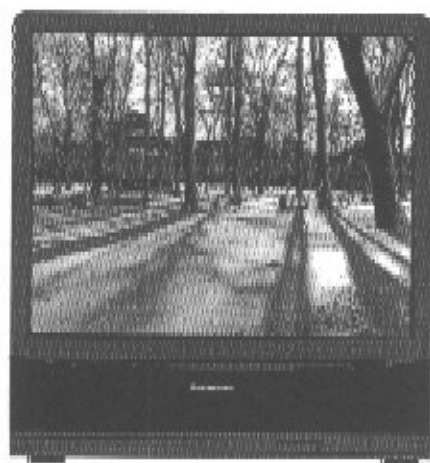


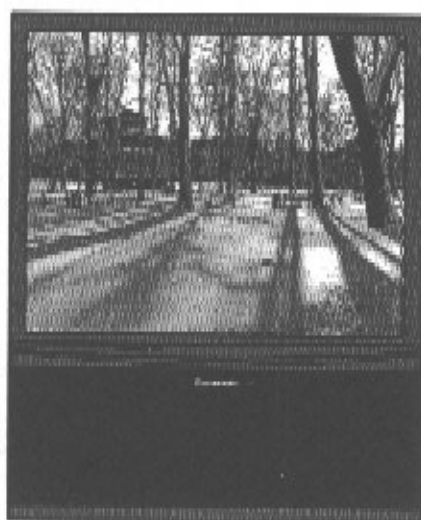
Panasonic®

Color Video Projection System

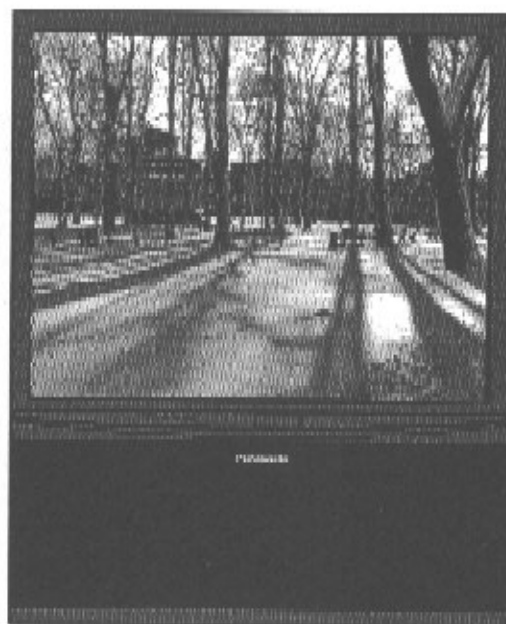
Operating Instructions



PT-51G50



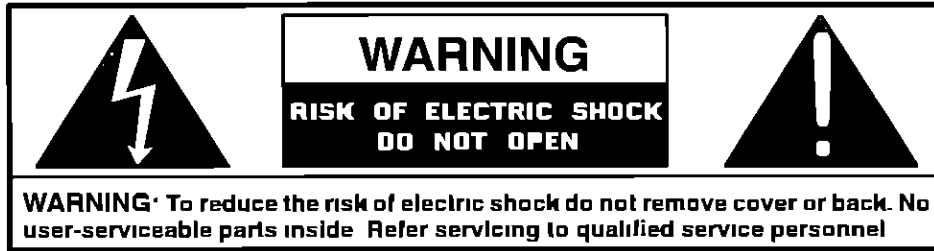
PT-51G52



PT-61G52

Read these instructions completely before operating.
Contents subject to change without notice or obligation.

Safety Instructions



The lightning flash with arrow-head within a triangle is intended to tell the user that parts inside the product are a risk of electric shock to persons

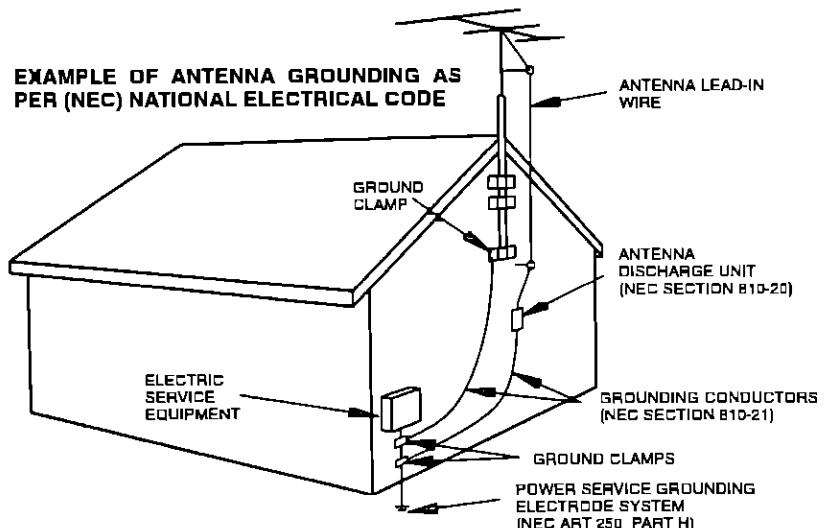


The exclamation point within a triangle is intended to tell the user that important operating and servicing instructions are in the papers with the appliance

Note To CATV System Installer: This reminder is provided to call the CATV system installer's attention to Article 820-40 of the NEC that 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

Safety Instructions For Television Receivers

- 1 Read and apply the operating instructions provided with your television receiver
- 2 Read all of the instructions given here and retain them for later use
- 3 Unplug this television receiver from the wall outlet before cleaning. Do not use liquid or aerosol cleaners. Use a damp cloth for cleaning.
- 4 Do not use attachments not recommended by the television receiver manufacturer as they may cause hazards.
- 5 Do not use this television receiver near water. For example, avoid placing it near a bathtub, washbowl, kitchen sink, or laundry tub, in a wet basement, or near a swimming pool, etc.
- 6 Do not place this television receiver on an unstable cart, stand or table. The television receiver may fall, causing serious injury to a child or adult, and serious damage to the appliance. Use only with a cart or stand recommended by the manufacturer, or sold with the television receiver. Wall or shelf mounting should follow the manufacturer's instructions, and should use a mounting kit approved by the manufacturer.
- 6A An appliance and cart combination should be moved with care. Quick stops, excessive force, and uneven surfaces may cause the appliance and cart combination to overturn.
- 7 Slots and openings in the cabinet and the back or bottom are provided for ventilation, and to insure reliable operation of the television receiver and to protect it from overheating. These openings must not be blocked or covered. The openings should never be blocked by placing the television receiver on a bed, sofa, rug or other similar surface. This television receiver should never be placed near or over a radiator or heat register. This television receiver should not be placed in a built-in installation such as a bookcase unless proper ventilation is provided.
- 8 Operate only from the type of power source indicated on the marking label. If you are not sure of the type of power supplied to your home consult your television dealer or local power company. For television receivers designed to operate from battery power, refer to the operating instructions.
- 9 This television receiver is equipped with a polarized alternating-current line plug (a plug having one blade wider than the other). This plug will fit into the power outlet only one way. This is a safety feature. If you are unable to insert the plug fully into the outlet, try reversing the plug. If the plug should still fail to fit, contact your electrician to replace your obsolete outlet. Do not defeat the safety purpose of the polarized plug.
- 10 Do not allow anything to rest on the power cord. Do not locate this television receiver where the cord will be abused by persons walking on it.
- 11 Follow all warnings and instructions marked on the television receiver.
- 12 Do not overload wall outlets and extension cords as this can result in fire or electric shock.
- 13 Never push objects of any kind into this television receiver through cabinet slots as they may touch dangerous voltage points or short out parts that could result in a fire or electric shock. Never spill liquid of any kind on the television receiver.



- 14 If an outside antenna is connected to the television equipment, be sure the antenna system is grounded so as to provide some protection against voltage surges and built up static charges. In the U.S. Section 810 of the National Electrical Code and in Canada Part 1 of the Canadian Electrical Code provides information with respect to proper grounding of the mast and supporting structure, grounding of the lead-in wire to an antenna discharge unit, size of grounding conductors, location of antenna-discharge unit, connection to grounding electrodes, and requirements for the grounding electrode. See Figure.
- 15 For added protection for this television receiver during a lightning storm, or when it is left unattended and unused for long periods of time, unplug it from the wall outlet and disconnect the antenna. This will prevent damage to the receiver due to lightning and power-line surges.
- 16 An outside antenna system should not be located in the vicinity of overhead power lines or other electric light or power circuits, or where it can fall into such power lines or circuits. When installing an outside antenna system extreme care should be taken to keep from touching such power lines or circuits as contact with them might be fatal.
- 17 Unplug this television receiver from the wall outlet, and refer servicing to qualified service personnel under the following conditions:
 - a When the power cord or plug is damaged or frayed
 - b If liquid has been spilled into the television receiver
 - c If the television receiver has been exposed to rain or water
 - d If the television receiver does not operate normally by following the operating instructions. Adjust only those controls that are covered by the operating instructions as improper adjustment of other controls may result in damage and will often require extensive work by a qualified technician to restore the television receiver to normal operation.
 - e If the television receiver has been dropped or the cabinet has been damaged
 - f When the television receiver exhibits a distinct change in performance – this indicates a need for service.
- 18 Do not attempt to service this television receiver yourself as opening or removing covers may expose you to dangerous voltage or other hazards. Refer all servicing to qualified service personnel.
- 19 When replacement parts are required, be sure the service technician has used replacement parts specified by the manufacturer that have the same characteristics as the original part. Unauthorized substitutions may result in fire, electric shock, or other hazards.
- 20 Upon completion of any service or repairs to this television receiver, ask the service technician to perform routine safety checks to determine that the television is in safe operating condition.
- 21 **WARNING: To prevent fire or shock hazard, do not expose this appliance to rain or moisture.**
- 22 **CAUTION: TO PREVENT ELECTRIC SHOCK DO NOT USE THIS (POLARIZED) PLUG WITH A RECEPTACLE OR OTHER OUTLET UNLESS THE BLADES CAN BE FULLY INSERTED TO PREVENT BLADE EXPOSURE.**

NOTE: This equipment is designed to operate in the U.S.A., Canada and other countries where the broadcasting system and AC house current is exactly the same as in the U.S.A. and Canada.

Important Information Regarding Use of Video Games, Computers, Teletext or Other Fixed Image Displays.

The extended use of fixed image program material can cause a permanent "shadow image" on the picture tube. This background image is viewable on normal programs in the form of a stationary fixed image. This type of irreversible picture tube deterioration can be limited by observing the following steps:

- A Reduce the brightness/contrast setting to a minimum viewing level
- B Do not display the fixed image for extended periods of time
- C Turn the power off when not in actual use

NOTE. The marking or retained image on the picture tube resulting from fixed image use is not an operating defect and as such is not covered by Warranty. This product is not designed to display fixed image patterns for extended periods of time.

Specifications

Power Source:	120V, 60Hz, AC
Channel Capability	181 channels (See chart)
Video Input Jacks (3):	VHF 2-13, UHF 14-69, Cable 125 channels
Audio Input Jacks (3):	1V p-p, 75 ohm, phono jack type (PT-51G52)
Video Input Jacks (4):	500mV rms, 47K ohm (PT-51G52)
Audio Input Jacks (4):	1V p-p, 75 ohm, phono jack type (PT-61G52, PT-50G50)
To Audio AMP Jacks:	500mV rms, 47K ohm (PT-61G52, PT-51G50)
S-VHS Input Jack (2):	0-2.0V rms 47K ohm
Stereo Sound	S-Video (Y-C) Connector

Channel Capability Chart

BAND	CHANNELS
VHF	12
UHF	56
CABLE (Mid-Band)	15
CABLE (Super Band)	14
CABLE (Hyper Band)	28
CABLE (Ultra Band)	56
TOTAL CHANNELS	181

- Dolby Pro Logic Surround**
- External Speakers**
- Closed Caption Display**
- Picture In Picture:** 2 Tuner

Specifications are subject to change without notice or obligation.

Introduction

Congratulations on Your New Purchase

Your new video component features an all solid state chassis which is designed to give you many years of enjoyment. It was thoroughly tested and adjusted at the factory for best performance.

In order for you to take full advantage of your new video component, please read and follow the installation and operating instructions supplied with this product.

Customer's Record

The model and serial number of this product may be found on its back cover. You should note the model and serial number in the space provided and retain this book as a permanent record of your purchase to aid in identification in the event of theft or loss.

Model Number _____ Serial Number _____

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Care and Cleaning

Plastic Cabinets

Wipe the cabinet with a soft cloth dampened with water or a mild detergent solution and wipe dry with a soft clean cloth. Avoid excessive moisture. Do not use benzene, thinners or other petroleum based cleaners.

Wood Cabinets

When dusting or polishing the cabinet, use a clean soft cloth and stroke straight with the grain. An occasional coat of furniture polish will help preserve the finish. Do not use benzene, thinners or other petroleum based cleaners. Do not place objects made of plastic or rubber directly on top of the cabinet. A chemical reaction could result causing permanent marring of the finish.

Remote Control Transmitter

Do not use benzene, thinners or other petroleum based cleaners to clean the Remote Control Transmitter. To clean, wipe with a soft cloth slightly moistened with a mild detergent and then wipe dry with a soft clean cloth.

Screen Caution

Your Projection screen may be marred by accidental contacts or improper cleaning. Avoid **BUMPING** or **SCRAPING** the screen **BY ANY OBJECTS**.

Screen Cleaning

The projection screen has a protective shield which is fully washable by using the following precautions. Use a mild soap solution or window cleaner and a clean cloth. Do not use laundry detergent, automatic dishwasher soap, abrasive cleaners, products containing alcohol, ammonia or petroleum distillates. Avoid excessive moisture and wipe dry.

Installation

Receiver Location

This unit is intended to be used with an optional stand or entertainment center. Consult your dealer for available options. Locate for comfortable viewing. Avoid placing where sunlight or other bright light (including reflections) will fall on the screen.

Use of some types of fluorescent lighting can reduce remote control transmitter range.

Adequate ventilation is essential to prevent internal component failure. Keep away from areas of excessive heat or moisture.

To insure optimum color purity do not position magnetic equipment (motors, fans, external speakers, etc.) nearby.

Optional External Equipment Connections

The Video/Audio connections between components should be made with shielded video and audio cables. For best performance, video cables should utilize 75 ohm coaxial shielded wire. Cables are available from your dealer or electronic supply house.

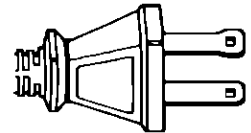
Before you purchase any cables, be sure you know what type of input and output connectors your various components require. Also determine the length of cable you'll need.

Condensation

When the set is moved into a warm room from a cold area, the picture may become out of focus because of condensation on the lens surface due to the temperature change. Picture will become clear when the set reaches the same temperature of the surrounding area.

AC Power Supply Cord

CAUTION. TO PREVENT ELECTRIC SHOCK, MATCH WIDE BLADE OF PLUG TO WIDE SLOT OF AC OUTLET AND FULLY INSERT. DO NOT USE THIS (POLARIZED) PLUG WITH A RECEPTACLE OR OTHER OUTLET UNLESS THE BLADE CAN BE FULLY INSERTED TO PREVENT BLADE EXPOSURE.



Polarized Plug

Remote Control Battery Installation

Batteries Use two "AA" batteries.

- 1 Turn the Transmitter face down. To remove top cover, press down on marking and slide cover off in the direction indicated.
- 2 Install the batteries as shown in the battery compartment. (Polarity (+) or (-) must be correct.)
- 3 Replace the cover and slide in reverse until the lock snaps.

Helpful Hint:

For frequent Remote Control users, replace old batteries with Alkaline batteries for longer life.

Note: In order to maximize the life of the batteries, the lighted buttons on the Remote Control can be turned OFF and ON by pressing R-TUNE and RECALL at the same time.

Precaution on Battery Use

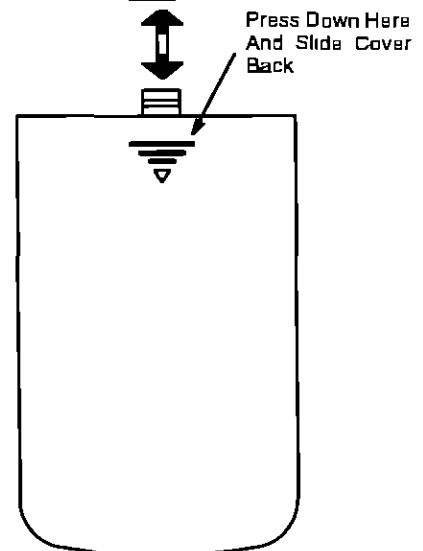
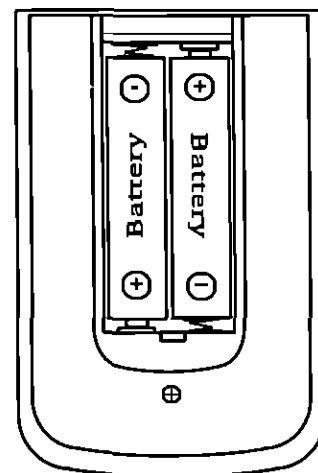
Incorrect installation can cause battery leakage and corrosion that will damage the Remote Control Transmitter.

Observe the Following Precautions:

- 1 Batteries should be replaced as a pair. Always use new batteries when replacing the old set.
- 2 Do not combine a used battery with a new one.
- 3 Do not mix battery types (Example "Zinc Carbon" with "Alkaline").
- 4 Do not attempt to charge, short-circuit, disassemble, heat or burn used batteries.
- 5 Battery replacement is necessary when Remote Control reacts sporadically or stops operating the Receiver.

Helpful Hint:

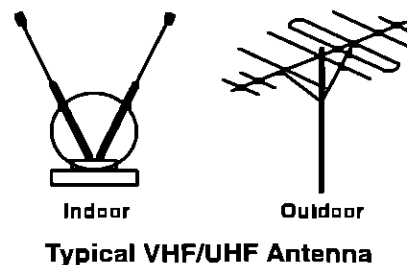
Whenever you remove the batteries to replace them, you may need to reset the Remote Control Infrared Codes. We recommend that you initially record the codes on page 49, prior to setting up the remote.



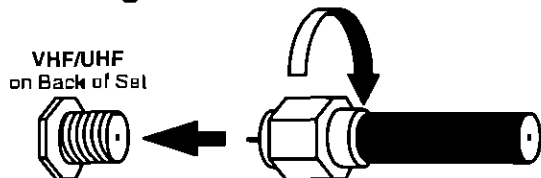
Installation (cont.)

Antenna/Cable Connections

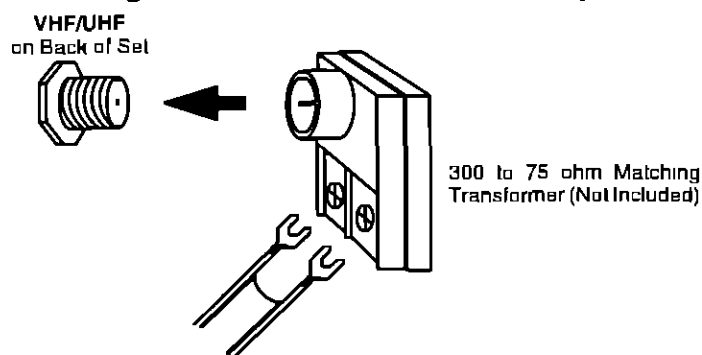
Antenna Connection – For proper reception of VHF/UHF channels, an external antenna is required. For best reception an outdoor antenna is recommended. Antenna Mode must be set to TV (Refer to Antenna Mode section.)



Incoming Cable From Home Antenna (75 Ohm)

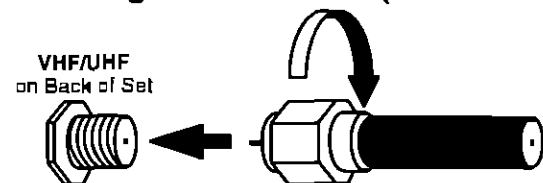


Incoming Cable From Home Antenna (300 Ohm)



Cable Connection – For reception of cable channels, connect the cable supplied by your local cable company. Antenna Mode must be set to CABLE (Refer to Antenna Mode section.)

Incoming 75 Ohm Cable (From Cable Company)



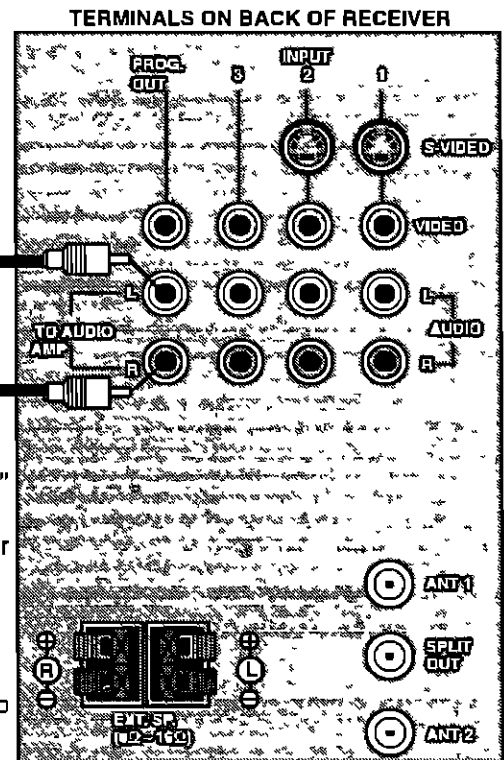
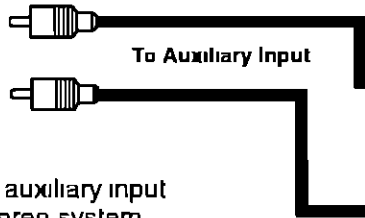
NOTE Certain cable systems offset some channels to reduce interference or have Premium (scrambled) channels. A cable converter box is required for proper reception. Check with your local Cable company for compatibility requirements.

Other Video Equipment

VCRs, Video Disc Players, Computers, TV games, and Teletext equipment can also be connected to the antenna input connection.

Optional Equipment Connection and Operation

To Audio AMP Connection (Stereo)



To Audio AMP

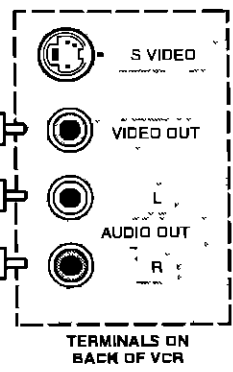
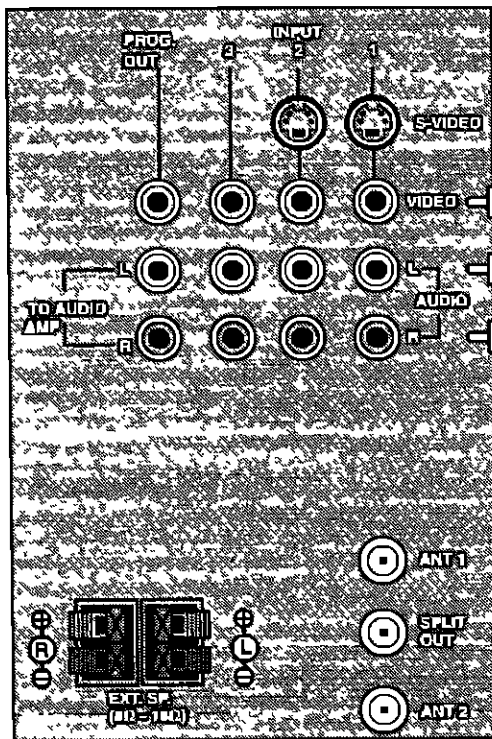
Connect to an external audio amp auxiliary input for monitoring sound through a stereo system

NOTE. "TO AUDIO AMP" terminals cannot be used for external speakers

Adjustment – When an audio amp is connected to "TO AUDIO AMP" terminals

- 1 Select SPEAKER "ON" Mode (Refer to the Audio Menu Speaker section)
- 2 Set volume of audio amp to near minimum
- 3 Adjust volume of TV to desired listening level
- 4 Adjust volume of audio amp to match the level of PTV
- 5 Select SPEAKER "OFF&VAO" (Variable Audio Output) Mode (Refer to the Audio Menu Speaker section)
- 6 Audio bass, treble, balance, volume, and mute can now be controlled by the TV Remote Control When "OFF&FAO" (Fix Audio Output) mode is selected in the Audio Menu, the external amplifier speakers are controlled by the Audio Amplifier

Video/Audio Connection

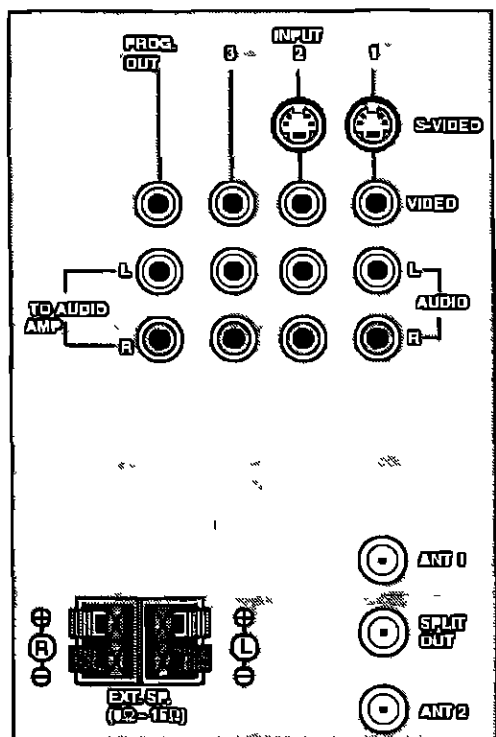


Operation

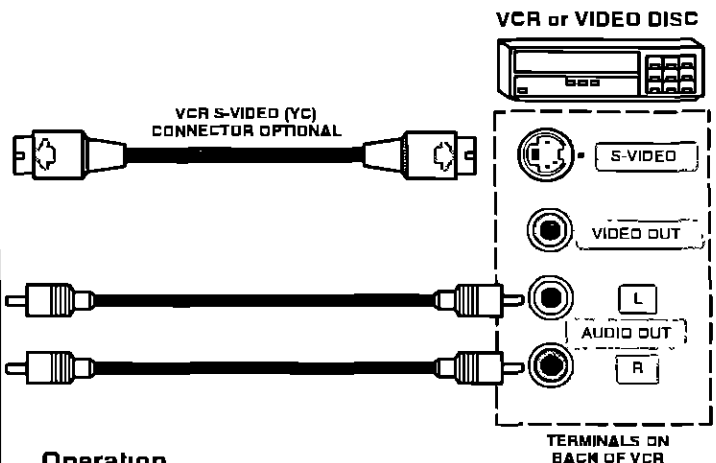
- 1 Connect optional equipment as shown to INPUT 1, 2, 3, or 4 (input 4 is located on front of Receiver) **NOTE:** MODEL PT-51G52 HAS ONLY 3 INPUTS
 - 2 Select the desired Video mode by pressing the TV/VIDEO button (or refer to the Input Select Menu)
- NOTE** You must select the same VIDEO Mode that the equipment is connected to
- 3 Operate optional equipment (VCR-VDP) as instructed in Optional Equipment manual

Optional Equipment Connection and Operation (cont.)

S-Video Connection



TERMINALS ON BACK OF RECEIVER



VCR or VIDEO DISC

TERMINALS ON BACK OF VCR

Operation

- 1 Connect S-Video (YC) connector to S-Video Terminals 1 or 2
- 2 Make connections to Input 1 or 2 Audio Jacks (L and R)
- 3 Select Video 1 or 2 mode by pressing the TV/VIDEO button (or refer to the Input Select Menu)
- 4 Operate optional equipment (VCR-VDP) as instructed in Optional Equipment Manual

NOTES:

- You must select the same VIDEO Mode that the equipment is connected to
- Connection of optional S-VIDEO jack automatically disconnects the normal Video Input 1 or 2 jack

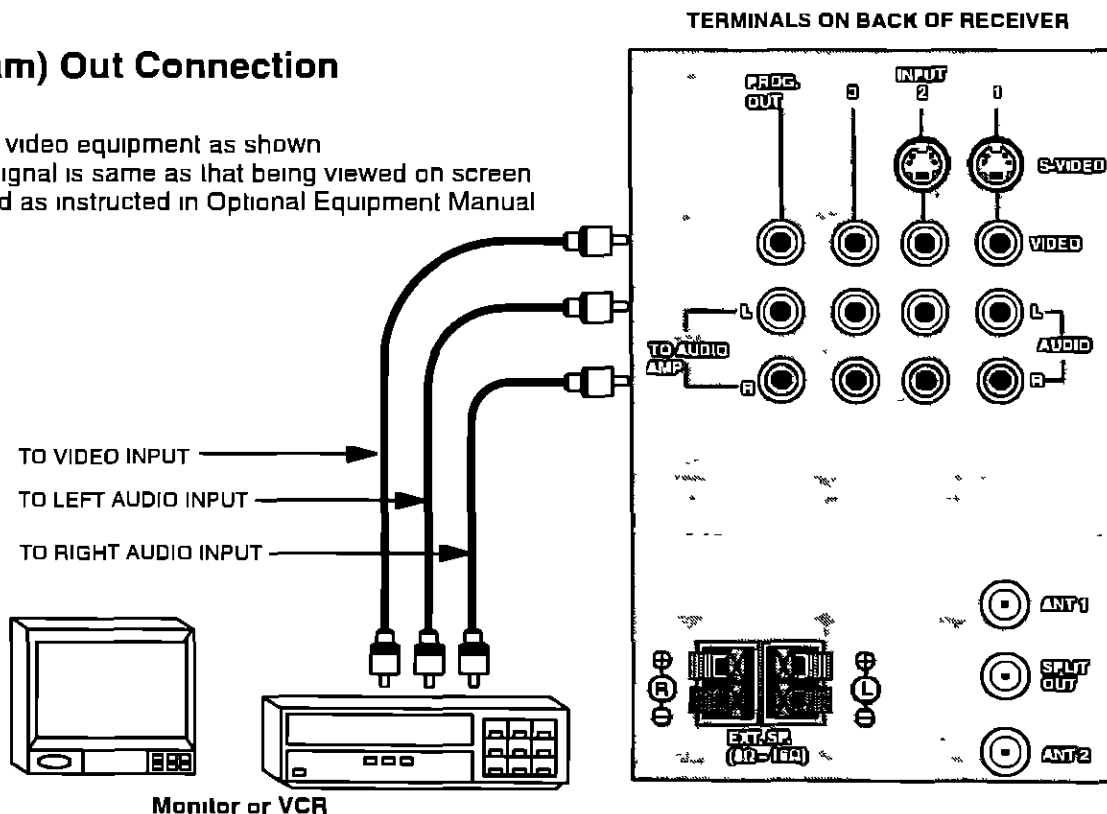
Helpful Hints:

The PIP feature will operate using S-Video input terminal 1 or 2

PROG (Program) Out Connection

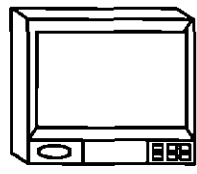
Operation

- 1 Connect optional video equipment as shown
- 2 Output terminal signal is same as that being viewed on screen
- 3 Monitor or Record as instructed in Optional Equipment Manual



TERMINALS ON BACK OF RECEIVER

TO VIDEO INPUT
TO LEFT AUDIO INPUT
TO RIGHT AUDIO INPUT

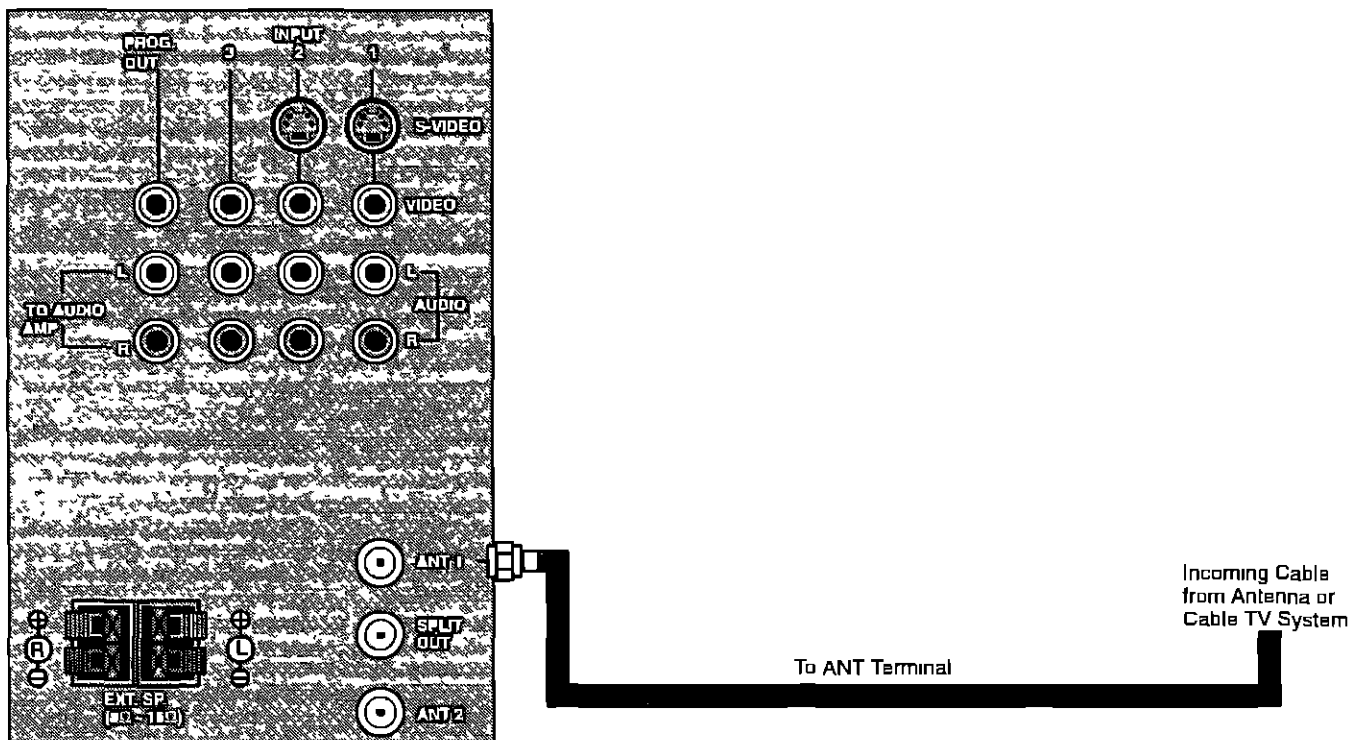


Monitor or VCR

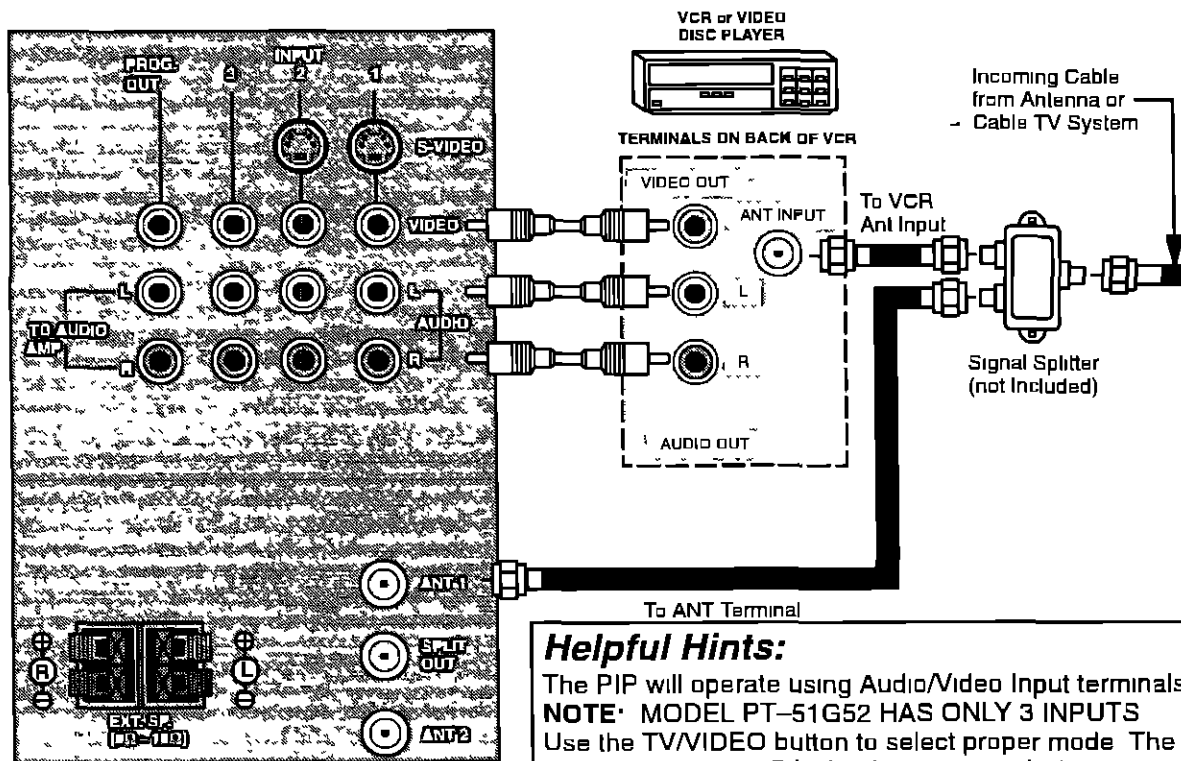
Picture in Picture External Video and Antenna Connection

This Receiver has the "PICTURE IN PICTURE" feature that uses two tuners. This allows you to watch two (2) live broadcasts at the same time without an external video source. Press the PIP button to display the PIP frame. (See PIP Antenna Connection, Detail 1.) If you wish an external video source (VCR, Laser Disc Player, or Camcorder) may be monitored in the PIP Frame. (See PIP External Video Connection, Detail 2.)

Detail 1 – PIP Antenna 1 Connection

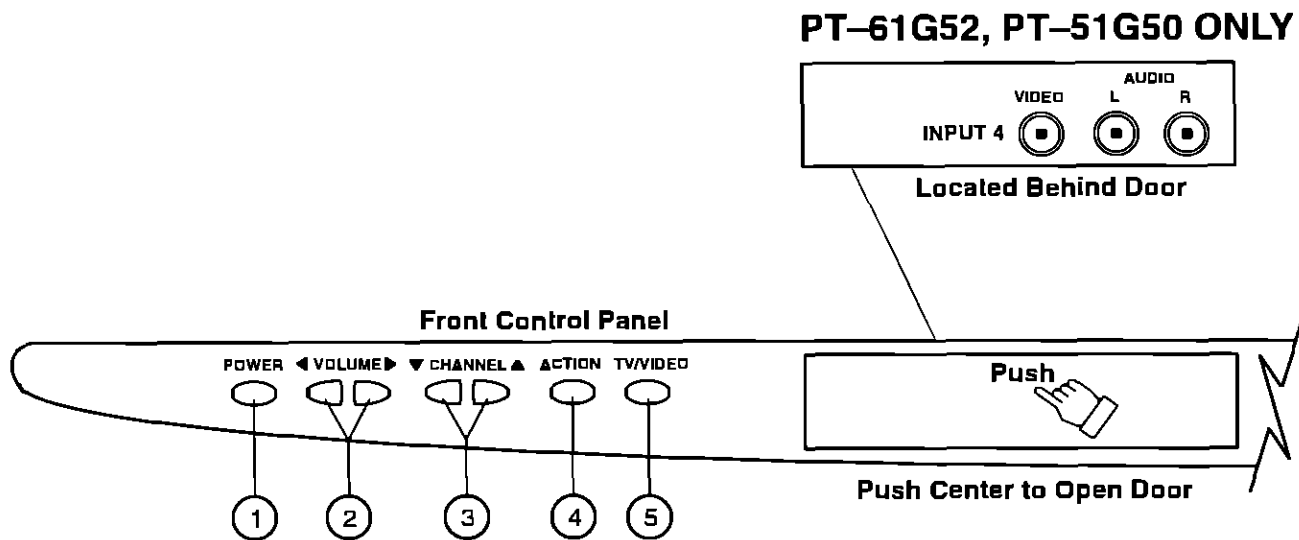


Detail 2 – PIP External Video Connection



Helpful Hints:
 The PIP will operate using Audio/Video Input terminals 1, 2, 3, or 4
NOTE: MODEL PT-51G52 HAS ONLY 3 INPUTS
 Use the TV/VIDEO button to select proper mode. The PIP feature will also operate using S-Video Input terminals 1 or 2

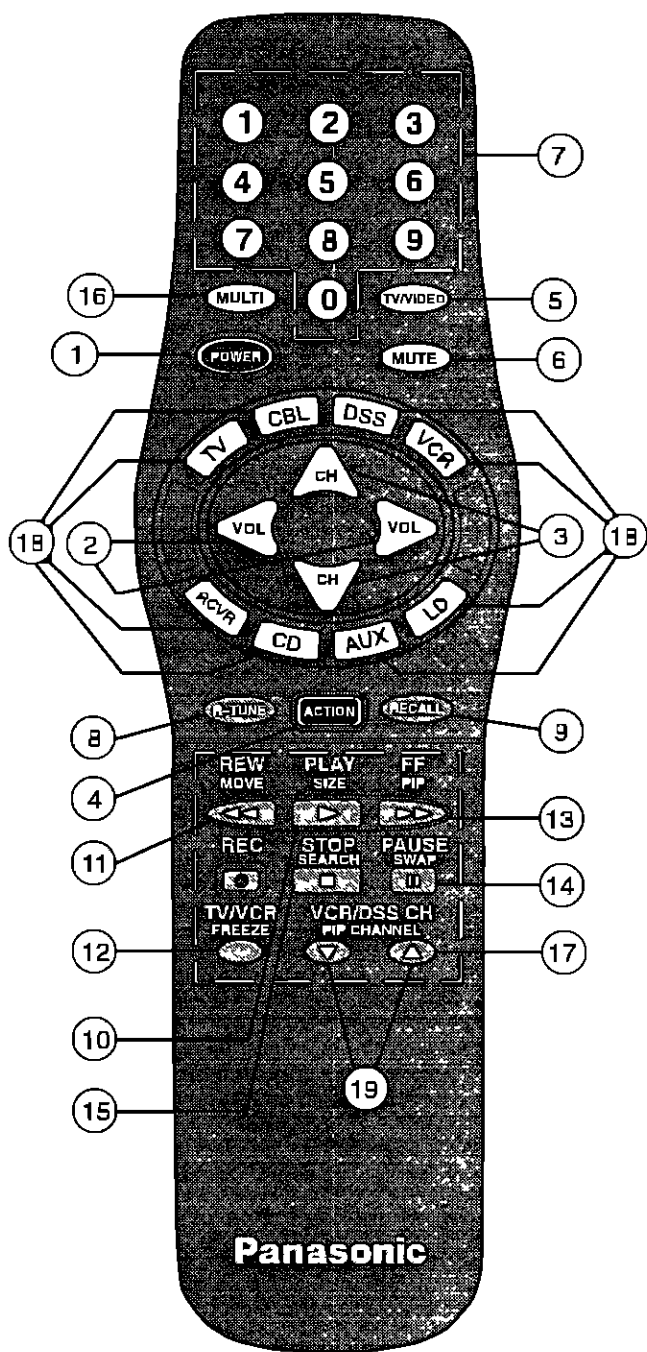
Location of Controls (Receiver)




Quick Reference Control Operation

- ① **Power Button** – Press to turn ON or OFF
- ② **Volume Buttons** – Press to adjust Sound Level Press to adjust Audio Menus, Video Menus, and select operating features when menus are displayed
- ③ **Channel Buttons** – Press to select programmed channels Press to highlight desired features when menus are displayed
- ④ **Action Button** – Press to display Main Menu and access or exit On-Screen feature and Adjustment Menus
- ⑤ **TV/Video Button** – Press to select TV, or one of four Video Input for the Main Picture, or the PIP frame (when the PIP frame is displayed) **NOTE: MODEL PT-51G52 HAS ONLY 3 INPUTS**

Location of Controls for the Illuminated Home Theater Remote Unit



Basic Remote Control Functions for Television Operation

The following is a basic overview of the remote control unit for television operation. Ensure the TV mode is selected by initially pressing . Please refer to the indicated pages for more information.

- ① **Power Button** – Press to turn the TV ON or OFF
- ② **Volume Buttons** – Press to adjust TV sound level. Use with Channel buttons to navigate in menus.
- ③ **Channel Buttons** – Press to select channels. Use with Volume buttons to navigate in menus.
- ④ **Action Button** – Press to display Main Menu and access or exit On-Screen feature and Adjustment Menus.
- ⑤ **TV/Video Button** – Press to select TV or one of various Video Inputs, for the Main Picture or the PIP frame (when the PIP frame is displayed).
- ⑥ **Mute Button** – Press to mute sound. A second press returns sound.
- ⑦ **Numeric Keypad (0 through 9 Buttons)** – Press desired channel number to access any channel.
- ⑧ **R-Tune (Rapid Tune) Button** – Press to switch between two (2) channels.
- ⑨ **Recall Button** – Press to display Time, status of Sleep Timer, Channel, Video Mode, Channel Caption (Station Identifier), and Audio Mode.
- ⑩ **Size Button** – Press to select size of PIP frame (when the PIP frame is displayed).
- ⑪ **Move Button** – Press to position PIP frame to any corner of the Main Picture (when PIP frame is displayed).
- ⑫ **Freeze Button** – Press to stop action in the Main Picture or PIP frame (when the PIP frame is displayed).
- ⑬ **PIP (Picture In Picture) Button** – Press to display the PIP frame, press again to remove PIP frame.
- ⑭ **Swap Button** – Press to interchange PIP frame with Main Picture (when the PIP frame is displayed).
- ⑮ **Search Button** – This button is used to select PIP Search to automatically scan channels within the PIP Frame.

Note: In order to maximize the life of the batteries, the lights can be turned OFF and ON by pressing R-TUNE and RECALL at the same time.

Helpful Hints:

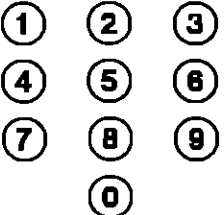
















If the selected component does not respond to the remote control, ensure that the proper mode is selected **First**, press the **Mode Selection Button** that corresponds to that component. For example, after first pressing the TV Mode Button, the remote will remain in the TV mode for any following commands. If a different mode button is pressed while operating the television, the TV mode button must be pressed again to reset the TV mode condition.

- ⑯ **Multi Button** – Programmable to operate up to six (6) Remote Function buttons simultaneously.
- ⑰ **VCR Function Buttons** – Programmable to operate many brands of VCR's.
- ⑱ **Mode Selection Buttons** – Selects the operation mode for the remote control.
- ⑲ **VCR/DSS (PIP) Channel Buttons** – These buttons are used to select VCR or DSS channels UP or DOWN, or to move the channels within the PIP frame UP or DOWN.

NOTE: For more information on the Remote Control, please refer to the Remote Control Quick Reference Functional Key Chart.











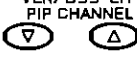
Remote Control

Quick Reference Functional Key Chart

KEY	MODE	FUNCTION
	TV VCR CABLE, DSS	Selects Channel Selects Channel Selects Channel
	RECEIVER/AMPLIFIER	Selects TV Video 1 VCR 1 Selects TV Video 2 VCR 2 Selects TV Video 3 VCR 3 Selects Tuner Selects CD Player Selects Tape Cassette Player
	CD PLAYER	Selects Track Number
	LD PLAYER	Selects Track Number
	ALL COMPONENTS	Programmable Button That Can Operate Up To Six Remote Functions At Once
	TV	Selects the TV Input Mode
	ALL COMPONENTS	Turns On and Off Selected Components
	TV, DSS, VCR, LDP CABLE RECEIVER/AMPLIFIER	Mutes TV Audio Mutes Audio Mutes Audio
	TV	TV Mode Selection for Remote Control
	CABLE	Cable Mode Selection for Remote Control
	DSS (DIGITAL SATELLITE SYSTEM)	DSS Mode Selection for Remote Control
	VCR	VCR Mode Selection for Remote Control
	RECEIVER/AMPLIFIER	Receiver/Amplifier Mode Selection for Remote Control
	COMPACT DISC	CD Mode Selection for Remote Control
	CASSETTE PLAYER, DVD	AUX Mode Selection for Remote Control Enables User to Operate a Tape Cassette Player, or Digital Video Disc
	LASER DISC PLAYER	LD Mode Selection for Remote Control
 	TV CABLE DSS LDP CD RECEIVER/AMPLIFIER DVD	Channel Up/Down, Menu Navigation Channel Up/Down DSS Guides and Menu Navigation Skip FF, REW Preset or Tuning Frequency Skip FWD/Skip REW
 	TV CABLE DSS RECEIVER/AMPLIFIER VCR LDP	Volume Up/Down, Menu Navigation Volume Up/Down DSS Guides and Menu Navigation Volume Up/Down TV Volume Up/Down TV Volume Up/Down

Remote Control

Quick Reference Functional Key Chart

KEY	MODE	FUNCTION
	LDP TV CABLE VCR DSS RECEIVER/AMPLIFIER CD TAPE CASSETTE PLAYER	Side A/B Switches Between Two (2) Channels Switches Between Two (2) Channels Switches Between Two (2) Channels Switches Between Two (2) Channels Switches between AM and FM Selects Next Disc Selects Tape Cassette Player A or B
	TV DSS	Activates TV Menus Acts as Menu Button for DSS
	TV DSS VCR LDP	Displays Channel, Time, and Audio Mode Displays Current DSS Settings Displays Current VCR Settings Displays Current LDP Settings
	TV DSS VCR LDP TAPE CD DVD	PIP Move DSS Guide Rewind Rewind Rewind Selects Previous Track Rewind
	TV DSS VCR LDP TAPE CD DVD	PIP Size Enter/Select Play Play Play (in Normal Direction) Play Play
	TV DSS VCR LDP TAPE CD DVD	PIP On/Off Exit/Clear Fast Forward Fast Forward Fast Forward Selects Next Track Fast Forward
	DSS VCR TAPE CABLE	One Touch Record in DSS Mode Record Record VCR Record
	TV DVD VCR LDP TAPE CD CABLE	PIP Search Stop Stop Stop Stop Stop VCR Stop
	DVD TV VCR LDP TAPE CD CABLE	Pause PIP Swap Pause Pause Pause Pause VCR Pause
	TV VCR DSS CABLE	PIP Freeze Selects TV/VCR Mode Selects TV/DSS Mode Selects TV/VCR Mode
	TV VCR DSS CABLE	PIP Channel Up/Down (2 Tuner PIP Models Only) Channel Up/Down Channel Up/Down VCR Up/Down

Control Operation

Helpful Hints:

- Press the TV Mode Selection button to operate TV Remote functions, if necessary

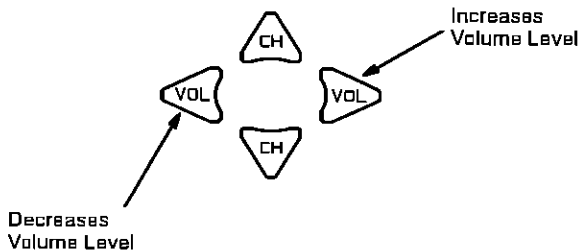


Power Button — Press the POWER button after selecting a mode to turn ON. Press again to turn OFF.



Volume Button — Press the VOLUME (VOL) LEFT/RIGHT button for desired listening level (when On-Screen menus are not displayed).

Located On Remote Control



Mute Button — Press the MUTE button to quickly reduce sound level (Mute will appear on screen momentarily). Press again to restore sound.



Helpful Hints:

- Helpful information will display On Screen momentarily when Receiver is first turned on and when the channel is changed.
- When using keyboard entry for channels 10, 11, and 12 in the CABLE mode there is a slight delay before channel change because of the capability of tuning cable channels 100 to 125.

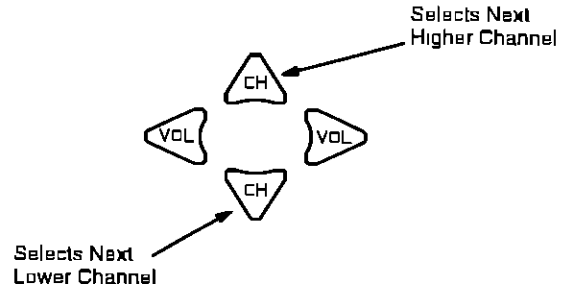
NOTE: If "SPEAKER OFF" is displayed On Screen after pressing the VOLUME button, refer to Audio Menu to turn Speakers "ON".

Channel Buttons (UP/DOWN)

Press the CHANNEL (CH) UP/DOWN button to sequentially scan through programmed channels (when On-Screen menus are not displayed).

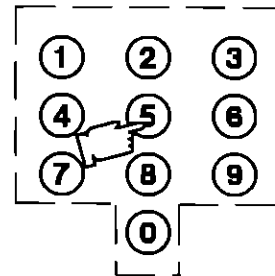
NOTE: Press the TV Mode button to operate TV Remote functions, if necessary.

Located On Remote Control



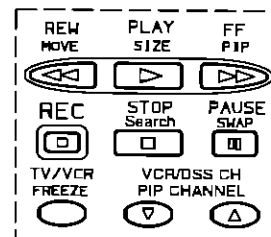
Numeric Keypad (0 through 9 Buttons) —

These buttons let you directly access channel number — even if the channel is not in the channel memory (Example: press 5 for channel 5, press 1 then 3 for channel 13). For channels over 99, press three number buttons.



VCR Function Buttons — The VCR function buttons have been designed to operate numerous brands of VCRs. The infrared code must be obtained prior to use (Please refer to Programming the Universal Remote for programming instructions).

NOTE: Press the VCR Mode Selection button to operate VCR Remote functions.



Control Operation (cont.)

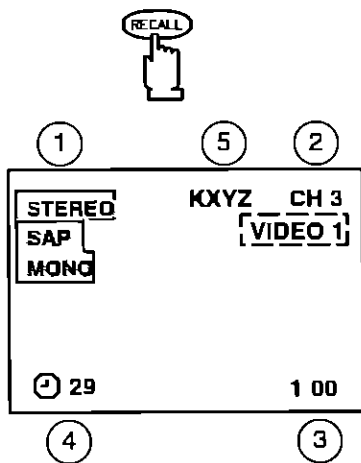
Helpful Hints:

- Press the TV Mode Selection button to operate TV Remote functions, if necessary



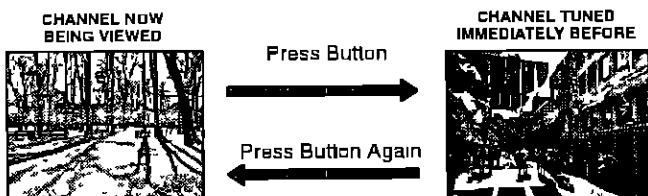
Recall Button — Press the RECALL button to review

- ① Audio Mode status
- ② CH number or Video Input selected
- ③ Sleep Timer status
- ④ Clock time
- ⑤ Channel Caption (Station Identifier)



R-Tune Button — Pressing the R-TUNE (RAPID TUNE) button will switch between the last two channels selected on the numeric keypad

NOTE: When rapidly scanning channels with the CHANNEL UP/DOWN button, pressing the R-TUNE button will switch between the last channel scanned, and initial channel at the start of scanning



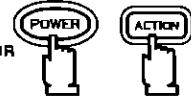
Multi Button

The MULTI button can be programmed to operate up to six (6) Remote function buttons at the same time. For Example: TV Power/On, VCR Power/On, and Cable box Power/On (selected brands) can be operated at the same time with one press of the MULTI button (The VCR Mode button should be programmed before starting procedure see pg 48).

Procedure

- 1 Program the Remote for the selected device. Infrared access code. Confirm that the Remote Control is compatible with the device.
- 2 Face the Remote Control transmitter away from all equipment remote sensors.
- 3 Press and hold the Remote POWER button, then press and hold the ACTION button down at the same time for three seconds (All previous commands are erased).

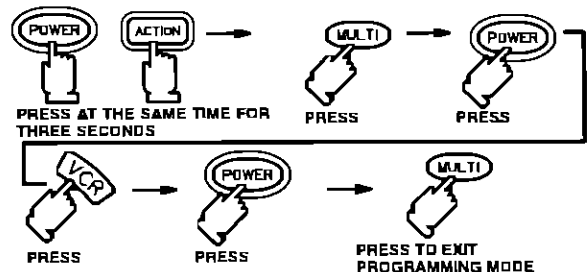
PRESS AT THE SAME TIME FOR THREE SECONDS



- 4 After three seconds, all the illuminated buttons will begin to flash. Release the POWER and ACTION buttons.
- 5 Press the MULTI button (Waiting more than 30 seconds without pressing another button will exit the programming mode).
- 6 Press a maximum of six (6) function buttons on the Remote Control.

Each button you press is equal to one function. If six (6) Remote button functions are entered, all will register in the MULTI button memory in the sequence entered. When finished, press the MULTI button to exit the programming mode.

The following is an example flow chart of Remote functions that can be programmed into the MULTI button.



You can now turn the TV and VCR ON/OFF at the same time with one press of the MULTI button.

To delete entered functions — Press and hold the Remote POWER button, then press and hold the ACTION button down at the same time for three seconds. You can now enter from one to six different Remote functions.

NOTE You can also program the MULTI button to perform most individual Remote Control button functions. Buttons which continuously perform a function as long as pressed (Volume Up/Down, Channel Up/Down, etc.) cannot be programmed, only those buttons which perform a function when initially pressed (Power On/Off, Mute, Direct Channel Entry, etc.) can be programmed.

Control Operation (cont.)

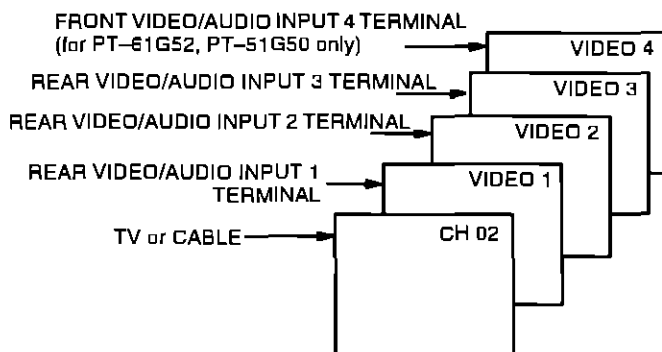
- Press the TV Mode Selection button to operate TV Remote functions, if necessary



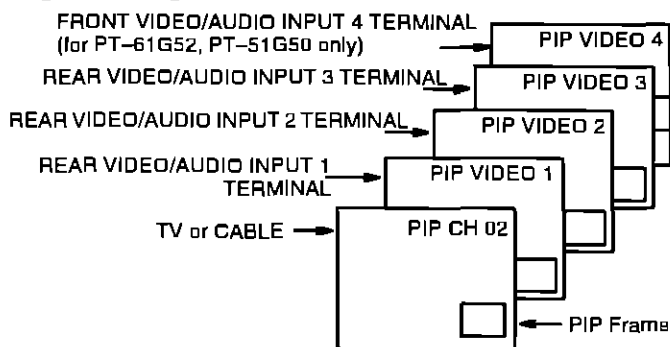
TV/Video Button — Press the TV/VIDEO button to select desired input for Main Picture or PIP frame (when the PIP Frame is displayed)



Signal coming from



Signal coming from



PIP (Picture in Picture) Button — This feature allows the viewer to monitor one channel program while watching another. The monitored source (PIP) can be a different channel or a different video source (such as a VCR) when connected to the input jacks

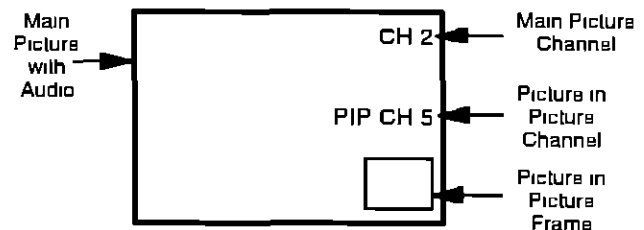
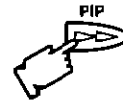
- S-Video connection will also operate the PIP feature (refer to OPTIONAL S-VIDEO VHS CONNECTION section)
- When the Main Picture is in Video mode with no signal, the PIP will not operate properly

PIP Operation

- Turn VCR ON and select a desired channel
- Press the TV Mode Selection button to operate TV Remote functions, if necessary

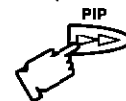


- Press the PIP button (television must be ON). The PIP frame will appear at the position it was last displayed. The Main Picture Video Source and PIP Video Source will display on screen momentarily. Audio will be that of Main Picture



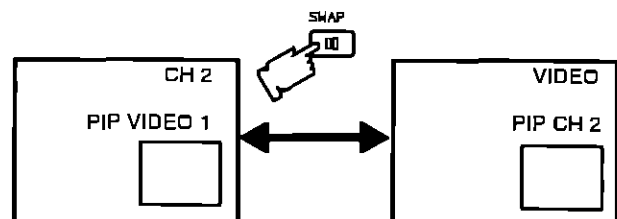
- For selecting channels in the PIP frame, press the PIP channel buttons on the remote control
- For selecting video source for the PIP frame, press the TV/Video button on the remote control

- Press the PIP button again to cancel PICTURE IN PICTURE feature (if desired)



NOTE: For PIP Video source connection, refer to the PIP External Video and Antenna Connections section

Swap Button — Press the SWAP button (when the PIP frame is displayed) to interchange what is being viewed on the Main Picture with that of the PIP frame



- Audio will be that of the Main Picture

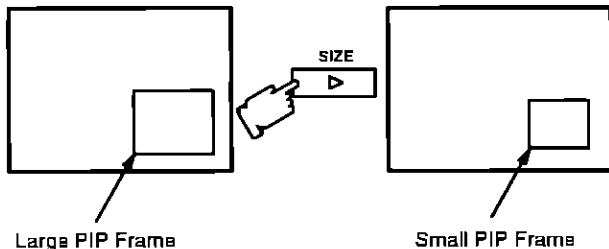
Control Operation (cont.)

Helpful Hints:

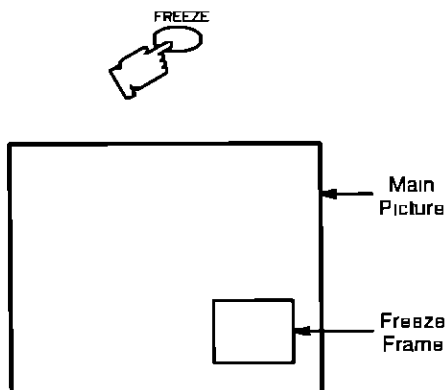
- Press the TV Mode Selection button to operate TV Remote functions, if necessary



Size Button – Press the SIZE button (when the PIP frame is displayed) to choose either the large or small PIP frame



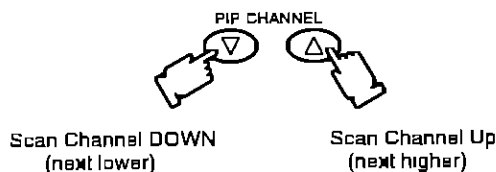
Freeze Button – Press the FREEZE button to stop action in the PIP frame



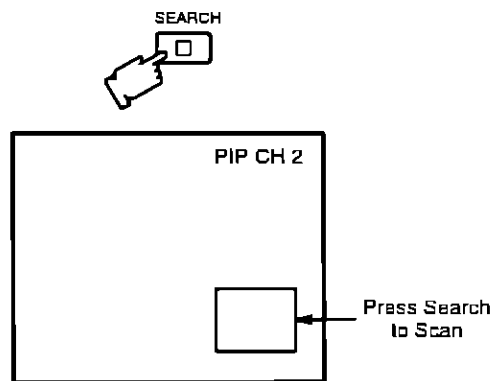
NOTES

- Pressing the FREEZE button when the PIP frame is not displayed, will stop action in the Main Picture and display it within the PIP frame
- Pressing the FREEZE button when PIP frame is displayed, will stop action in the PIP frame. Press the FREEZE button again to continue action
- Press the PIP button to delete PIP frame

PIP Channel Buttons – Press the (PIP) CH (CHANNEL) UP/DOWN button while the PIP frame is displayed to sequentially scan through Channels



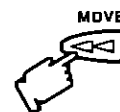
Search Button – The SEARCH button allows you to scan channels in “Channel Scan memory” one at a time. This feature will work with or without an external video signal as the Main Picture



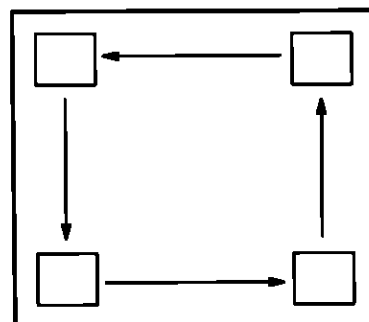
Search Operation

- Press the SEARCH button. A PIP frame will appear on the Main Picture. (The PIP frame will continuously scan channels in sequence as programmed into channel memory.)
- Press the PIP button to stop Search feature on desired picture for PIP frame. (Press the SWAP button to interchange what is being viewed on the Main Picture with that of the PIP frame. Press the SEARCH button again, the Search frame will disappear.)

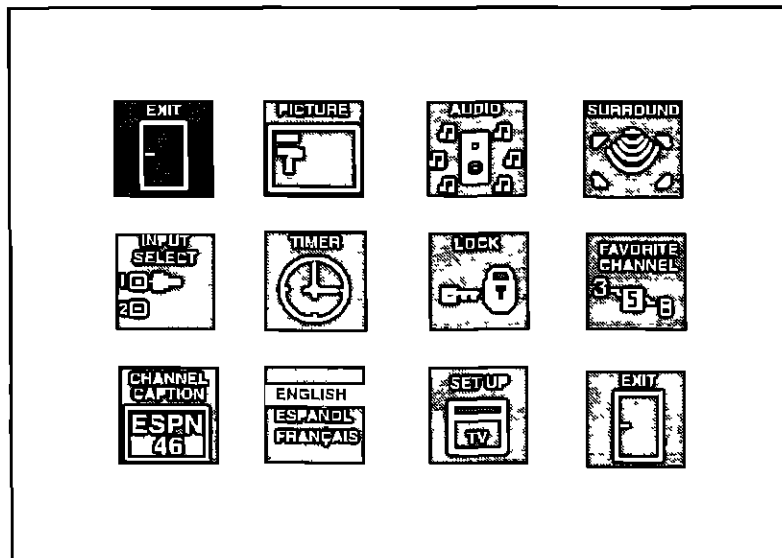
Move Button – The PIP frame may be located at any corner of the Main Picture by pressing the PIP MOVE button (when the PIP frame is displayed)



NOTE: Each time MOVE button is pressed (when the PIP frame is displayed), the PIP frame will move counterclockwise as illustrated



Main Menu (Trilingual Animated Icons)

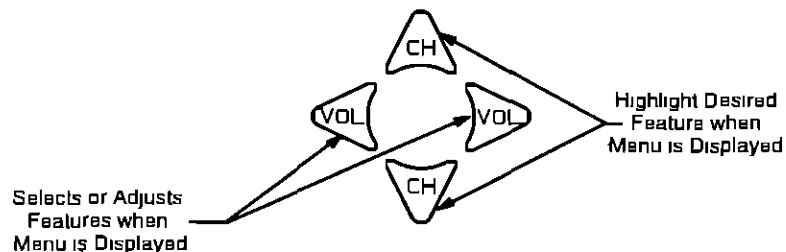


NOTE: Only the selected icon will be animated

Displays and Exits Menus



Located On Remote Control

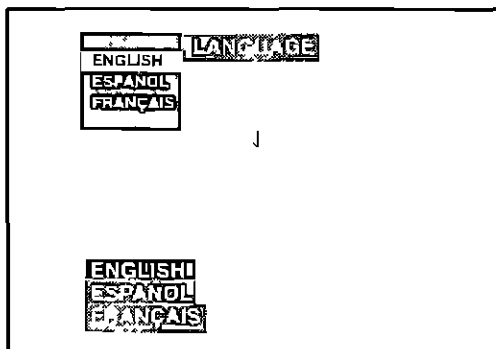


- 1 Press the ACTION button to display the Main Menu with Icons
- 2 Press the CH UP/DOWN and the VOL LEFT/RIGHT buttons to select the desired icon when the Main Menu is displayed (selected icon will be indicated in Red)
- 3 Press the VOL buttons for left and right movement and the CH buttons for up or down movement
- 4 To exit the Main Menu first select the EXIT icon, then press the ACTION button

Language Menu

The LANGUAGE MENU is factory set to ENGLISH. Follow these instructions to change the Language Menu to SPANISH or FRENCH and back to ENGLISH.

- 1 Press the ACTION button to display the Main Menu
- 2 Press the CH UP/DOWN and VOL LEFT/RIGHT buttons to highlight the Language ENGLISH/ESPAÑOL (Spanish)/FRANÇAIS (French) icon
- 3 Press the ACTION button to display the Language select Menu

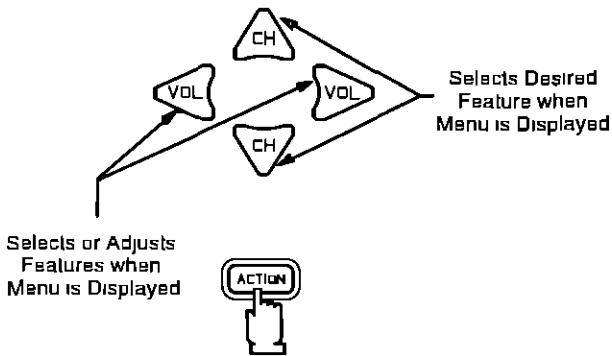


- 4 Press the CH UP/DOWN button to select ENGLISH, SPANISH, or FRENCH for the Language Menu
- 5 Press the ACTION button twice to exit the menus

Picture Adjustments

- Picture Norm
- Color
- Tint
- Brightness
- Picture
- Sharpness
- Color Temp (Temperature)
- Auto Color
- Video NR
- AI Picture

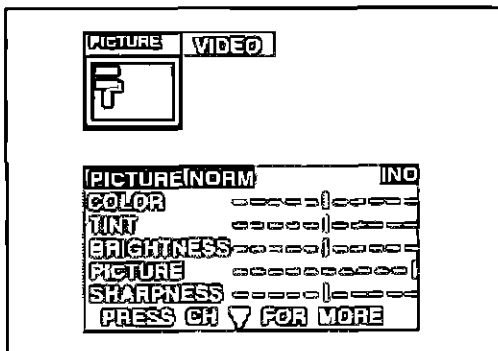
Located On Remote Control



Displays and Exits Menus

Picture Norm – This feature is used to reset Color, Tint, Brightness, Picture, and Sharpness adjustments back to a factory preset level

- 1 Press the ACTION button to display the Main Menu
- 2 Press the CH UP/DOWN and VOL LEFT/RIGHT buttons to highlight the Picture Icon
- 3 Press the ACTION button to display the Picture Adjustment Menu

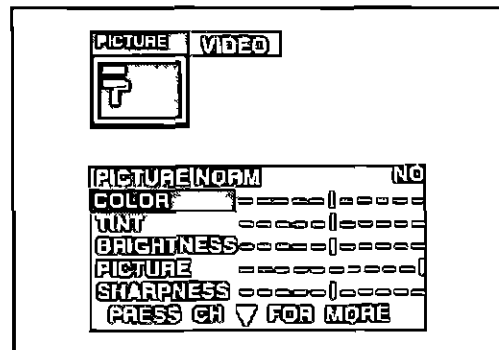


- 4 Press the CH UP/DOWN button to highlight PICTURE NORM
- 5 Press the VOL LEFT/RIGHT button to select "SET" to Normalize Color, Tint, Brightness, Picture, and Sharpness
- 6 Press the ACTION button twice to exit menus

Color, Tint, Brightness, Picture, and Sharpness Adjustments

Before setting the following Picture Adjustment, select the desired mode of AI Picture (ON or OFF) Picture Adjustments may require re-adjustment when changing between AI Picture ON or OFF

- 1 Press the ACTION button to display the Main Menu
- 2 Press the CH UP/DOWN and VOL LEFT/RIGHT buttons to highlight the Picture Icon
- 3 Press the ACTION button to display the Picture Adjustment Menu



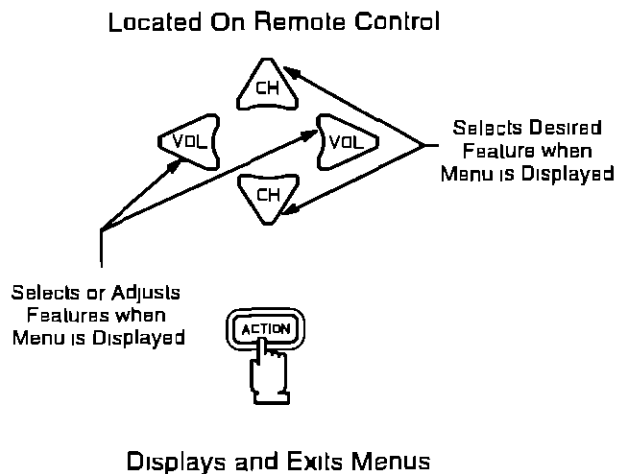
- 4 Press the CH UP/DOWN button to select the desired Picture Adjustment (Color, Tint, Brightness, Picture, or Sharpness)
- 5 Press the VOL LEFT/RIGHT button to adjust your selection (The Selected Picture Adjustment will be displayed)
- 6 Repeat steps 4 and 5 for the remaining Picture Adjustments
- 7 Press the ACTION button twice to exit menus

NOTE: Pressing the ACTION button again will return to Picture Icon

Helpful Hints:

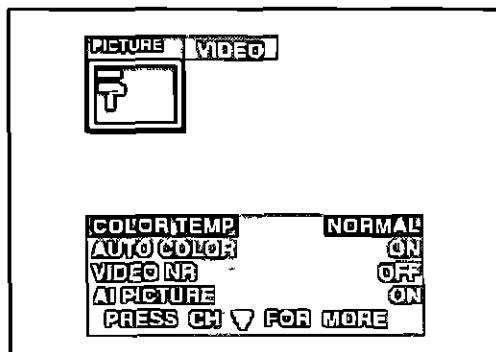
- COLOR – adjust for desired color intensity
- TINT – adjust for natural flesh tones
- BRIGHTNESS – adjust so dark areas of picture slightly become black for a crisp detail
- PICTURE – adjust the white areas of the picture as desired
- SHARPNESS – adjust for best clarity of outline detail

Picture Adjustment (cont.)



Color Temp (Temperature) – This feature selects three (3) options for picture temperature

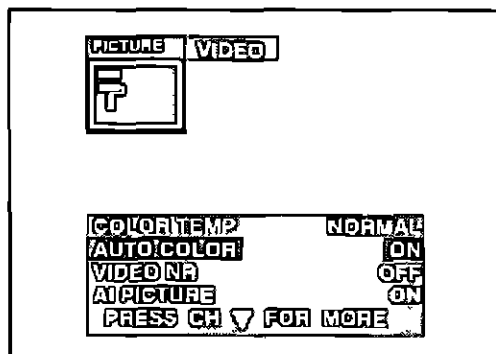
- 1 Press the ACTION button to display the Main Menu
- 2 Press the CH UP/DOWN and VOL LEFT/RIGHT buttons to highlight the Picture Icon
- 3 Press the ACTION button to display the Picture Adjustment Menu



- 4 Press the CH UP/DOWN button to highlight COLOR TEMP
- 5 Press the VOL LEFT/RIGHT button to select NORMAL, WARM, or COOL
 - NORMAL (no tint)
 - WARM (reddish tint)
 - COOL (bluish tint)
- 6 Press the ACTION button twice to exit the Picture Adjustment Menu

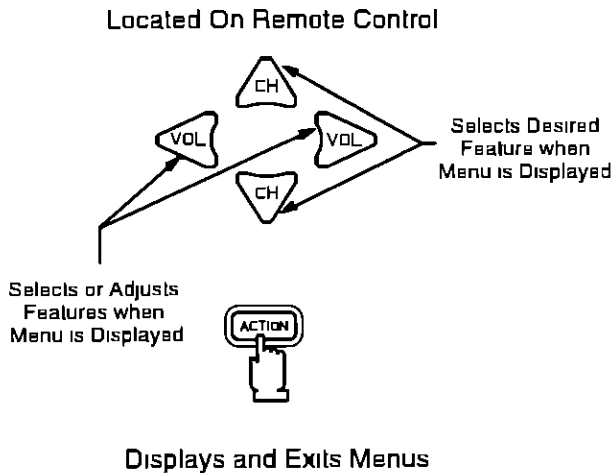
Auto Color – This feature automatically optimizes color adjustment to compensate for signal variations

- 1 Press the ACTION button to display the Main Menu
- 2 Press the CH UP/DOWN and VOL LEFT/RIGHT buttons to highlight the Picture Icon
- 3 Press the ACTION button to display the Picture Adjustment Menu



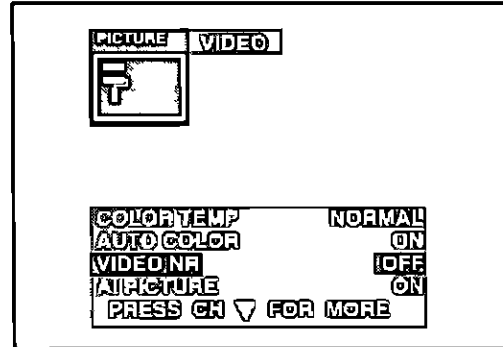
- 4 Press the CH UP/DOWN button to highlight AUTO COLOR
- 5 Press the VOL LEFT/RIGHT button to turn Auto Color feature ON or OFF
- 6 Press the ACTION button twice to exit Menus

Picture Adjustment (cont.)



Video NR (Noise Reduction) – This feature reduces video noise (snow in picture) due to weak signal

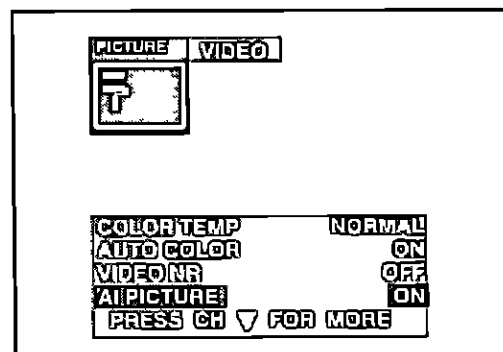
- 1 Press the ACTION button to display the Main Menu
- 2 Press the CH UP/DOWN and VOL LEFT/RIGHT buttons to highlight the Picture Icon
- 3 Press the ACTION button to display the Picture Adjustment Menu



- 4 Press the CH UP/DOWN button to highlight VIDEO NR (Noise Reduction)
- 5 Press the VOL LEFT/RIGHT button to turn Video NR feature ON or OFF
- 6 Press the ACTION button twice to exit the Picture Adjustment Menu

AI Picture – This feature provides Flesh Tone Correction, Color Edge Correction, Color Noise Reduction, and Optimum Flesh Tone Brightness. For the best possible picture quality this feature should be activated (ON)

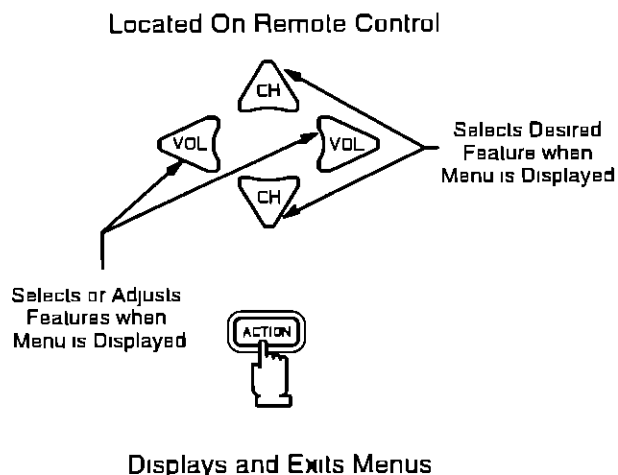
- 1 Press the ACTION button to display the Main Menu
- 2 Press the CH UP/DOWN and VOL LEFT/RIGHT buttons to highlight the Picture Icon
- 3 Press the ACTION button to display the Picture Adjustment Menu



- 4 Press the CH UP/DOWN button to highlight AI PICTURE
- 5 Press the VOL LEFT/RIGHT button to select ON or OFF
- 6 Press the ACTION button twice to exit Menus

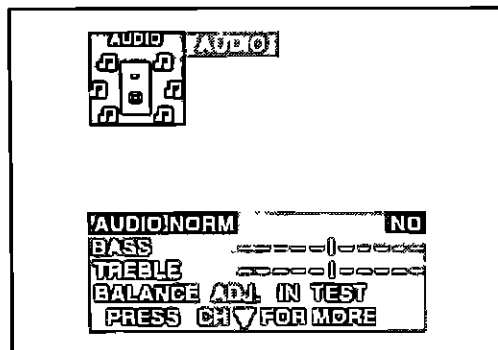
Audio Adjustments

- Audio Norm
- Bass
- Treble
- Balance ADJ In Test
- Mode
- [TV] Speaker
- Extra Bass
- AI Sound



Audio Norm – This feature is used to reset BASS and TREBLE back to a factory preset level

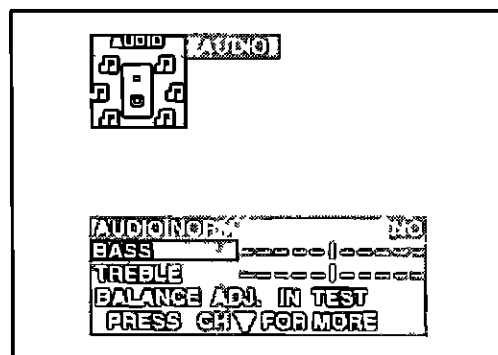
- 1 Press the ACTION button to display the Main Menu
- 2 Press the CH UP/DOWN and VOL LEFT/RIGHT buttons to highlight the Audio Icon
- 3 Press the ACTION button to display the Audio Adjustment Menu



- 4 Press the CH UP/DOWN button to highlight AUDIO NORM
- 5 Press the VOL LEFT/RIGHT button to select YES to "Normalize" Bass and Treble
- 6 Press the ACTION button twice to exit the Audio Adjustment Menu

Bass and Treble – While the AI (Artificial Intelligence) Sound is "ON" the Bass and Treble cannot be adjusted

- 1 Press the ACTION button to display the Main Menu
- 2 Press the CH UP/DOWN and VOL LEFT/RIGHT buttons to highlight the Audio Icon
- 3 Press the ACTION button to display the Audio Adjustment Menu



- 4 Press the CH UP/DOWN button to highlight BASS or TREBLE
- 5 Press the VOL LEFT/RIGHT button to adjust for desired audio response
- 6 Press the ACTION button twice to exit the Audio Adjustment Menu

NOTE. Pressing the ACTION button again will return you back to the Audio Icon

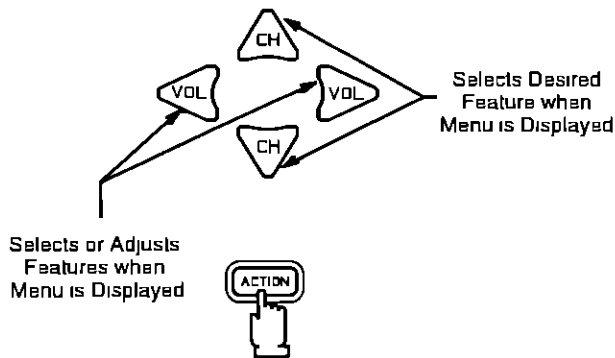
Helpful Hints:

BASS – To increase or decrease the Bass response
TREBLE – To increase or decrease the Treble response

NOTE- BALANCE ADJ IN TEST cannot be selected, refer to Surround Test Tone section to emphasize the speaker volume (LEFT/RIGHT) (p 26)

Audio Adjustments (cont.)

Located On Remote Control

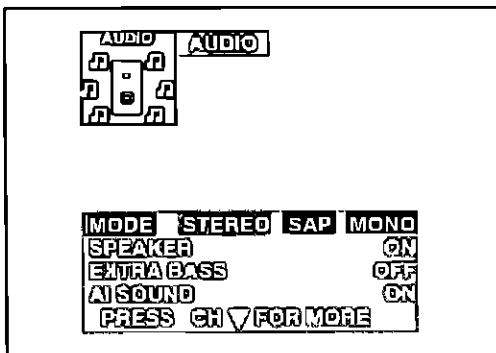


Displays and Exits Menus

Mode – Stereo/SAP/Mono

When Audio is broadcast in Stereo or SAP, an On-Screen display will appear on initial "Turn On" and "Channel Change". The available choices will be indicated in red.

- 1 Press the ACTION button to display the Main Menu
- 2 Press the CH UP/DOWN and VOL LEFT/RIGHT buttons to highlight the Audio icon
- 3 Press the ACTION button to display the Audio Adjustment Menu

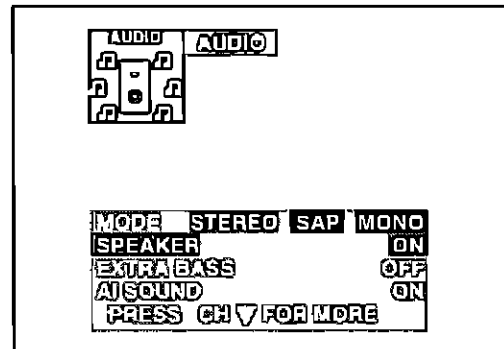


- 4 Press the CH UP/DOWN button to highlight MODE
- 5 Press the VOL LEFT/RIGHT button to select STEREO, SAP (Second Audio Programming), or MONO. The selected mode will be highlighted.
- 6 Press the ACTION button twice to exit the Audio Adjustment Menu

[TV] Speaker – This feature is used to turn the internal speakers "ON" or "OFF". It is used when the Receiver is connected to an External Audio Amplifier (Refer to "To Audio Amp Connection" section, page 8 for further information)

- 1 Press the ACTION button to display the Main Menu
- 2 Press the CH UP/DOWN and VOL LEFT/RIGHT buttons to select the Audio icon
- 3 Press the ACTION button to display the Audio Adjustment Menu

NOTE: Speaker is not displayed in audio menu when the unit is in Pro-Logic mode. Refer to page 26, to turn mode OFF.

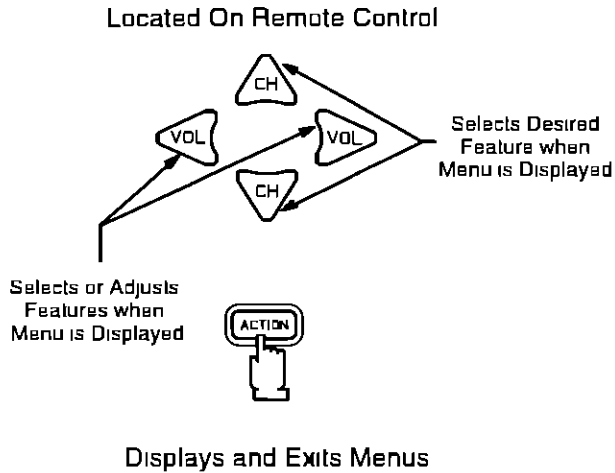


- 4 Press the CH UP/DOWN button to highlight SPEAKER
- 5 Press the VOL LEFT/RIGHT button to select ON, OFF&VAO or OFF&FAO
 - ON – TV SPEAKERS operate normally
 - OFF&VAO (Variable Audio Output) – TV SPEAKERS off, the sound output varies according to the TV volume. Use the TV remote to control the volume, muting, bass, treble, and balance of the External Amplifier System
 - OFF&FAO (Fixed Audio Output) – TV SPEAKERS off, sound output is not adjustable. The audio is controlled by the External Amplifier System volume control
- 6 Press the ACTION button twice to exit the Audio Adjustment Menu

Helpful Hints:

STEREO – Two channel Audio reception
 SAP – Second Audio Programming (typically used for bilingual audio)
 MONO – Use when stereo signal is weak

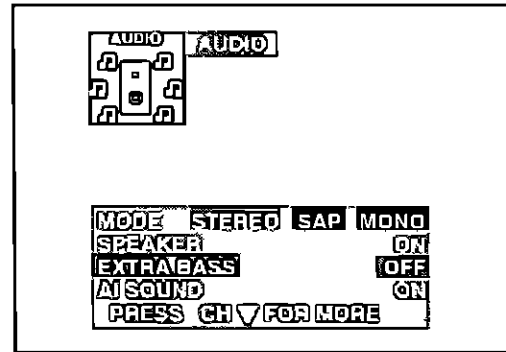
Audio Adjustments (cont.)



Extra Bass – This feature puts additional emphasis on bass frequencies to allow for low volume listening, and provides a fullness of sound with rich bass tones

- 1 Press the ACTION button to display the Main Menu
- 2 Press the CH UP/DOWN and VOL LEFT/RIGHT buttons to highlight the Audio Icon
- 3 Press the ACTION button to display the Audio Adjustment Menu

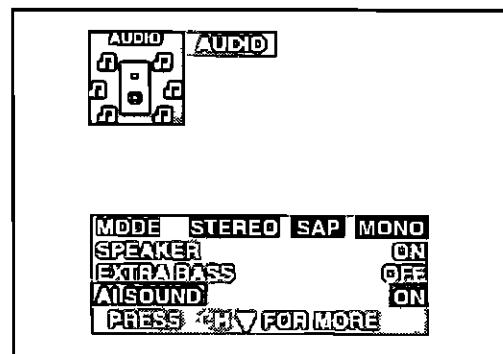
NOTE: AI Sound is not displayed in audio menu when the unit is in Pro-Logic mode. Refer to page 26, to turn mode OFF



- 4 Press the CH UP/DOWN button to highlight EXTRA BASS
- 5 Press the VOL LEFT/RIGHT button to select ON or OFF
- 6 Press the ACTION button twice to exit menus

AI Sound – This feature is used to enhance sound quality through automatic adjustment of bass and treble during speech or music segments of the audio broadcast. It also regulates the volume between program and commercial audio to maintain a constant sound output level

- 1 Press the ACTION button to display the Main Menu
- 2 Press the CH UP/DOWN and VOL LEFT/RIGHT buttons to highlight the Audio Icon
- 3 Press the ACTION button to display the Audio Adjustment Menu

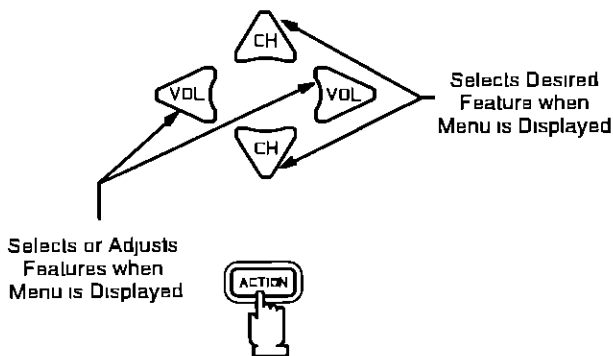


- 4 Press the CH UP/DOWN button to highlight AI SOUND
- 5 Press the VOL LEFT/RIGHT button to select AI SOUND ON or OFF
- 6 Press the ACTION button twice to exit menus

Surround

- Surround Mode (Off)
- Test Tone (adjustment for PTV speakers audio balance)
- Surround Pro-Logic Mode (Wide/Normal/Phantom)
- Surround Mode (Cinema/Hall/Stadium)

Located On Remote Control

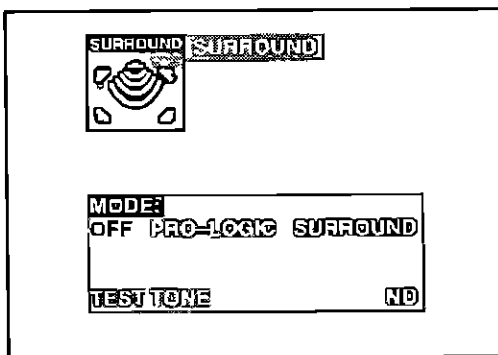


Displays and Exits Menus

Surround Mode (Off)

This feature is used to turn the Surround Mode off or to emphasize the Left/Right speaker volume

- 1 Press the ACTION button to display the Main Menu
- 2 Press the CH UP/DOWN and VOL LEFT/RIGHT buttons to highlight the SURROUND Icon
- 3 Press the ACTION button to display the Surround Menu

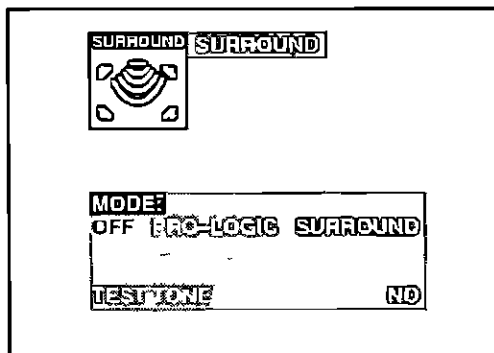


- 4 Press the CH UP/DOWN button to highlight MODE
- 5 Press the VOL LEFT/RIGHT button to select OFF
- 6 Press the ACTION button twice to exit the Audio Adjustment Menu

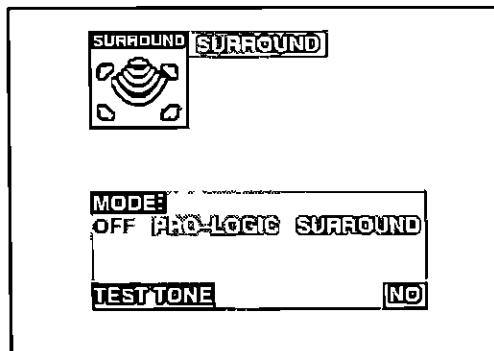
Test Tone for Adjustment of PTV Speakers Audio Balance

This feature is used to emphasize Left and Right speaker volume (Surround must be in the OFF mode)

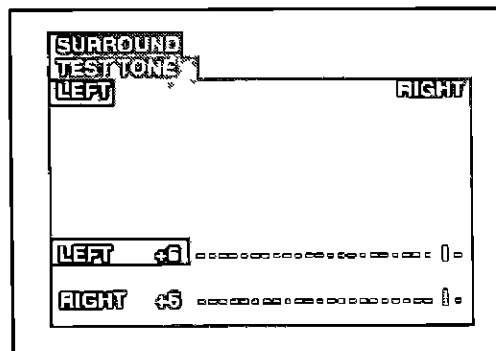
- 1 Press the ACTION button to display the Main Menu
- 2 Press the CH UP/DOWN and VOL LEFT/RIGHT buttons to highlight the SURROUND Icon
- 3 Press the ACTION button to display the Surround Menu



- 4 Press the CH UP/DOWN button to highlight TEST TONE



- 5 Press the VOL LEFT/RIGHT button to display the Surround Test Tone Menu



- 6 Press the VOL LEFT button while the left or right is highlighted to decrease speaker volume, or press the VOL RIGHT button while the left or right is highlighted to increase speaker volume
- 7 Press the ACTION button three times to exit menus

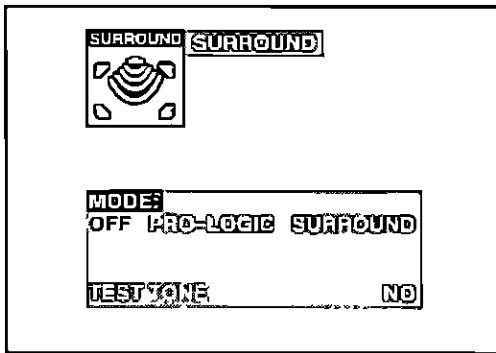
Surround (cont.)

Surround Pro-Logic Mode (Wide/Normal/Phantom)

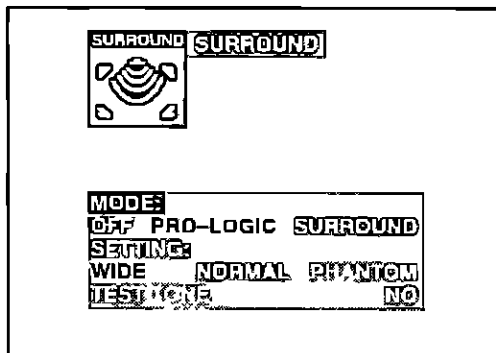
The built-in Dolby Pro-Logic Surround Sound processor eliminates the need for a separate Dolby receiver. It provides exceptional sound reproduction when using video software encoded with Dolby Surround information. The PTV speakers can function as center channel speakers in a Dolby Pro-Logic configuration. Refer to Dolby Pro-Logic Surround Connection (page 29), for connection instructions.

NOTE. Adjust the PTV Main volume to a normal listening level. (Use the volume button on the Remote Control.)

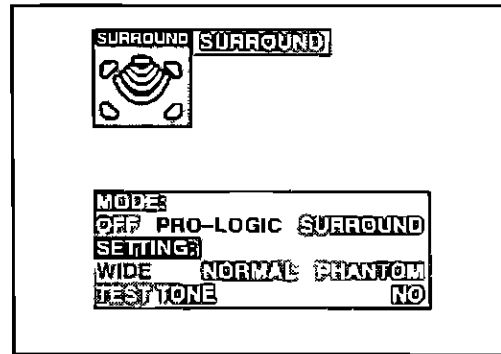
- 1 Press the ACTION button to display the Main Menu
- 2 Press the CH UP/DOWN and VOL LEFT/RIGHT buttons to highlight the Surround Icon
- 3 Press the ACTION button to display the Surround Menu



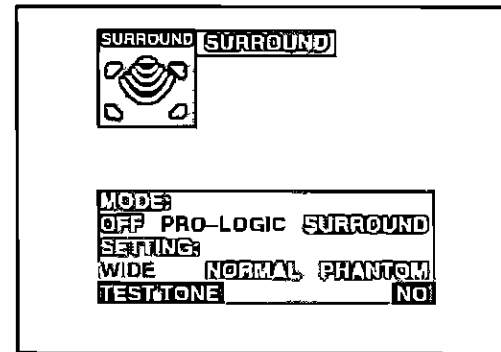
- 4 Press the CH UP/DOWN button to highlight MODE
- 5 Press the VOL LEFT/RIGHT button to select PRO-LOGIC



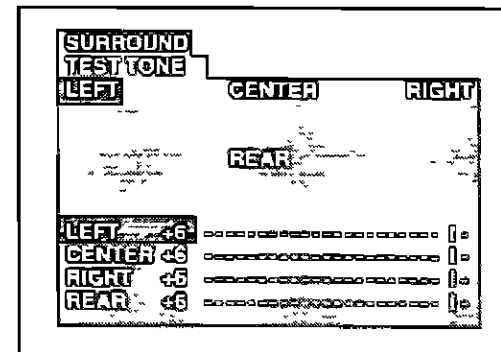
- 6 Press the CH UP/DOWN button to highlight SETTING



- 7 Press the VOL LEFT/RIGHT button to select WIDE, NORMAL, or PHANTOM
 - WIDE When the center speaker sound is the same or larger than the front speakers
 - NORMAL When the center speaker sound is smaller than the front speakers
 - PHANTOM The sound which would have been sent to the center speaker will be divided equally between both the left and right front speakers
- 8 Press the CH DOWN button to highlight TEST TONE

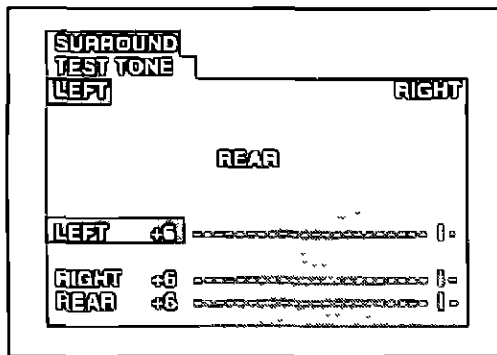


- 9 Press the VOL LEFT/RIGHT button to display the Surround Test Tone Menu



Select Pro-Logic Wide or Normal mode to adjust this menu.

Surround (cont.)



Select Pro-Logic Phantom mode to adjust this menu.

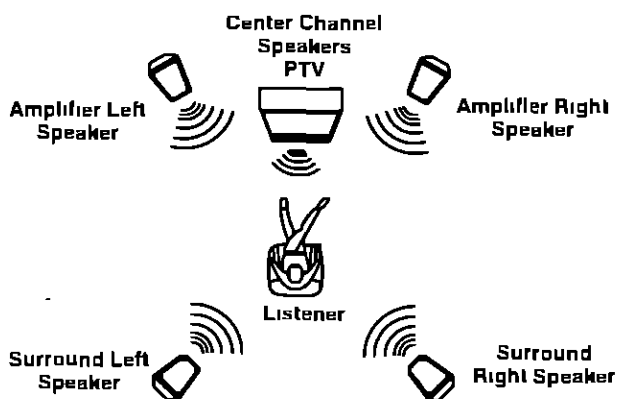
10 Press the CH UP/DOWN button to select

- LEFT For adjusting tone to front-left and/or optional, amplifier speaker
- CENTER For adjusting tone to PTV speakers (center-front channel)

NOTE. For PHANTOM mode, the center channel will be divided equally between front PTV speakers (left and right)

- RIGHT For adjusting tone to front-right and/or optional amplifier speaker
- REAR For adjusting tone to rear Surround Speakers (left and right)

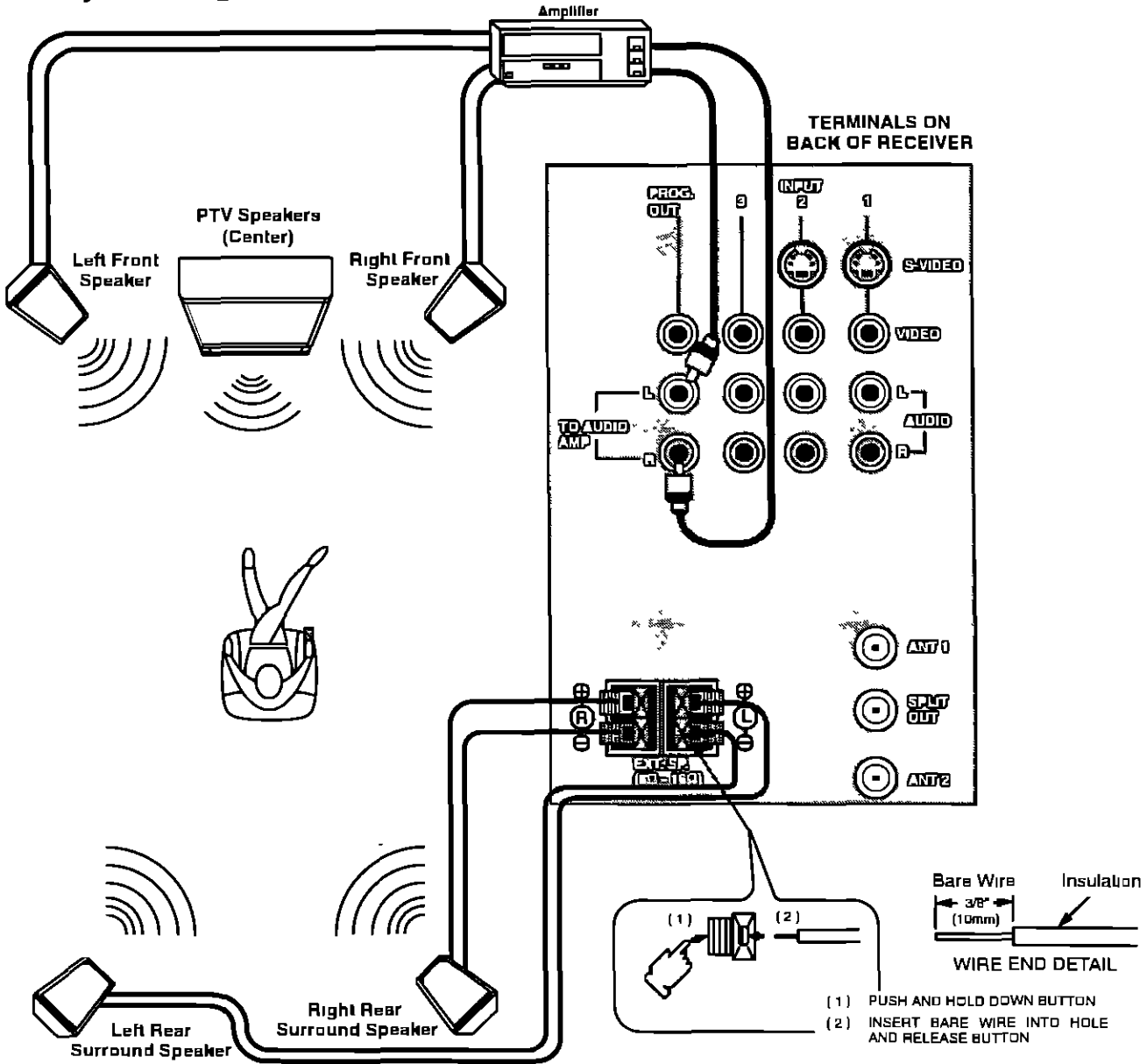
NOTE Before adjusting the Test Tone Volume level, the listener should be positioned in the center of all speakers as shown below



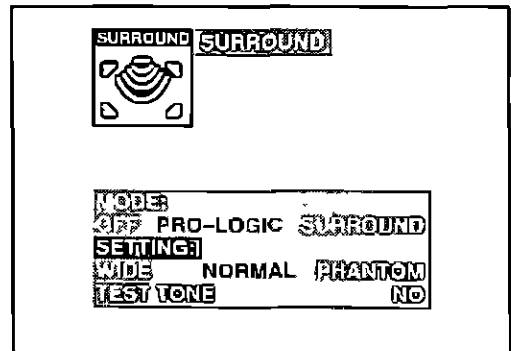
11 Press the VOL LEFT/RIGHT button to adjust your selection. The volume level that is being adjusted will be highlighted. Adjust so that left and right optional Amplifier Speakers, TV Center channel speakers, and Rear Surround Speakers tone level will be equal.

12 Press the ACTION button three times to exit menus.

Surround (cont.) Dolby Pro-Logic Surround Connection



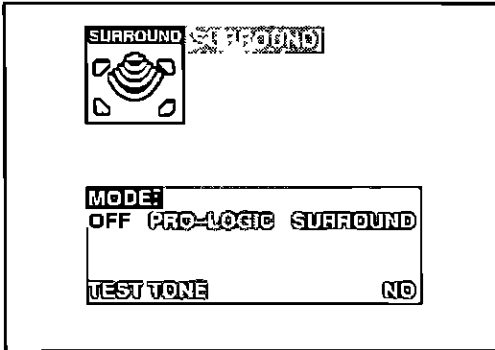
- 1 Connect the Audio amplifier speakers and the surround rear speakers to the PTV as shown in the diagram above
 - 2 The PTV Volume should be set at a normal listening level
- NOTE** The PTV main audio volume control will vary all audio channels at the same time, similar to a master volume control
- 3 Set up the Dolby Pro-Logic Surround menu system as follows
MODE: PRO-LOGIC
SETTINGS WIDE or NORMAL
 (Refer to the Surround Pro-Logic Mode section for setting up menu procedures, page 27)
 - 4 Balance the system by using the Surround Pro-Logic Test Tone menu. Adjust the levels of the Optional Amplifier front LEFT and RIGHT Speakers, PTV Center channel Speaker, and the LEFT and RIGHT Rear Surround Speakers to be equal
 (Refer to the Surround Pro-Logic Mode section for the procedure to adjust Test Tone levels, page 27)



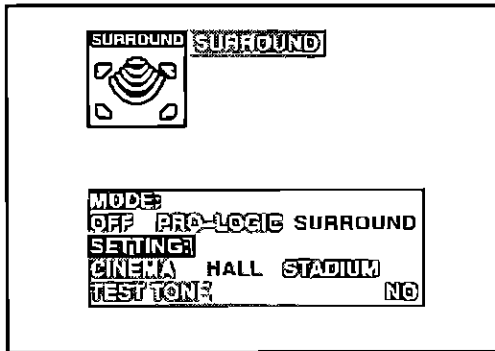
Surround (cont.)

Surround Mode (Cinema/Hall/Stadium)

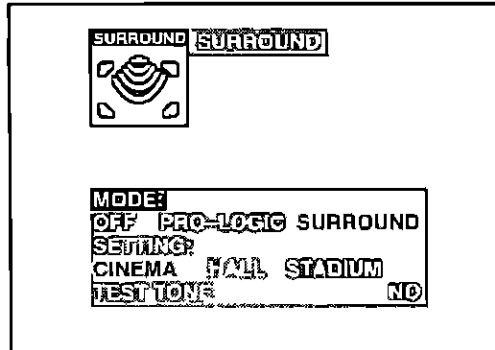
- 1 Press the ACTION button to display the Main Menu
- 2 Press the CH UP/DOWN and VOL LEFT/RIGHT buttons to highlight the Surround Icon
- 3 Press the ACTION button to display the Surround Menu



- 4 Press the CH UP/DOWN button to highlight MODE
- 5 Press the VOL LEFT/RIGHT button to select SURROUND

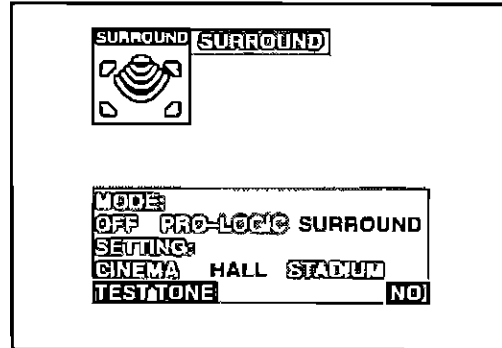


- 6 Press the CH UP/DOWN button to highlight SETTING

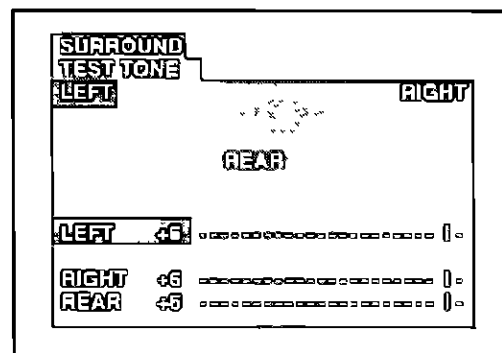


- 7 Press the VOL LEFT/RIGHT button to select CINEMA, HALL, or STADIUM
 - CINEMA The Cinema mode simulates the sound of a good movie theater, with strong bass and spacious feel
 - HALL The Hall mode establishes a club atmosphere for pop music and well defined vocals
 - STADIUM The Stadium mode creates a vast, high-rooted stadium feeling, regardless of the actual size of your listening room

- 8 Press the CH DOWN button to highlight TEST TONE

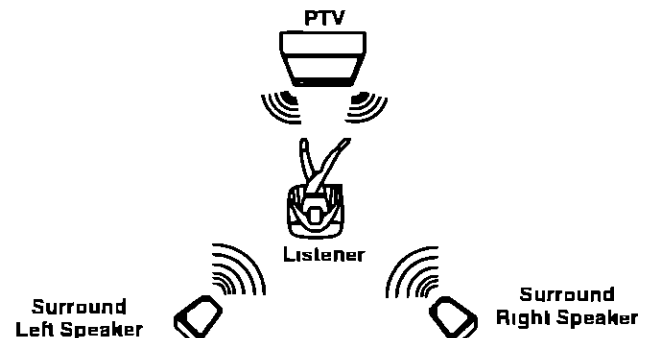


- 9 Press the VOL LEFT/RIGHT button to display the Surround Test Tone Menu



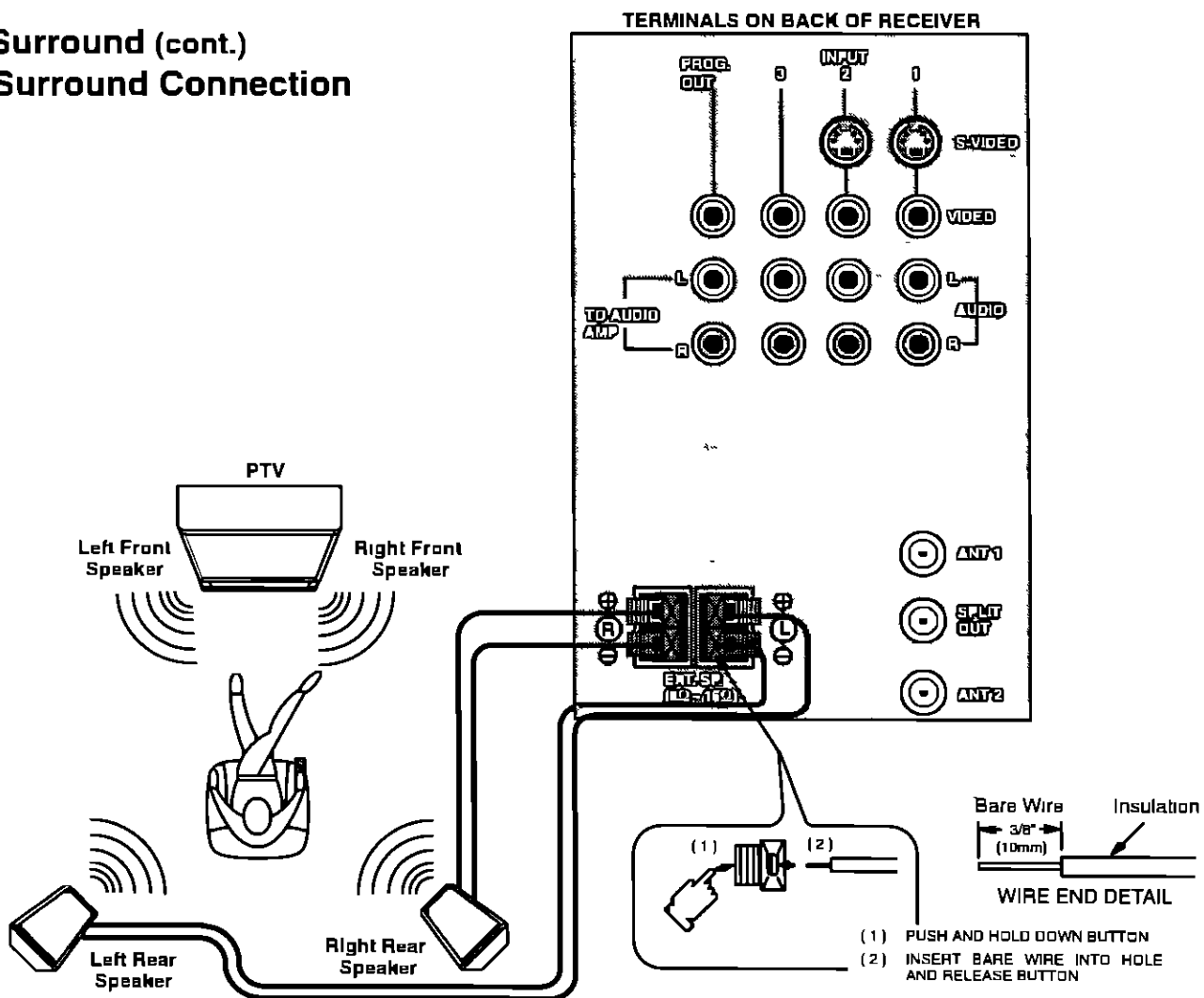
- 10 Press the CH UP/DOWN button to select
 - LEFT For adjusting tone for left front PTV speaker
 - RIGHT For adjusting tone for right front PTV speaker
 - REAR For adjusting tone for rear Surround speakers (left and right)

NOTE Before adjusting the Test Tone Volume level, the listener should be positioned in the center of all speakers as shown below



- 11 Press the VOL LEFT/RIGHT button to adjust your selection. The volume level that is being adjusted will be highlighted. Adjust so that TV Speakers and Rear Surround Speakers tone level will be equal
- 12 Press the ACTION button three times to exit menus

Surround (cont.) Surround Connection

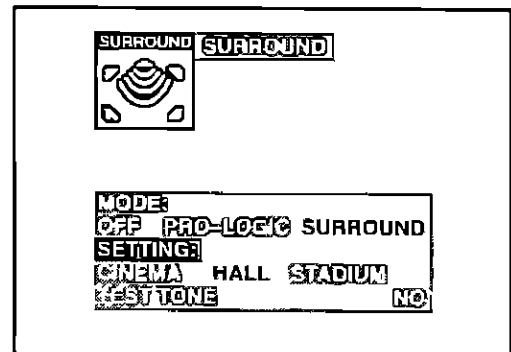


NOTE After wire connection, gently pull to check that it is securely connected. Ensure wire does not protrude from its terminal or come into contact with other wires as damage to components could result.

System Set-Up Procedures

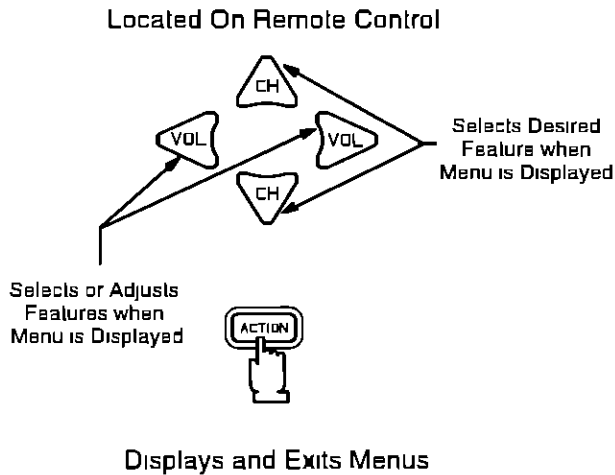
NOTE: Be sure the PTV audio balance adjustments are made before setting up the surround system. Refer to Test Tone for Adjustment of PTV section for speakers Audio balance, page 26.

- 1 Connect the Speakers to the PTV as shown in the diagram above.
- 2 The PTV Volume should be set at a normal listening level.
- 3 Set up the Surround menu system as follows:
MODE: SURROUND
SETTINGS: CINEMA, HALL, or STADIUM
(Refer to Surround Mode section for menu operation procedures, page 30)
- 4 Balance the system by using the Test Tone Menu. Adjust the levels of the PTV LEFT and RIGHT Speakers and the LEFT and RIGHT Rear Surround Speakers to be equal.



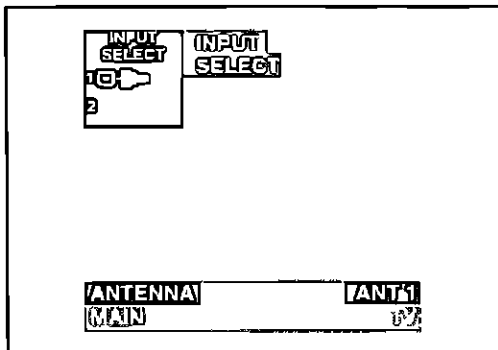
Input Select

- Antenna Input Selection
- Main Picture Input Selection
- PIP (Picture in Picture) Input Selection (When PIP the frame is displayed)



Antenna Input Selection

- 1 Press the ACTION button to display the Main Menu
- 2 Press the CH UP/DOWN and VOL LEFT/RIGHT buttons to highlight the Input Select Icon
- 3 Press the ACTION button to display the Input Select Menu

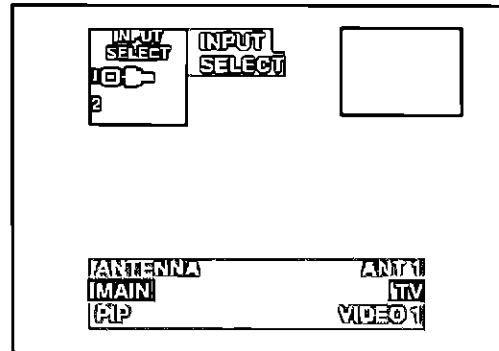


- 4 Press the CH UP/DOWN button to highlight ANTENNA
- 5 Press the VOL LEFT/RIGHT button to select ANT 1 or ANT 2
- 6 Press the ACTION button twice to exit menus

Main (Picture) Input Selection

This feature is used to select TV Mode Operation or one of four Video Inputs for the Main Picture (used with optional accessory Video equipment) **NOTE:** Model PT-51G52 has only 3 inputs

- 1 Press the ACTION button to display the Main Menu
- 2 Press the CH UP/DOWN and VOL LEFT/RIGHT buttons to highlight the Input Select Icon
- 3 Press the ACTION button to display the Input Select Menu

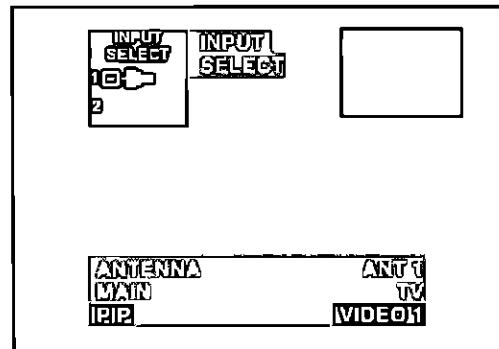


- 4 Press the CH UP/DOWN button to highlight MAIN
- 5 Press the VOL LEFT/RIGHT button to select TV, VIDEO 1, VIDEO 2, VIDEO 3, or VIDEO 4 for Main Picture Input
- 6 Press the ACTION button twice to exit the Input Select Menu

PIP Input Selection

This feature is used to select TV Mode Operation or one of four Video Inputs for the PIP (Picture in Picture) frame when the PIP frame is displayed (used with optional accessory Video equipment) **NOTE:** Model PT-51G52 has only 3 inputs

- 1 Press the PIP button to display the PIP frame
- 2 Press the ACTION button to display the Main Menu
- 3 Press the CH UP/DOWN and VOL LEFT/RIGHT buttons to highlight the Input Select Icon
- 4 Press the ACTION button to display the Input Select Menu

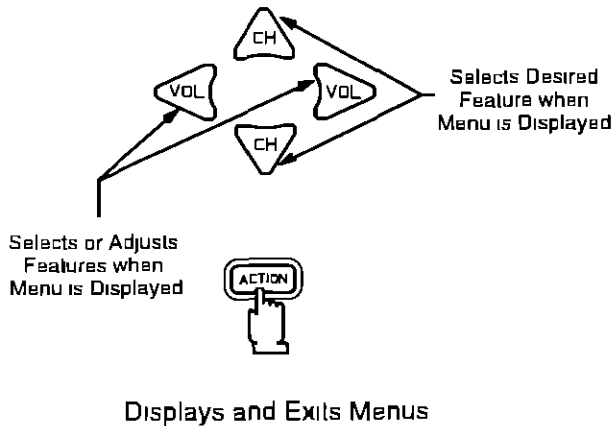


- 5 Press the CH UP/DOWN button (when the PIP frame is displayed) to highlight PIP
- 6 Press the VOL LEFT/RIGHT button to select TV, VIDEO 1, VIDEO 2, VIDEO 3, or VIDEO 4 for the PIP frame Input
- 7 Press the ACTION button twice to exit menus

Timer Feature

- Sleep Timer
- (Dual Program) Timer

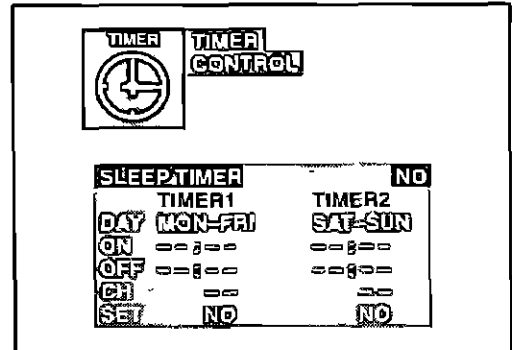
Located On Remote Control



Sleep Timer — This feature is used for automatic turn OFF in 30, 60, or 90 minutes as desired

NOTE Display will flash 3, 2, and 1 to indicate the last three remaining minutes prior to turn OFF

- 1 Press the ACTION button to display the Main Menu
- 2 Press the CH UP/DOWN and VOL LEFT/RIGHT buttons to highlight the Timer Icon
- 3 Press the ACTION button to display the Timer Control Menu



- 4 Press the VOL RIGHT button to select NO, 30, 60, or 90 (minutes) for Sleep Timer to be activated
- 5 Press the ACTION button twice to exit menus

NOTE: To deactivate Sleep Timer repeat steps 1 through 4. In step 4, select "NO" instead of minutes

Timer Feature (cont.)

Special Feature:

Automatic "OFF" after 90 minutes.

The TV has a special feature that will shut itself **OFF** after 90 minutes when turned **ON** by the program timer, unless a function key is pressed during the 90 minutes

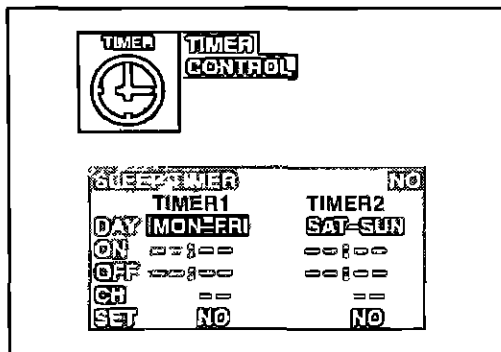
This feature is useful so that the TV will not remain **ON** unattended for an extended period of time

Programming the **OFF** timer will also cancel the automatic **OFF** feature

(Program) Timer – The (Dual Program) Timer feature is capable of turning the TV on to a desired channel and then turning the set **OFF** at a predetermined time

NOTE The clock and day must be set for this feature to operate (Refer to Set Up Menu to Set Time and Day)

- 1 Press the ACTION button to display the Main Menu
- 2 Press the CH UP/DOWN and VOL LEFT/RIGHT buttons to highlight the Timer Icon
- 3 Press the ACTION button to display the Timer Control Menu



- 4 Press the CH UP/DOWN button to highlight the TIMER 1 or TIMER 2 setting
 - Day or days you wish the Timer to activate
 - ON (time) – hours and minutes
 - OFF (time) – hours and minutes
 - CH – channel you want tuned when the ON Timer activates
 - SET– NO (Timer feature will not activate)
 - YES (Timer feature will activate)

- 5 Highlight the Timer 1 Day/Days option
- 6 Press the VOL LEFT/RIGHT button to set the day or days you wish the Receiver to turn ON
The options for setting day are (MON-FRI), (SAT-SUN), (DAILY), (SUN), (MON), (TUE), (WED), (THR), (FRI), (SAT), (EVR SUN), (EVR MON), (EVR TUE), (EVR WED), (EVR THR), (EVR FRI), (EVR SAT)

- 7 Press the CH DOWN button to highlight the ON (Hours) position

- 8 Press the VOL LEFT/RIGHT button to set the desired time for the Receiver to turn ON

NOTE: Press CH DOWN to change selection from hours to minutes

- 9 Press the CH DOWN button to highlight the OFF (Hours/Minutes) position

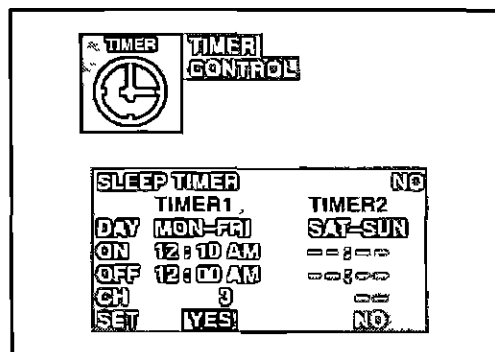
- 10 Press the VOL LEFT/RIGHT button to set the time you wish the Receiver to turn OFF

- 11 Press the CH DOWN button to highlight the CH position

NOTE: Press CH DOWN to change selection from hours to minutes

- 12 Press the VOL LEFT/RIGHT button to select a channel (from Program Channel Memory) that you want to be tuned to when the set turns ON

- 13 Press the CH DOWN button to highlight the SET position



- 14 Press the VOL RIGHT button to activate or LEFT button to deactivate Timer 1
 - YES=Feature is activated
 - NO=Feature is not activated

- 15 Press the CH DOWN button to set Timer 2 (if desired) Follow Steps 6 through 14

- 16 Press the ACTION button twice to exit menus

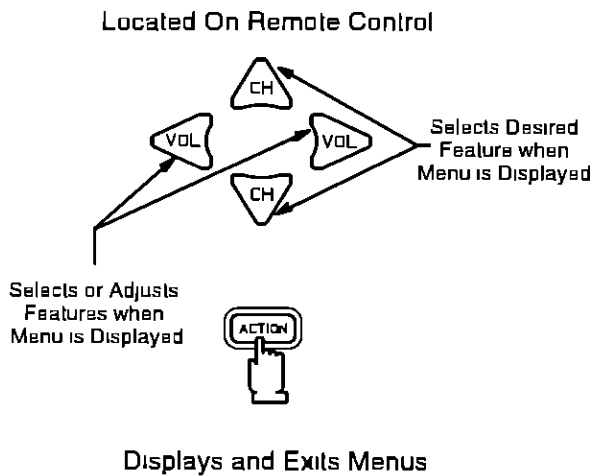
NOTE: Pressing the ACTION button again will return to Timer Icon

Helpful Hints:

- The Program Timer overrides the Sleep Timer
- Program Timer can only access channels in Program Channel Memory
- "Set Time First" will appear on screen when trying to set Timer Day Option without the clock being set
- If the Program Timer "ON" functions while the set is operating the set will automatically tune to the channel designated in the Program Timer

Lockout Features

- Game Lockout
- Channel Lockout
- All Channels plus Video Inputs Lockout



Lockout Mode – This feature allows you to lockout

- Game – (Lockout Channel 3, 4, and Video Inputs)
- Channel – (Lockout up to 4 Channels)
- All – (Lockout All Channels and Video Inputs)

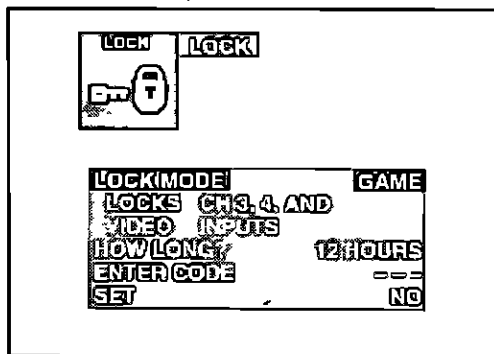
NOTE: This feature will Lockout your selection for up to 48 hours. Be sure to understand this feature before attempting its use. **Use a code that you will easily remember.**

- 1 Press the ACTION button to display the Main Menu
- 2 Press the CH UP/DOWN and VOL LEFT/RIGHT buttons to highlight the Lock icon

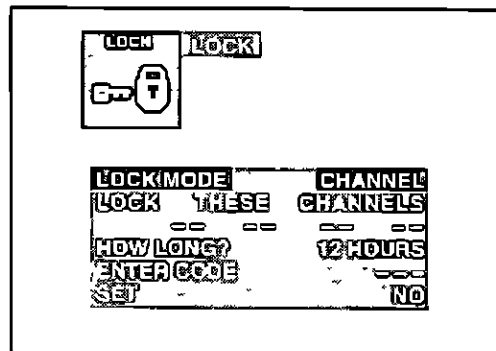
3 Press the ACTION button to display the Lock Menu

NOTE When the Lockout Menu is displayed, the Game Lock option will be highlighted

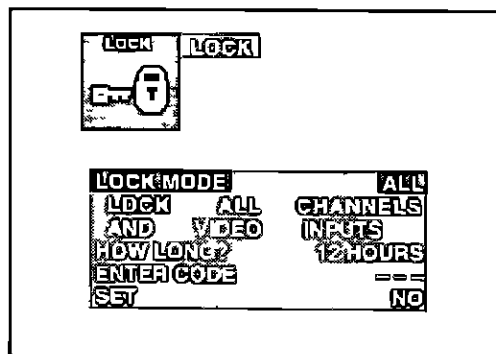
- 4 Press the VOL LEFT/RIGHT button to select GAME, CH (CHANNEL), or ALL



Game Lockout Menu
(Channels 3 and 4 plus Video Inputs)



Channels Lockout Menu
(up to 4 Channels)



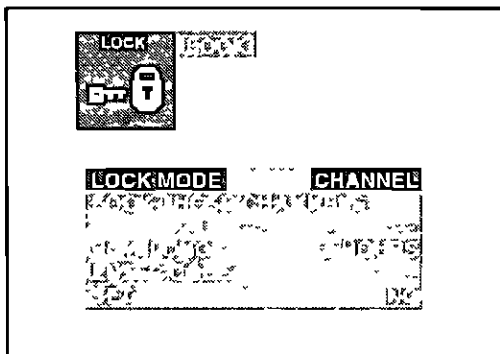
All Lockout Menu
(All Channels plus Video Inputs)

Helpful Hints:

NOTE If you see a red "PG" in the upper right hand corner, the channel or Video mode selected has been locked out

Lockout Features (cont.)

NOTE: When the LOCK MODE CHANNEL is selected, perform Steps A through D



Step A

Press the CH DOWN button to highlight "LOCK THESE CHANNELS"

Step B

Then use the Remote Control Keyboard to select a channel you desire to lockout

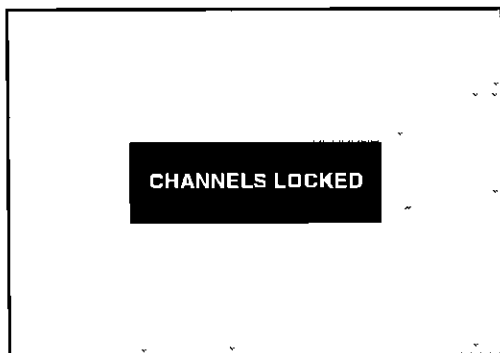
Step C

Press the CH DOWN button to select next Channel position

Step D

Then repeat Step B and C until desired Channels are locked out (up to 4 Channels)

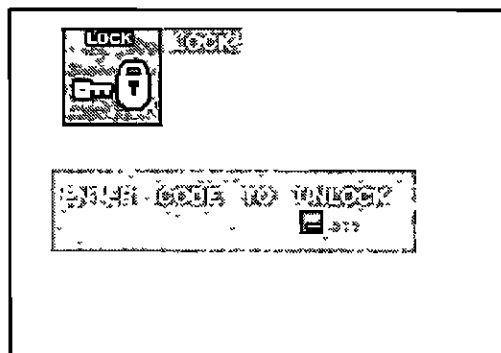
- 5 Press the CH DOWN button to highlight "HOW MANY HOURS"
- 6 Press the VOL LEFT/RIGHT buttons to select 12, 24, or 48 (hours lockout time)
- 7 Press the CH DOWN button to highlight "ENTER CODE" then enter a 3-digit code by using the Remote Control Keyboard **IMPORTANT NOTE: Use a code you can easily remember**
- 8 Press the VOL RIGHT button to select "YES" for Lock feature to be activated, "CHANNELS LOCKED" will display On Screen



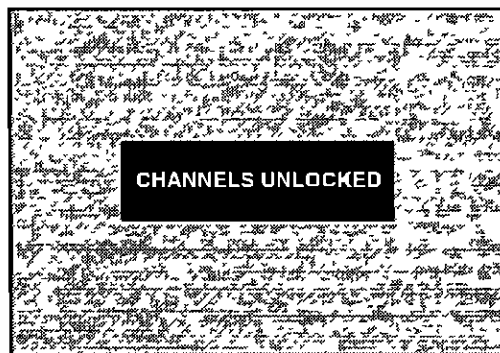
Lock Feature Activated

Unlock

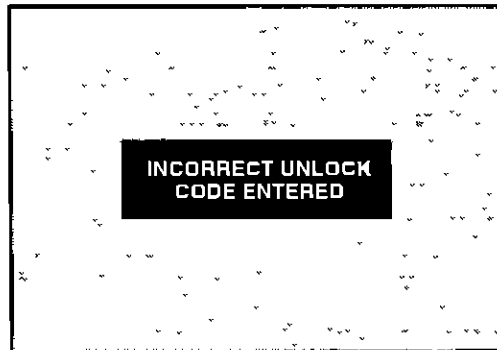
- 1 Press the ACTION button to display the Main Menu
- 2 Press the CH UP/DOWN and VOL LEFT/RIGHT buttons to highlight the Lock Icon
- 3 Press the ACTION button to display the Lock Menu
- 4 Enter same 3-digit code as in Step 7 from Lockout Mode section Channel Unlocked display will appear



ENTER SAME 3-DIGIT CODE



IF 3-DIGIT CODE IS THE SAME



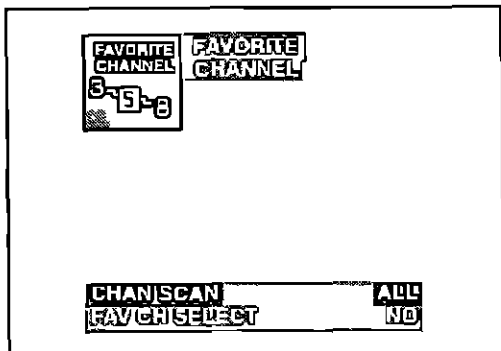
IF 3-DIGIT CODE IS NOT THE SAME

Favorite Channel Feature

Channel Scan – This feature is use to select which Channels will be accessed when using CH UP/DOWN buttons, ALL or FAV (Favorite) Channels

NOTE: Channels must be programmed into Favorite Channel Select Memory first

- 1 Press the ACTION button to display the Main Menu
- 2 Press the CH UP/DOWN and VOL LEFT/RIGHT buttons to highlight the Favorite Channel Icon
- 3 Press the ACTION button to display the Favorite Channel Menu



- 4 Press the CH UP/DOWN to highlight CHAN SCAN
- 5 Press the VOL LEFT/RIGHT button to select ALL or FAV (Favorite)
 - ALL – The CH UP/DOWN buttons will access all channels in Channel Memory
 - FAV – The CH UP/DOWN buttons will only access channels in Favorite Channel Select Memory
- 6 Press the ACTION button twice to exit menus

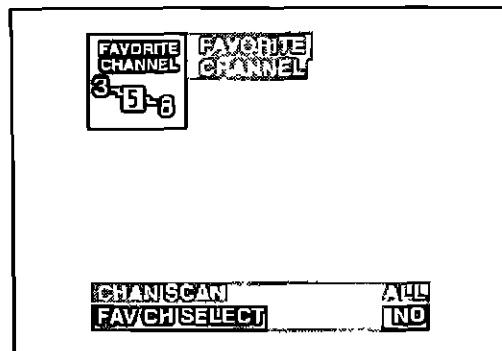
NOTE: Pressing the ACTION button again will return to Favorite Channel Icon

Helpful Hints:

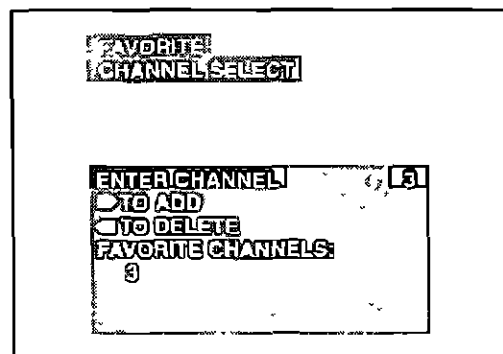
NOTE After Auto Channel Program the first 15 channels selected will automatically be put into Favorite Channel memory

Favorite Channel Select – The Favorite Channel Programming feature allows you to program up to 15 of your favorite channels. You can use the CH buttons on the Remote Control to scan channels without going through channels you don't normally view

- 1 Press the ACTION button to display the Main Menu
- 2 Press the CH UP/DOWN and VOL LEFT/RIGHT buttons to highlight the Favorite Channel Icon
- 3 Press the ACTION button to display the Favorite Channel Menu



- 4 Press the CH UP/DOWN button to highlight CHAN SCAN. Then, press the VOL LEFT/RIGHT button to select FAV option for Favorite Channels setting
- 5 Press the CH UP/DOWN button to highlight "FAV CH SELECT"
- 6 Press the VOL LEFT/RIGHT button to display the Favorite Channel Select Menu



- 7 Enter the channel number you wish to add or delete from Favorite Channel Memory (using the Remote Keyboard or CH UP/DOWN buttons)
- 8 Press the VOL RIGHT button to add or press the LEFT button to delete channel(s) from Favorite Channel Memory
- 9 Repeat Steps 6 and 7 to continue adding or deleting channels (up to 15 channels may be stored in Favorite Channel Memory)

NOTE When desired channels have been programmed, press the ACTION button twice to return to selected program

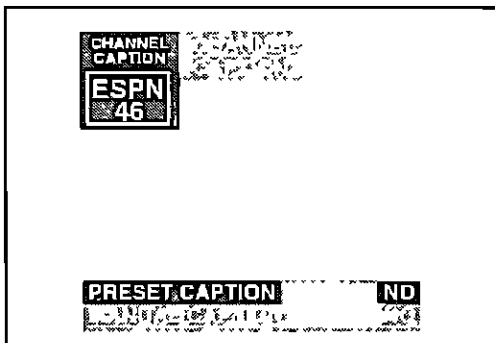
- 10 Press the CH UP/DOWN button to scan through the Favorite Channels you programmed

Channel Caption Features

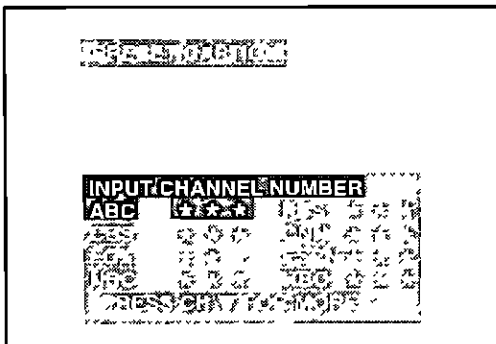
Preset Caption

This feature allows you to select from 56 preset captions, and assign corresponding channel numbers utilized in your area. Captions are easily assigned to the channel numbers you select by following the simple steps outlined below. The channel number will then display, along with preset captions when changing channels or pressing the Recall button.

- 1 Press the ACTION button to display the Main Menu
- 2 Press the CH UP/DOWN and VOL LEFT/RIGHT buttons to highlight the Channel Caption Icon
- 3 Press the ACTION button to display the Channel Caption Menu

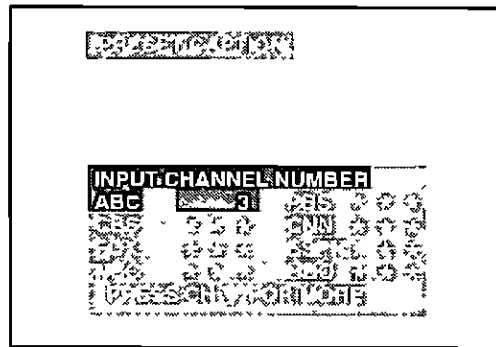


- 4 Press the CH UP/DOWN button to highlight PRESET CAPTION
- 5 Press the VOL LEFT/RIGHT button to display the Preset Caption Menu



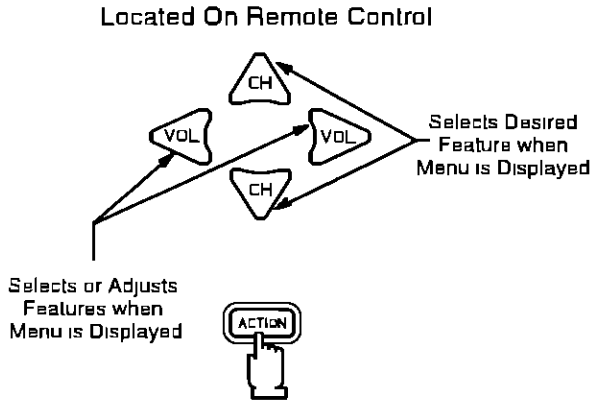
- 6 Press the CH UP/DOWN to highlight the desired Preset Channel Caption
- 7 Use the Remote Control keyboard to assign the channel number to the Channel Caption in your area (Refer to your local TV guide)

NOTE: To delete an assigned channel number from channel caption, press the VOL LEFT button while the assigned channel number is highlighted.



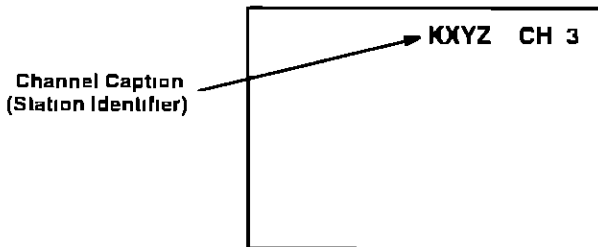
- 8 Press the CH DOWN button to select a different Preset Channel Caption, then repeat steps 6 and 7 until all desired Preset Channel Captions have an assigned channel number
- 9 Press the ACTION button three times to exit menus

Channel Caption Features (cont.)

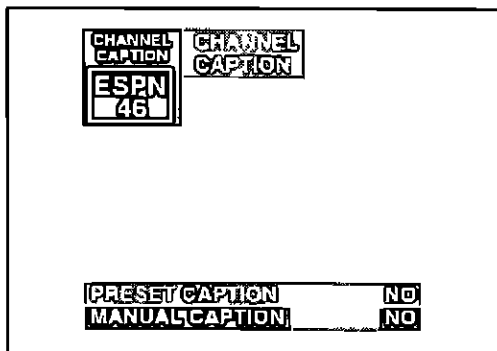


Displays and Exits Menus

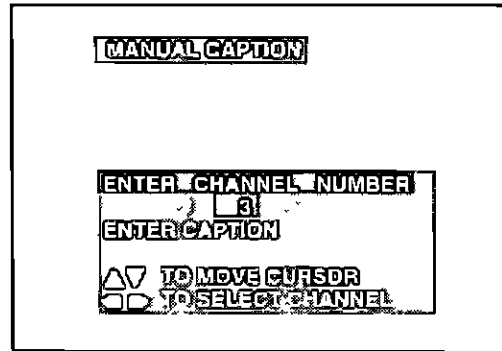
Manual Caption – The Channel Caption (Station Identifier) allows you to input the call names of up to 30 stations into memory (using up to 4 characters) The call name will then display, along with the channel number when changing channels or pressing RECALL



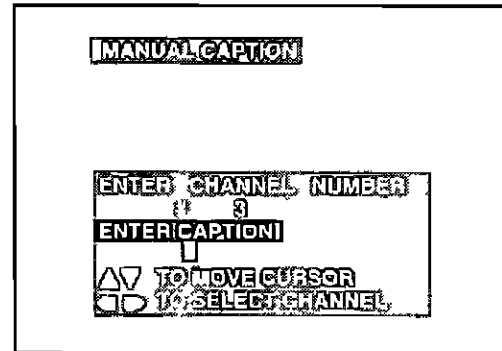
- 1 Press the ACTION button to display the Main Menu
- 2 Press the CH UP/DOWN and VOL LEFT/RIGHT buttons to highlight the Channel Caption Icon
- 3 Press the ACTION button to display the Channel Caption Menu



- 4 Press the CH UP/DOWN button to highlight MANUAL CAPTION
- 5 Press the VOL LEFT/RIGHT button to display the MANUAL CAPTION menu



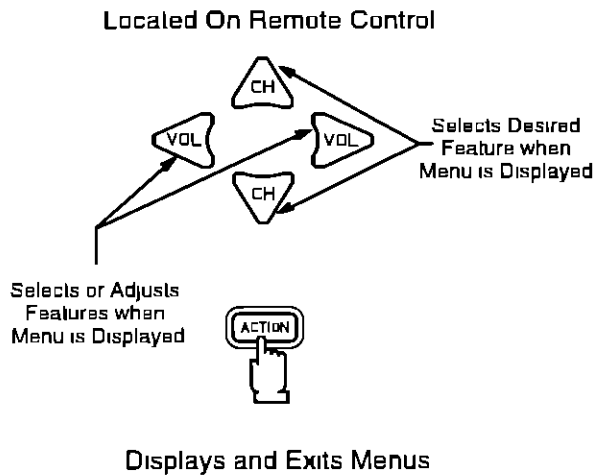
- 6 Use the Remote Control Keyboard or VOL LEFT/RIGHT buttons to enter channel number your wish to assign a channel caption (STATION IDENTIFIER)
- 7 Press the CH DOWN button to highlight ENTER CAPTION



- 8 Press the VOL LEFT/RIGHT button to select first character in channel caption (STATION IDENTIFIER)
- 9 Press the CH DOWN button to move to second character position, and repeat steps 8 and 9 until the complete caption is entered (up to 4 characters)
- 10 Press the CH UP/DOWN button repeatedly to highlight ENTER CHANNEL NUMBER Then repeat steps 6 through 10 to continue adding channel caption (STATION IDENTIFIERS)
- 11 Press the ACTION button three times to exit the Manual Caption menu

NOTE. Press the ACTION button again to return to Channel Caption Icon

Trilingual Menu Selection

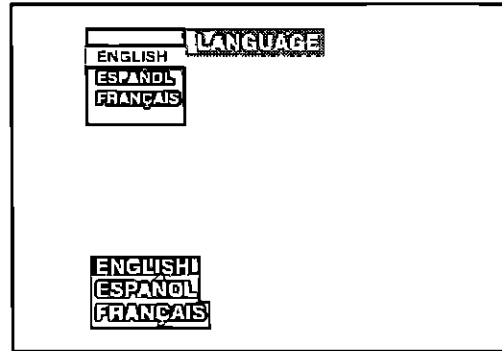


Language Selection (English/Spanish/French)

Follow these instructions to change the Language Menu to Spanish, French, and English

NOTE: The Language Menu is factory set to ENGLISH

- 1 Press the ACTION button to display the Main Menu
- 2 Press the CH UP/DOWN and VOL LEFT/RIGHT buttons to highlight the Language ENGLISH/ESPAÑOL (Spanish)/FRANÇAIS (French) Icon
- 3 Press the ACTION button to display the LANGUAGE select Menu



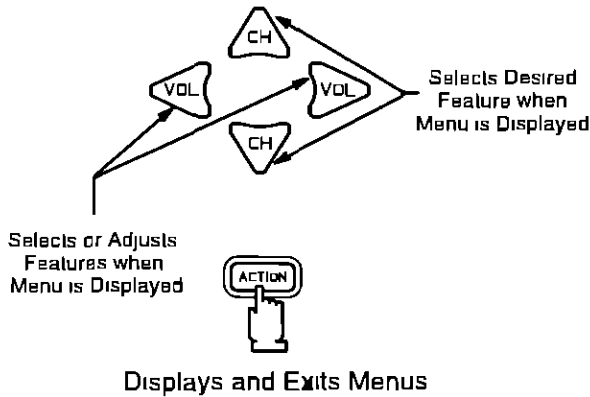
- 4 Press the CH UP/DOWN button to select ENGLISH, SPANISH, or FRENCH for the Language Menu
- 5 Press the ACTION button twice to exit the Language Menu

NOTE: Press the ACTION button again to return to Language Icon

Set-Up Features

- Clock (Auto)
- Clock (Manual)
- Set Time
- Set Day
- Convergence Adj
- Mode (TV or Cable)
- Auto Program
- Manual Program
- CC On Mute
- CC Mode

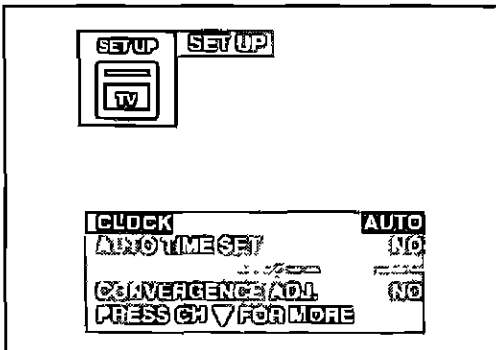
Located On Remote Control



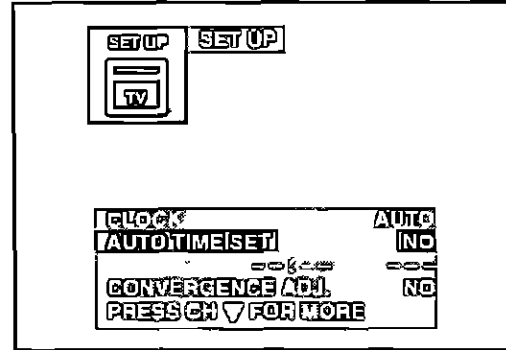
Clock (Auto) – This feature automatically adjusts the TV clock to the correct time whenever the TV is tuned to a PBS (Public Broadcasting Service) station for 10 minutes, or until the correct time and day are displayed (Refer to your local TV guide for PBS channel number)

Follow these procedures to automatically set the PTV clock

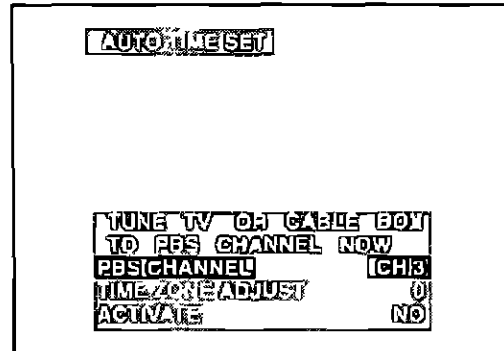
- 1 Press the ACTION button to display the Main Menu
- 2 Press the CH UP/DOWN and VOL LEFT/RIGHT buttons to highlight the Set Up Icon
- 3 Press the ACTION button to display the Set Up Menu



- 4 Press the CH UP/DOWN button to highlight CLOCK
- 5 Press the VOL LEFT/RIGHT button to select AUTO (if necessary)
- 6 Press the CH DOWN button to highlight AUTO TIME SET

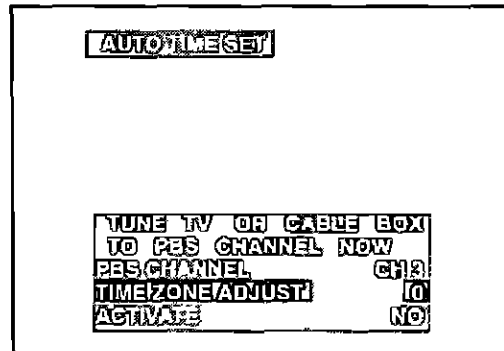


- 7 Press the VOL LEFT/RIGHT button to display the AUTO TIME SET Menu
- 8 Press the CH UP button to highlight PBS CHANNEL



- 9 Tune TV or Cable Box to PBS channel, using the Remote Control Keyboard or VOL LEFT/RIGHT buttons to enter PBS channel number
- 10 Press the CH DOWN button to highlight TIME ZONE ADJUST

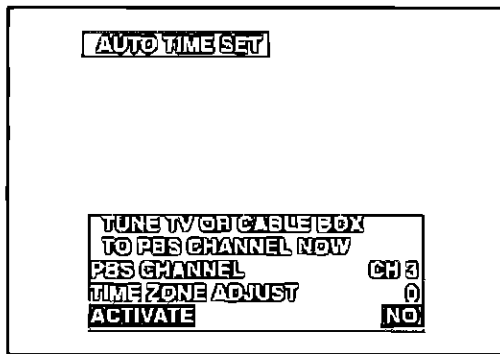
NOTE: There is a plus or minus one-hour offset that can be programmed to adjust the clock, should there be a time zone difference between the PBS TV station and the viewer



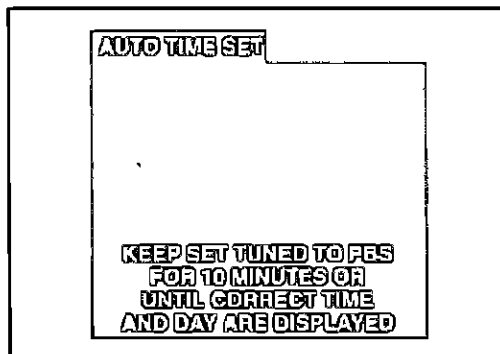
- 11 Press the VOL LEFT button for minus one-hour offset or the VOL RIGHT button for plus one-hour offset (if necessary)
- 12 Press the CH DOWN button to highlight ACTIVATE

Set-Up Features (cont.)

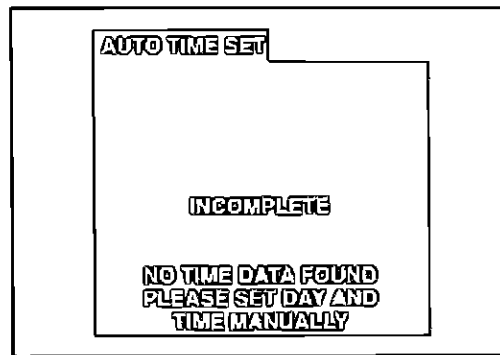
(Clock Auto – cont.)



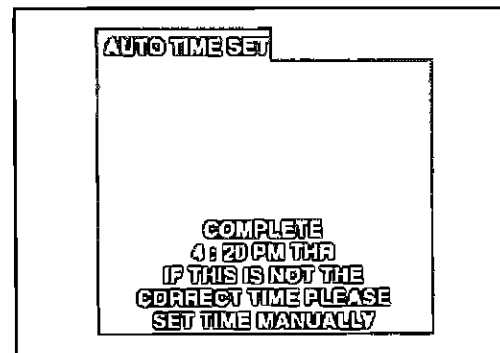
- 13 Press the VOL LEFT/RIGHT button to display the AUTO TIME SET submenu



WAITING FOR CORRECT TIME AND DAY



INCOMPLETE READ MENU



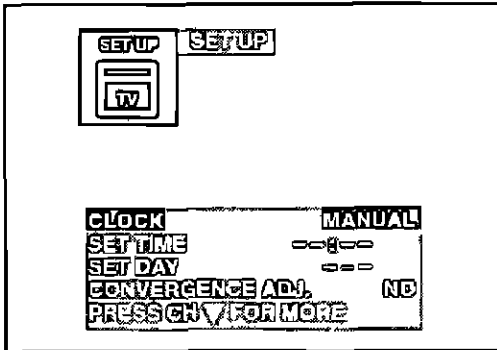
COMPLETED READ MENU

- 14 Press the ACTION button four times to exit menus

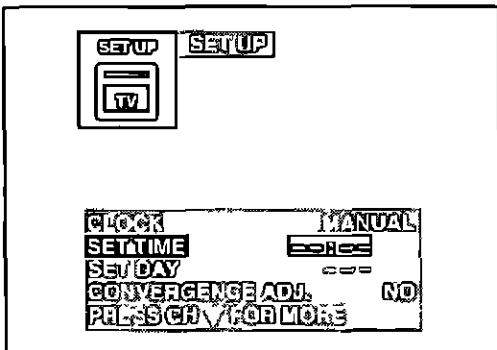
Set-Up Features (cont.)

Clock (Manual) — Clock (when set) will display On Screen at initial turn on, after a channel change and when pressing Recall button. It must be set to operate the dual Timer feature.

- 1 Press the ACTION button to display the Main Menu
- 2 Press the CH UP/DOWN and VOL LEFT/RIGHT buttons to highlight the Set Up Icon
- 3 Press the ACTION button to display the Set Up Menu



- 4 Press the CH UP/DOWN button to highlight CLOCK
- 5 Press the VOL LEFT/RIGHT button to select MANUAL
- 6 Press the CH DOWN button to highlight SET TIME

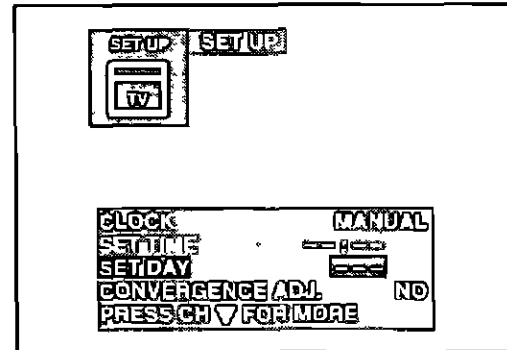


- 7 Press the VOL LEFT/RIGHT button to Set Hours (set AM/PM accordingly)
- 8 Press the CH DOWN button to highlight minutes position
- 9 Press the VOL LEFT/RIGHT button to set minutes
- 10 Press the ACTION button twice to exit the Set Up Menu

NOTE: Pressing the ACTION button again will return to Set Up Icon

Set Day — The day of the week must be set in order to operate the Dual Timer feature

- 1 Press the ACTION button to display the Main Menu
- 2 Press the CH UP/DOWN and VOL LEFT/RIGHT button to highlight the Set Up Icon
- 3 Press the ACTION button to display the Set Up Menu



- 4 Press the CH UP/DOWN button to highlight SET DAY
- 5 Press the VOL LEFT/RIGHT button to select proper day of the week
- 6 Press the ACTION button twice to exit the Set Up Menu

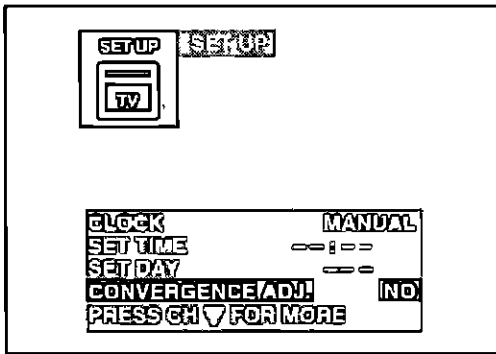
Set-Up Features (cont.)

Convergence Adj. (Adjustment) – This unit incorporates a special *Digital Convergence Adjustment* feature. For the convenience of the customer, this adjustment is preset at the factory. Adjustment may be required when the Receiver is moved due to the influence of earth's magnetic field on the projection tubes. Convergence can also be reset as necessary. Perform the convergence adjustment using the following procedure:

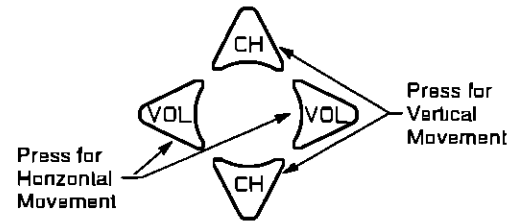
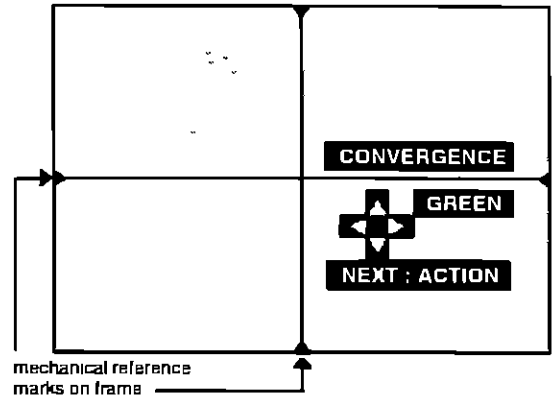
GREEN ADJUSTMENT

Turn the Receiver ON and tune in a local channel that provides a clear picture. The test pattern requires a received channel for stabilization. Green is the standard reference for the convergence adjustment procedure. Follow the steps below:

- 1 Press the ACTION button to display the Main Menu
- 2 Press the CH UP/DOWN and VOL LEFT/RIGHT buttons to highlight the Set Up Icon
- 3 Press the ACTION button to display the Set Up Menu
- 4 Press the CH DOWN button to highlight CONVERGENCE ADJ
- 5 Press the VOL LEFT/RIGHT button to display the Convergence Adjustment screen

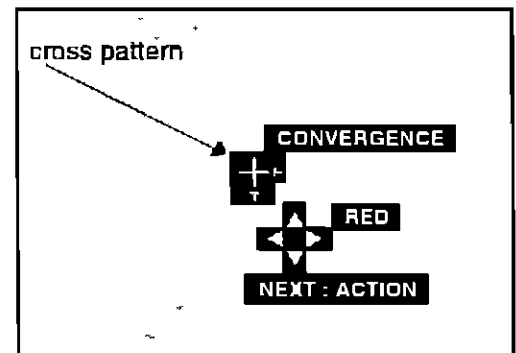


- 6 Green horizontal and vertical test lines must be present at the screen frame mechanical reference marks
- 7 Align the Green test marks with the frame mechanical reference marks. Press the VOL LEFT/RIGHT button on Remote Control for horizontal movement and the CH UP/DOWN button on Remote Control for the vertical movement



RED ADJUSTMENT

- 8 Press the ACTION button on the Remote Control
- NOTE.** A properly converged cross pattern will appear as white with a minimum of red color fringing
- 9 Align the Red Cross with the white cross pattern at the center of the screen. Press the VOL LEFT/RIGHT button on Remote Control for horizontal movement and the CH UP/DOWN button on Remote Control for the vertical movement

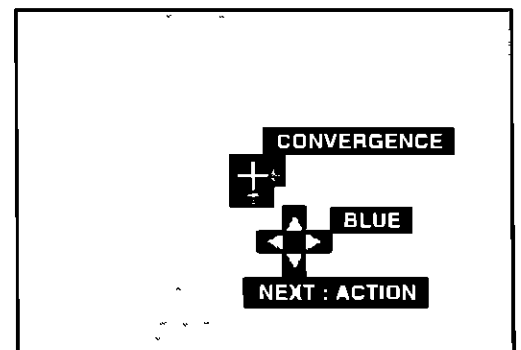


BLUE ADJUSTMENT

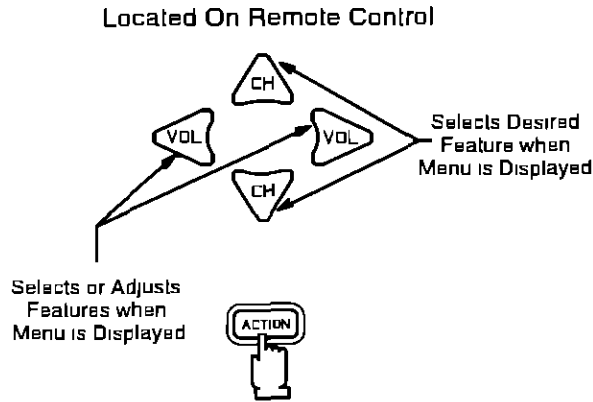
- 10 Press the ACTION button on the Remote Control
- 11 Align the Blue Cross with the white cross pattern at the center of the screen. Press the VOL LEFT/RIGHT button on Remote Control for horizontal movement and the CH UP/DOWN button on Remote Control for the vertical movement
- 12 Press the ACTION button three times to exit menus



NOTE TO PREVENT PICTURE TUBE DAMAGE, DO NOT LEAVE TEST PATTERN ON FOR A LONG PERIOD OF TIME



Set-Up Features (cont.)



Displays and Exits Menus

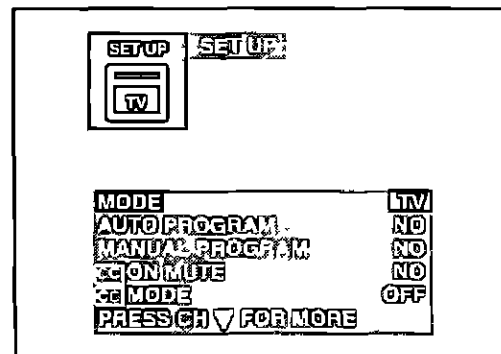
Mode (TV or Cable)

IMPORTANT NOTE The proper input mode must be selected for the type of signal at the antenna input.

- TV is used when the Receiver is not connected to a Cable TV System, for example, when using a VHF/UHF antenna (Channels 02-69)
- CABLE is used when the Receiver is connected to a Cable TV System and you are not using a cable company converter box (Channels 01-125)

NOTE: Some Cable TV Systems encode (scramble) program material on specific channels. A cable company supplied decoder is required to reproduce an acceptable picture. Certain Cable TV Systems offset some channels to reduce interference. It will be necessary to use the cable company supplied converter to receive these specific channels.

- 1 Press the ACTION button to display the Main Menu
- 2 Press the CH UP/DOWN and VOL LEFT/RIGHT buttons to highlight the Set Up Icon
- 3 Press the ACTION button to display the Set Up Menu



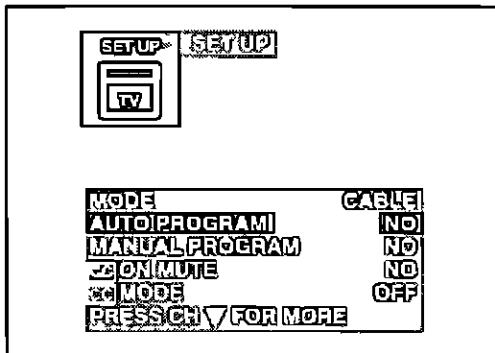
- 4 Press the CH UP/DOWN button to highlight Mode
- 5 Press the VOL LEFT/RIGHT button to select TV or CABLE
- 6 Press the ACTION button twice to exit menus

Set-Up Features (cont.)

Auto Program – The Auto Programming feature allows you to place all channels with a video signal into Channel Scan Memory. When you press the CHANNEL UP/DOWN button, only those channels with a video signal will be accessed.

NOTE. TV or Cable Tuning mode must be set properly for your system

- 1 Press the ACTION button to display the Main Menu
- 2 Press the CH UP/DOWN and VOL LEFT/RIGHT button to highlight the Set Up Icon
- 3 Press the ACTION button to display the Set Up Menu



- 4 Press the CH UP/DOWN button to highlight AUTO PROGRAM
- 5 Press the VOL LEFT/RIGHT button to start Auto Programming. Scan Channels will automatically advance until all channels have been scanned.
 - Channel numbers with video signal present will turn blue which indicates stored in Channel Scan Memory
- 6 Press the ACTION button twice to exit menus

NOTE: Some channels with very weak signals may be locked into memory. If desired, these channels can be deleted manually using the Manual Program feature.

Helpful Hints:

After Auto Programming:

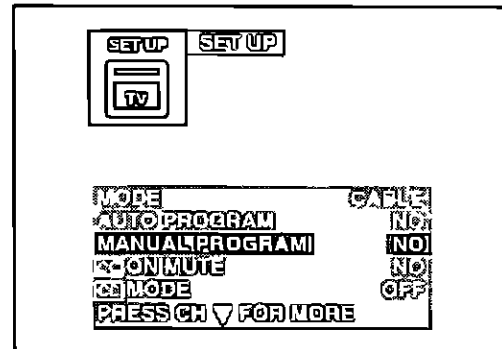
Blue channel number indicates channel is in Channel Scan Memory

All channels are available by direct access using the numeric keypad (0 through 9 buttons)

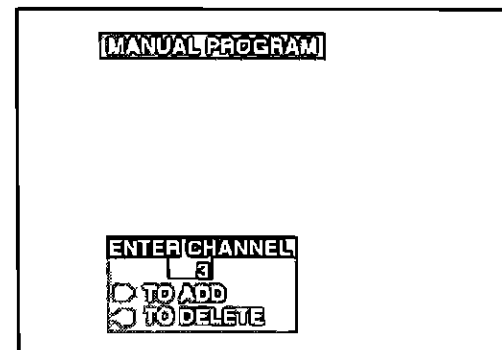
Up to 15 channels will be programmed into the FAVORITE Channel Scan after Auto Programming Scan has been completed. Any original channels that were programmed into FAV CHANNEL will remain (Refer to Favorite Channel Scan for deleting unwanted channels)

Manual Program – This feature allows you to select which channels are placed into Channel Scan Memory, so when you press the CHANNEL UP/DOWN button, only those channels you desire will be accessed.

- 1 Press the ACTION button to display the Main Menu
- 2 Press the CH UP/DOWN and VOL LEFT/RIGHT buttons to highlight the Set Up Icon
- 3 Press the ACTION button to display the Set Up Menu



- 4 Press the CH UP/DOWN button to highlight MANUAL PROGRAM
- 5 Press the VOL LEFT/RIGHT button to display Manual Program Menu



- 6 Use the Numeric Keypad (0 through 9 buttons) or CH UP/DOWN buttons to select channels
- 7 Press the VOL RIGHT button to add channel(s) to memory (blue). Press the VOL LEFT button to delete channel(s) from memory (yellow)
- 8 Repeat Steps 6 and 7 to continue adding or deleting channels
- 9 Press the ACTION button twice to exit menus

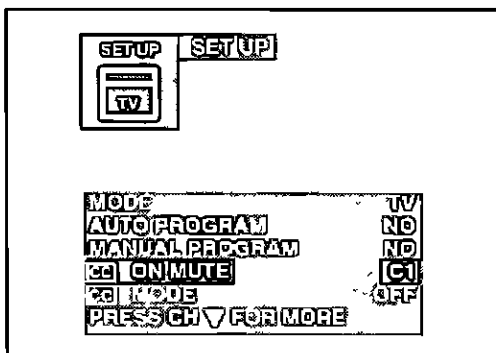
Set-Up Features (cont.)

CC On Mute

Activates the On-Screen Closed Caption feature, when the MUTE button on the Remote Control is pressed. To deactivate press the MUTE button again.

NOTE: This feature functions when the Closed Caption Mode is in the "OFF" position. The program being viewed must be broadcast with Closed Caption. (Refer to your local TV guide.)

- 1 Press the ACTION button to display the Main Menu
- 2 Press the CH UP/DOWN and VOL LEFT/RIGHT buttons to highlight the Set Up Icon
- 3 Press the ACTION button to display the Set Up Menu



- 4 Press the CH UP/DOWN button to highlight CC ON MUTE
- 5 Press the VOL LEFT/RIGHT button to select NO (OFF), C1, C2, C3, or C4

NOTE: Recommended menu Set Up for Closed Caption when using Mute Button

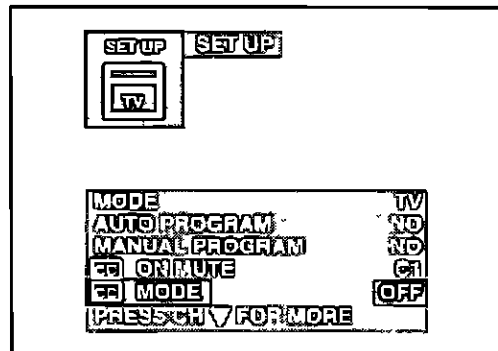
- CC ON MUTE C1
- CC MODE OFF

- 6 Press the ACTION button twice to exit the Set Up Menu
- 7 Press the MUTE button when the program being viewed is broadcast with Closed Caption to activate

NOTE: Press the MUTE button again to deactivate

CC Mode — This Receiver has a built in decoder that provides a visual depiction of the audio portion of a television program in the form of written words across the screen (white or colored letters on a black background). It allows the viewer to read the dialogue of a television program or other information.

- 1 Press the ACTION button to display the Main Menu
- 2 Press the CH UP/DOWN and VOL LEFT/RIGHT buttons to highlight the Set Up Icon
- 3 Press the ACTION button to display the Set Up Menu



- 4 Press the CH UP/DOWN button to highlight CC MODE
- 5 Press the VOL LEFT/RIGHT button to select OFF, C1, C2, T1, T2, C3, C4, T3, or T4
 - CAPTION OFF – Recommended mode when Closed Caption is not being used
 - CAPTION C1 – For video related information that can be displayed (up to 4 lines of script strategically placed on the television screen so that it does not obstruct relevant parts of the picture). Script can be in any language
 - CAPTION C2 – Another mode used for video related information
 - TEXT T1 – Blanks out a large portion of the picture on the television screen, and displays program guide or any other information currently being transmitted
 - TEXT T2 – Another mode which displays information and blanks out a large portion of the picture on the television screen
 - CAPTION C3 – Another mode used for video related information
 - CAPTION C4 – Another mode used for video related information
 - TEXT T3 – Another mode which displays information and blanks out a large portion of the picture on the television screen
 - TEXT T4 – Another mode which displays information and blanks out a large portion of the picture on the television screen
- 6 Press the ACTION button twice to exit menus

Programming the Home Theater Remote

The remote control can be set to control other manufacturers components, by utilizing the **MODE SELECTION BUTTONS** for **CABLE, DSS, VCR, RCVR** (a Receiver or Amplifier), **CD, LD,** and **AUX** (for **Cassette Players, Second VCR** or a **DVD**)

Code Known

Use the following procedure for setting up the remote control using the numerical buttons when the component's remote code is known.

- 1 Determine the brand of the component
- 2 Identify the code(s) associated with the brand from the infrared code index (see following pages) Record all possible codes
- 3 Confirm that the component is plugged in and operating properly, then turn it OFF
- 4 Press and hold the **ACTN** button, then the **POWER** button so that both are pressed at the same time for at least **5 seconds**. All Mode buttons will flash. Then let go of the buttons
- 5 Press the appropriate Mode button for the component. The pressed button will illuminate steadily All other buttons will go out.
- 6 Enter the 3-digit code, by using the Remote Control Keypad "0" through "9" buttons. If a proper code was entered, the Mode button will blink twice then go out.

Now the remote is set for the entered code.

- 7 Press the **POWER** button to test the remote. If the correct code is setup for the component (in step 6), the component will turn on.

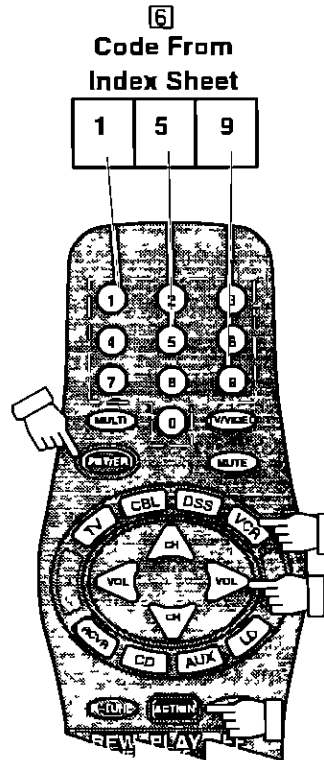
NOTE Some brands have multiple codes Repeat the procedure using another listed code until the component responds correctly

Code Unknown

Use the following procedure for setting up the remote control when the component's remote access code is not known. This procedure uses the "sequence method".

- 1 Confirm that the component is plugged in and operating properly, then turn it OFF
- 2 Press and hold the **ACTN** button, then the **POWER** button so that both are pressed at the same time for at least **5 seconds**. All Mode buttons will flash. Then let go of the buttons
- 3 Press the appropriate Mode button for the device. The pressed button will illuminate steadily. All other buttons will go out.
- 4 Press the **VOL** button to step over to the next code.
- 5 Press the **POWER** button to test the remote If the correct code is sent, the component will turn on.
- 6 Once the correct code is found, press the **ACTN** button to store the code
- 7 Repeat from step 3 above until the proper component code is found It may take several attempts before the correct code is found

NOTE: If an incorrect code is entered, or when the operation is not completed within 30 seconds, the settings will not change



TNQ2AE003-1

Infrared Remote Codes for Specific Components

Helpful Hint: Write down the code numbers for your components in the space provided below. This will serve as a handy reference whenever you need to reprogram your remote control

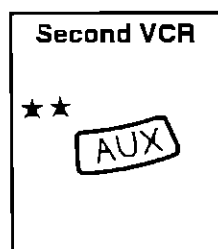
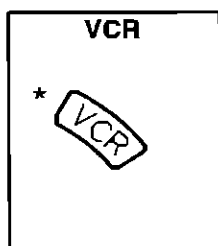
CABLE Cable TV Converter Box	<input type="text"/> <input type="text"/> <input type="text"/>	VCR Video Cassette Recorder	<input type="text"/> <input type="text"/> <input type="text"/>	CD Compact Disc Player	<input type="text"/> <input type="text"/> <input type="text"/>
DSS Digital Satellite System	<input type="text"/> <input type="text"/> <input type="text"/>	RCVR Receiver or Amplifier	<input type="text"/> <input type="text"/> <input type="text"/>	LD Laser Disc Player	<input type="text"/> <input type="text"/> <input type="text"/>
_____	<input type="text"/> <input type="text"/> <input type="text"/>	_____	<input type="text"/> <input type="text"/> <input type="text"/>	_____	<input type="text"/> <input type="text"/> <input type="text"/>
Other Component		Other Component		Other Component	
_____	<input type="text"/> <input type="text"/> <input type="text"/>	_____	<input type="text"/> <input type="text"/> <input type="text"/>	_____	<input type="text"/> <input type="text"/> <input type="text"/>
Other Component		Other Component		Other Component	

VCR Infrared Codes Index

The Universal Infrared Remote Control is capable of operating many brands of VCRs. Refer to the Programming the Remote Control section for procedures.

Note: The Universal Remote Control memory is limited, therefore, some models of VCRs may not operate. The Universal Remote Control is not designed to control all features that are available in all models.

Note: After entering the proper infrared code, press the Remote VCR (*) Selection Mode button. **A second VCR can be activated** using the same codes, from AUX (**) Selection Mode button. Then refer to the Remote Control Key Functions section, for Remote VCR and VCR 2 function key listing.



Code Index for VCRs

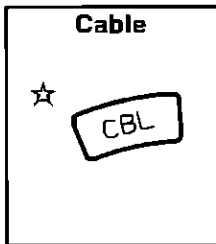
VCR Brand	Code(s)	VCR Brand	Code(s)
Adventura	000	MTC	000, 240
Aiko	278	Multitech	000, 072
Aiwa	000	NEC	038, 041, 067
Akai	041, 061	Nikko	037
American High	035	Noblex	240
Asha	240	Olympus	035
Audiovox	037	Optimus	037, 048, 104
Beaurnark	240	Panasonic	035, 162, 225, 454
Bell & Howell	104	Penney	035, 037, 038, 042
Broksonic	121, 184		240
Calix	037	Pentax	042
Canon	035	Philco	035
Carver	081	Philips	035, 081
CCE	072, 278	Pilot	037
Citizen	037, 278	Pioneer	067
Coll	072	Protec	072
Craig	037, 047, 072, 240	Pulsar	039
Curtis Mathes	035, 041, 060	Quarter	046
Cybemex	240	Quartz	046
Daewoo	045, 278	Quasar	035
Dynatech	000	Radio Shack	000, 037
Electrohome	037	Radix	037
Electrohome	037	Randax	037
Emerax	032	RCA	042, 060
Emerson	000, 002, 037, 043, 061, 121, 184, 278	Realistic	000, 035, 037, 046
			047, 048, 104, 240
Fisher	047, 104	Ricoh	034
Fuji	033, 035	Runco	039
Funai	000	Samsung	045, 240
Garrard	000	Sanky	039, 048
GE	035, 060	Sansui	041, 067
Goldstar	037, 038	Sanyo	046, 047, 104, 240
Gradiente	000	Scott	043, 045, 121, 184
Harley-Davidson	000	Sears	035, 037, 042, 046, 047, 104
Harman-Kardon	038		
Harwood	072	Sharp	048
Headquarter	046	Shintom	072
Hi-Q	047	Shogun	240
Hilachi	041, 042	Singer	072
Jensen	041	Sony	032, 033, 034, 035
JVC	041, 067	STS	042
Kenwood	038, 041, 067	Sylvania	000, 035, 043, 081
KLH	072	Symphonic	000
Kodak	035, 037	Tatung	041
Lloyd	000	Teac	000, 041
Logik	072	Technics	035, 162
LXI	037	Teknika	000, 035, 037
Magnavox	035, 039, 081	TMK	240
Magnin	240	Toshiba	043, 045
Marantz	035, 081	Television	037, 240
Marta	037	Unitach	240
Matsushita	035	Vector	045
MEI	035	Vector Research	038
Memorex	000, 035, 037, 039, 046, 047, 048, 104	Video Concepts	045, 061
		Videosonic	240
MGA	043, 061	Wards	000, 035, 042, 047, 048, 072, 240
MGN Technology	240		
Minolta	042	XR-1000	000, 035, 072
Mitsubishi	043, 061, 067	Yamaha	038
Motorola	035, 048	Zenith	033, 034, 039

Cable Converter Box and CD Players Infrared Codes Index

The Universal Infrared Remote Control is capable of operating many brands of Cable Converter Boxes and CD Players Refer to the Programming the Remote Control section for procedures

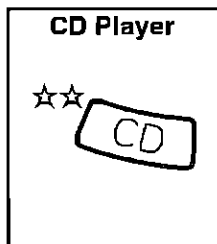
Note: The Universal Remote Control memory is limited, therefore, some models of Cable Converter Boxes and CD Players may not operate The Universal Remote Control is not designed to control all features that are available in all models

Note: After entering the proper infrared code, press the Remote **CBL** Selection Mode button (☆) Then refer to the Remote Control Key Functions section, for Remote CBL function key listing



Codes for Cable Converter Box			
Brand of Cable-TV Box	Code(s)	Brand of Cable-TV Box	Code(s)
ABC	003, 007, 008, 011, 013, 014, 017	Pioneer	144, 533
Archer	153	Pulsar	000
Century	153	RCA	021
Citizen	153	Regal	020, 259
Contec	019	Rembrandt	011
Dae Ryung	008	Runco	000
Garrard	153	Samsung	144
Gemini	015	Scientific Atlanta	008, 017, 477
General Instrument	011, 476	Signal	015
Goldstar	144	Signature	011
Hamlin	009, 020, 259	Sprucer	021
Hitachi	011	Starcom	003, 015
Hytex	007	Stargate	015
Jasco	153	Starquest	015
Jerrold	003, 011, 012, 014, 015, 476	Tocom	012, 013
Memorex	000	Toshiba	000
Oak	007, 019	Tusa	015
Panasonic	000, 021, 107	Unika	153
Paragon	000	United Artists	007
Philips	153	United Cable	003
		Universal	153
		Zenith	000, 525

Note: After entering the proper infrared code, press the Remote **CD** Selection Mode button (☆☆) Then refer to the Remote Control Key Functions section, for Remote CD Players function key listing



Codes for CD Players			
Brand of CD Players	Code(s)	Brand of CD Players	Code(s)
Aiwa	124, 157	Onkyo	101
CA Audio Lab	029	Optimus	000, 032, 037, 305, 426, 468
Carver	157	Panasonic	029, 367
Denon	003	Philips	157
DKK	000	Pioneer	032, 468
Emerson	305	Proton	157
Fisher	048	QED	157
Генерал	032, 305	Quasar	029
Harman-Kardon	426	RCA	305
Hitachi	032	Rotel	157
JVC	072	SAE	157
Kenwood	028, 037, 048, 190	Sansui	157, 305
Krell	157	Scott	305
LXI	305	Sears	305
Magnavox	157	Sharp	037
Marantz	029, 157	Sherwood	426
MCS	029	Sony	000
Mission	157	Technics	029, 303
Nakamichi	147	Victor	072
NSM	157		

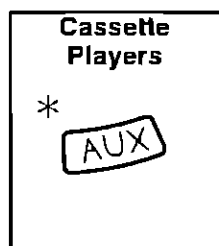
Cassette Players, Receivers, and Amplifiers

Infrared Codes Index

The Universal Infrared Remote Control is capable of operating many brands of Cassette Players, Receivers, or Amplifiers. Refer to the Programming the Remote Control section for procedures.

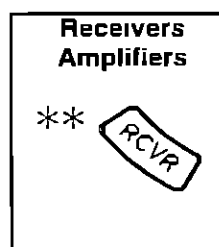
Note The Universal Remote Control memory is limited, therefore, some models of Cassette Players, Receivers, and Amplifiers may not operate. The Universal Remote Control is not designed to control all features that are available in all models.

Note After entering the proper infrared code, press the Remote **AUX** Selection Mode button (*). Then refer to the Remote Control Key Functions section, for Remote Cassette Players function key listing.



Code Index for Cassette Players			
Brand of Cassette Players	Code(s)	Brand of Cassette Players	Code(s)
Aiwa	029	Panasonic	272
Carver	029	Philips	029
Denon	076	Pioneer	027, 220
Kenwood	070	Sansui	029
Magnavox	029	Sherwood	337, 338
Marantz	029	Sony	170, 243
Nakamichi	147	Technics	229
Optimus	027, 220, 337, 338	Wards	027
		Yamaha	094, 097

Note After entering the proper infrared code, press the Remote **RCVR** Selection Mode button (**). Then refer to the Remote Control Key Functions section, for Remote Receivers/Amplifiers function key listing.



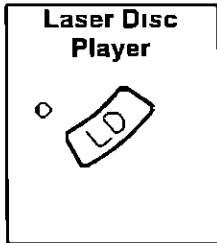
Code Index for Receivers and Amplifiers			
Brand of Receiver / Amplifier	Code(s)	Brand of Receiver / Amplifier	Code(s)
ADC	531	Panasonic	039
Aiwa	121, 158, 189	Penney	195
Carver	008, 042, 189, 269	Philips	189, 269
Casio	195	Pioneer	013, 014, 080, 300, 531
Clarinetta	195	Quasar	039
Denon	004	RCA	531
Fisher	042, 219	Realistic	195
JVC	074	Sansui	189, 321
Kenwood	027, 186	Sanyo	219
Lloyd's	195	Sharp	186
Magnavox	189, 195, 269, 531	Sherwood	502
Marantz	039, 189, 269, 321	Sony	158
MCS	039	Technics	039, 208, 308, 309, 518
Modulaire	195	Victor	074
NAD	320	Wards	013, 014, 042, 080, 158, 189
Nakamichi	321, 347	Yamaha	176, 186, 354
Onkyo	135	Yox	195
Optimus	013, 080, 186, 219, 300, 531		

Laser Disc, DSS (Digital Satellite System), and DVD (Digital Videodisc) Infrared Codes Index

The Universal Infrared Remote Control is capable of operating selected brands of Laser Disc, DSS Digital Satellite System, and DVD (Digital Videodisc) Refer to the Programming the Remote Control section for procedures

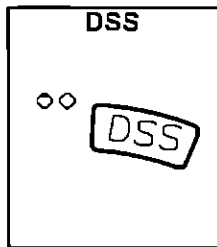
Note The Universal Remote Control memory is limited, therefore, some models of Laser Disc, DSS Digital Satellite System, and DVD (Digital Videodisc) may not operate The Universal Remote Control is not designed to control all features that are available in all models

Note: After entering the proper infrared code, press the Remote **LD** Selection Mode button (◊) Then refer to the Remote Control Key Functions section, for Remote Laser Disc function key listing



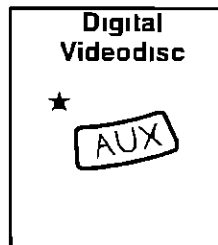
Codes for Laser Disc	
Brand of Laser Disc	Code(s)
Mitsubishi	059
NAD	059
Panasonic	204
Pioneer	059
Quasar	204
Sony	201

Note After entering the proper infrared code, press the Remote **DSS** Selection Mode button (◊◊) Then refer to the Remote Control Key Functions section, for Remote DSS function key listing



Codes for DSS (Digital Satellite System)	
Brand of Satellite	Code(s)
Panasonic	701
RCA	566
Sony	639





















Note: After entering the proper infrared code, press the Remote **AUX** Selection Mode button (★) Then refer to the Remote Control Key Functions section, for Remote DVD function key listing



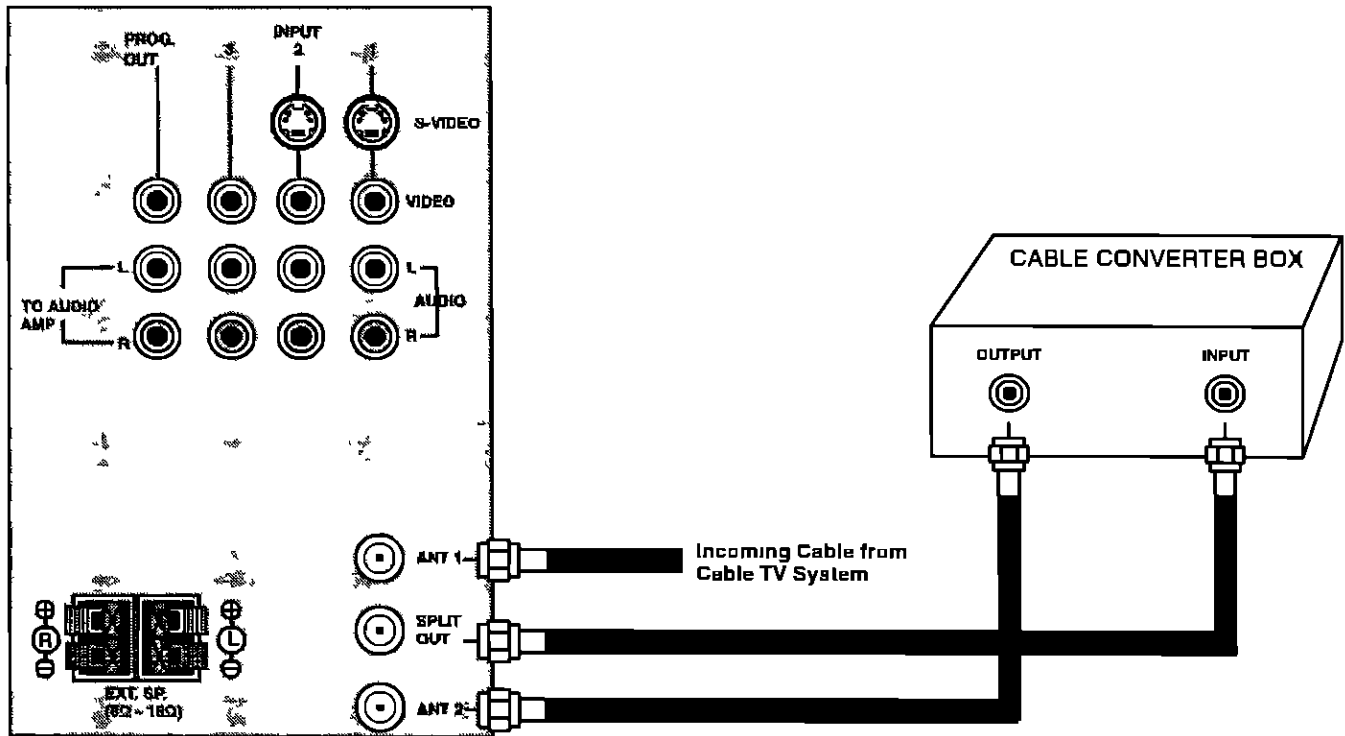
Codes for DVD (Digital Videodisc)	
Brand of DVD	Code(s)
Panasonic	490

Troubleshooting Chart

Before you call for service, determine the symptoms and make a few simple checks shown below

Symptoms		Check
Picture	Sound	
 SNOWY PICTURE	 NOISY SOUND	<ul style="list-style-type: none"> - ANTENNA LOCATION AND/OR CONNECTION
 MULTIPLE IMAGE	 NORMAL SOUND	<ul style="list-style-type: none"> - ANTENNA DIRECTION AND/OR LOCATION - ANTENNA LEAD-IN WIRE
 INTERFERENCE	 NOISY SOUND	<ul style="list-style-type: none"> - ELECTRICAL APPLIANCES, LIGHTS, CARS AND TRUCKS - DIATHERMY AND OTHER MEDICAL EQUIPMENT
 NORMAL PICTURE	 NO SOUND	<ul style="list-style-type: none"> - VOLUME CONTROL SETTING - MUTE CONTROL (IF APPLICABLE) - TV SPEAKER SWITCH (IF APPLICABLE) IN OFF OR EXT POSITION - TRY ANOTHER CHANNEL
 NO VIDEO	 NOISY SOUND	<ul style="list-style-type: none"> - TV/ANT-CABLE TUNING SYSTEM SET TO PROPER SETTING - ANTENNA INPUT MODE INCORRECT
 NO PICTURE	 NO SOUND	<ul style="list-style-type: none"> - CHECK THAT AC POWER LINE IS PLUGGED INTO AC OUTLET AND POWER BUTTON IS ON - BRIGHTNESS AND AUDIO CONTROLS SET PROPERLY - TRY ANOTHER CHANNEL
 NO COLOR	 NORMAL SOUND	<ul style="list-style-type: none"> - COLOR CONTROL SETTINGS - TRY ANOTHER CHANNEL
 BLUE PICTURE	 NO SOUND	<ul style="list-style-type: none"> - RECEIVER IN VIDEO MODE WITH NO SIGNAL
 NO VIDEO	 NOISY SOUND	<ul style="list-style-type: none"> - CHANNEL LOCKOUT FEATURE ACTIVATED
 BLACK BOX IN PICTURE	 SOUND	<ul style="list-style-type: none"> - CC (CLOSED CAPTION) IN TEXT MODE - PUT IN CAPTION OFF MODE TO ELIMINATE BLACK BOX

Recommended Cable Converter Box Connection



TERMINALS ON BACK OF RECEIVER

When connecting a Cable Company supplied converter box for scrambled (premium) channels, we recommend making your connections as shown above so that the converter box is required only when viewing scrambled channels

- 1 ANT 1 Mode (accessed by the INPUT SELECT Menu, page 32) will allow you to view all non scrambled channels without the use of the cable converter box
- 2 When a scrambled channel is desired, use ANT 2 Mode (accessed by the INPUT SELECT Menu page 32) Select channel on TV as instructed by Cable Company and operate cable converter box

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