year for labor charges.
- One year for parts.
- Two years for picture tube.

What we will do:

- Pay any Authorized ProScan Television Servicenter the labor charges to repair your television.
- Pay any Authorized ProScan Television Servicenter for the new or, at our option, rebuilt replacement parts and picture tube required to repair your television.

How you get service:

- Request in-home service from any Authorized ProScan Television Servicenter. To identify your nearest Authorized ProScan Television Servicenter, ask your dealer or call 1-800-PROSCAN.
- Show the service technician your evidence of purchase date.

What your warranty does not cover:

- Customer instruction. (Your Owner's Manual clearly describes how to install, adjust, and operate your television. Any additional information should be obtained from your dealer.)
- Installation and related adjustments.
- Signal reception problems not caused by your television.
- Damage from misuse or neglect.
- Remote control batteries.
- A television that has been modified or incorporated into other products or is used for institutional or other commercial purposes.
- A television purchased or serviced outside the USA.

Product Registration:

- Please complete and mail the *Product Registration Card* packed with your set. 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 also may have other rights that vary from state to state.

If you purchased your television in Canada:

- The Canadian warranty applies in place of this Warranty. A separate warranty for Canada is enclosed with all televisions sold in Canada.

Trouble Checks
Warranty

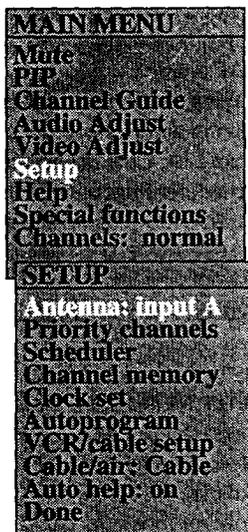
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Quick-Reference Operating Guide

SETUP Menu

- 1 Press the **MENU** button to display the **MAIN MENU**.
- 2 Repeatedly press the **+** or **-** button to highlight **Setup** in white.
- 3 Press the **MENU** button again to display the **SETUP** menu.
- 4 Press **+** or **-** to highlight desired function, and then press **MENU** to enter or adjust the function.



To adjust **Antenna: input A/B**, press the **MENU** button when **Antenna: input A/B** is highlighted to switch between the two antennas. *Details are on page 41.*

Note: Press the **ANT** (Antenna) button on the master remote control to switch between antenna input A and B. Antenna B appears with the channel number display when you are watching the input from antenna input B.

To create a **Priority channels** memory scan list consisting of up to six favorite channels, use the **+**, **-**, and **MENU** buttons. The on-screen help menus will guide you through creating a priority channel scan list. When the **Channels: normal/priority** function is set to **Channels: priority** on the **MAIN MENU**, pressing the **CHANNEL** up or down button will only scan through the channels you have entered in the **PRIORITY CHAN** menu. Press the **MENU** button when the **Priority channels** function is highlighted to display the **PRIORITY CHAN** menu. *Details are on page 42.*

To program the **Scheduler**, use the **+**, **-**, and **MENU** buttons. The on-screen help menus will guide you through programming the scheduler. *Details are on pages 44-45.*

The **Channel memory** function allows you to add or erase channels from the channel memory scan list, turn **SAP** on or off, turn parental control on or off, and add or erase channel labels. *Details are on pages 30 and 47-50.*

- The **Scan List: in/out** display allows you to add or erase channels from the list of channels the TV stops on when you press the **CHANNEL** up or down buttons. *Details are on page 47.*
- The **SAP: off/on** function allows you to receive **SAP** (Second Audio Program) when available and broadcast in your area. *Details are on page 30.*

- The **Parent Ctrl: off/on** function allows you to lock out any channels that you do not want your children to watch. When the **Parent Ctrl: off/on** function is set to on for any channel, that channel cannot be accessed from the front control panel of the TV. You can still access this channel from the remote controls. *Details are on page 50.*
- The **Label and Erase Label** functions allow you to add or erase labels (names) for each channel. The label you select will then appear on the screen whenever the channel number is displayed. *Details are on pages 48-49.*

To adjust the **Clock set** function, use the **+**, **-**, and **MENU** buttons. The on-screen help displays will guide you through setting the clock. The time and day-of-the-week display will then appear on the TV screen whenever you turn on the TV, change channels, or press the **TV** or **DISPLAY** button on the remote control. *Details are on page 7.*

To **AutoProgram** your TV, press the **MENU** button when **Autoprogram** is highlighted. The TV will automatically cycle through all channels and place only active channels in the channel memory scan list. The TV will then only stop on the channels in the scan list when you press the **CHANNEL** up or down button. *Details are on page 46.*

To change the **VCR/cable setup** function, use the **+**, **-**, and **MENU** buttons. The on-screen help menus will guide you through changing the **VCR/cable setup** function. This function allows you to program to which channel the TV will automatically tune when you press the **VCR1**, **VCR2**, or **CABLE** button. *Details are on page 43.*

The **Cable/air** function tells your TV whether you have a cable-TV system or home antenna (air) connected to the antenna inputs. Your TV is so automatic that you will probably never need to change this function. When your TV autoprograms, it automatically adjusts the **Cable/air** function for you. If you ever need to override the automatic setting, press the **MENU** button while the **Cable/air** function is highlighted to change it.

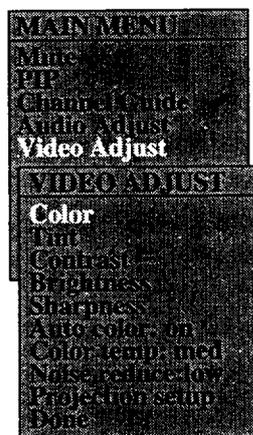
The **Auto help: on/off** function lets you turn on or off the help messages that appear on the bottom of the screen whenever a menu is displayed. Press the **MENU** button when the **Auto help** function is highlighted to turn the help messages on or off. *Details are on page 4.*

- Select **Auto help: on** when you want the help messages to automatically appear whenever a menu is displayed on the TV screen.
- Select **Auto help: off** when you do not want the help messages to appear.

Quick-Reference Operating Guide

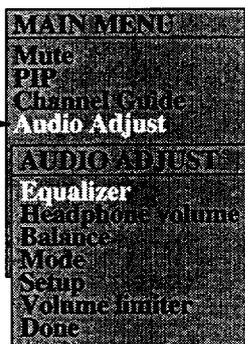
Video Adjustments

- 1 Press **MENU** to display the **MAIN MENU**.
- 2 Repeatedly press **-** to highlight the **Video Adjust** function.
- 3 Press **MENU** to display **VIDEO ADJUST** menu.
- 4 Press the **+** or **-** button to highlight the function you want to adjust, then press **MENU** to enter the adjustment display. Press **+** or **-** to adjust it.



Audio Adjustments

- 1 Press **MENU** to display the **MAIN MENU**.
- 2 Then press **+** or **-** to highlight **Audio Adjust** in white.
- 3 Press **MENU** again to display **AUDIO ADJUST** menu.
- 4 Press **+** or **-** to highlight desired function. Then press **MENU** to enter the function.
- 5 Follow instructions in the next column for desired function.



Picture-In-Picture (PIP)

using master remote control For details, see pages 18-21.

- 1 Turn on the TV and select the channel you want to watch on the big picture. Press the **PIP** button to turn on the little picture. Press the **CHANNEL** up or down button or two number buttons to select a channel on the little picture.

Notes: The remote must be in the "TV mode" when you press the **PIP** button. To put the remote in the "TV mode", press the **TV** button.

After you press the **PIP** button, pressing the **CHANNEL** up or down button will automatically change channels on the small picture. **PIP** will appear in the channel number display.

To change channels on the big picture, press the **TV** button and then the **CHANNEL** up or down or two number buttons.

- 2 Whenever you have the **PIP** feature turned on, you can move, enlarge, reduce, or freeze the little picture, or swap the big and little picture.

Note: The remote must be in the "TV mode" to operate the special **PIP** functions. To put the remote in the "TV mode", press the **TV** button.

- 3 To turn **PIP** off, press the **OFF** button next to the **PIP** button on the master remote control.

Adjusting for a Color Picture that Pleases You

- 1 Decrease color to minimum. This will leave a black-and-white image on the screen.
- 2 Adjust contrast until the picture pleases you.
- 3 Adjust brightness until the black parts of the picture appear black. You may need to wait until the picture shows something you are sure is black. Be careful not to lose the details in darkly shaded areas.
- 4 Increase color until you reach a pleasing level of intensity.
- 5 Adjust tint until flesh tones or other color objects appear natural.
- 6 Adjust sharpness for a pleasing level of picture sharpness. (For weak signals, the picture may be more pleasing with sharpness decreased.)
- 7 Set the **Auto Color**, **Color temp**, and **Noise Reduce** features for your personal preference.

Note: You can save and restore your video adjustments. You can also reset the video adjustments to factory settings. *Details are on page 38.*

To adjust the **Equalizer** settings, use the **+**, **-**, and **MENU** buttons. Follow the help screens on the bottom of the TV screen. *Details are on pages 26-27.*

To adjust the **Headphone volume** function, press **+** to increase, or **-** to decrease the headphone volume. *Details are on page 25.*

To adjust the **Balance** function, press the **+** or **-** button until the sound seems to originate from a point halfway between the speakers.

To select an audio **Mode**, press **MENU** to see the eight different audio mode choices, then press **+** or **-** to highlight one of the eight modes. Then press **MENU** to turn on the highlighted mode. *Details are on pages 22-36.*

Note: You can quickly select one of the eight audio modes by repeatedly pressing the **SURR** (surround) button on the master remote control.

To adjust one of the **Setup** menus after you have selected an audio mode, press **+** or **-** and then press the **MENU** button. *Details are on page 28-36.*

To adjust the **Volume limiter** function, press **+** or **-** to adjust. *Details are on page 24.*

Using Other Video Input Sources with PIP

For details, see page 19

The **PIP** feature can also be used with video sources (such as **VCR**'s and camcorders) that are connected to the **INPUT 1** or **INPUT 2** jacks on the back of the TV. You can only view the picture from one set of **INPUT** jacks at a time. The picture from the **INPUT** jacks can be viewed on either the large picture or the small picture.

Note: **S-VHS** video can only be viewed on the main picture. If you plan to view the picture from the **INPUT** jacks in the small picture, be sure to connect the normal video cable to the **VIDEO INPUT** jack.

To see the signal from a source connected to the **INPUT** jacks, select channel 91 or 92. Repeatedly press the **INPUT** button on the master remote or press two number buttons.

- Select channel 91 if the other video source is connected to the TV's **INPUT 1** jacks.

- Select channel 92 if the other video source is connected to the TV's **INPUT 2** jacks.

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1-800-ProScan

If you would like a copy of this manual in French, please follow the instructions below:

Si un livret d'instructions en français n'est pas inclus avec votre appareil, vous pouvez en obtenir un (indiquer le numéro de modèle, votre nom, et votre adresse) en vous adressant à:

Thomson Électronique Grand Public du Canada
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6540 Tomken Rd
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