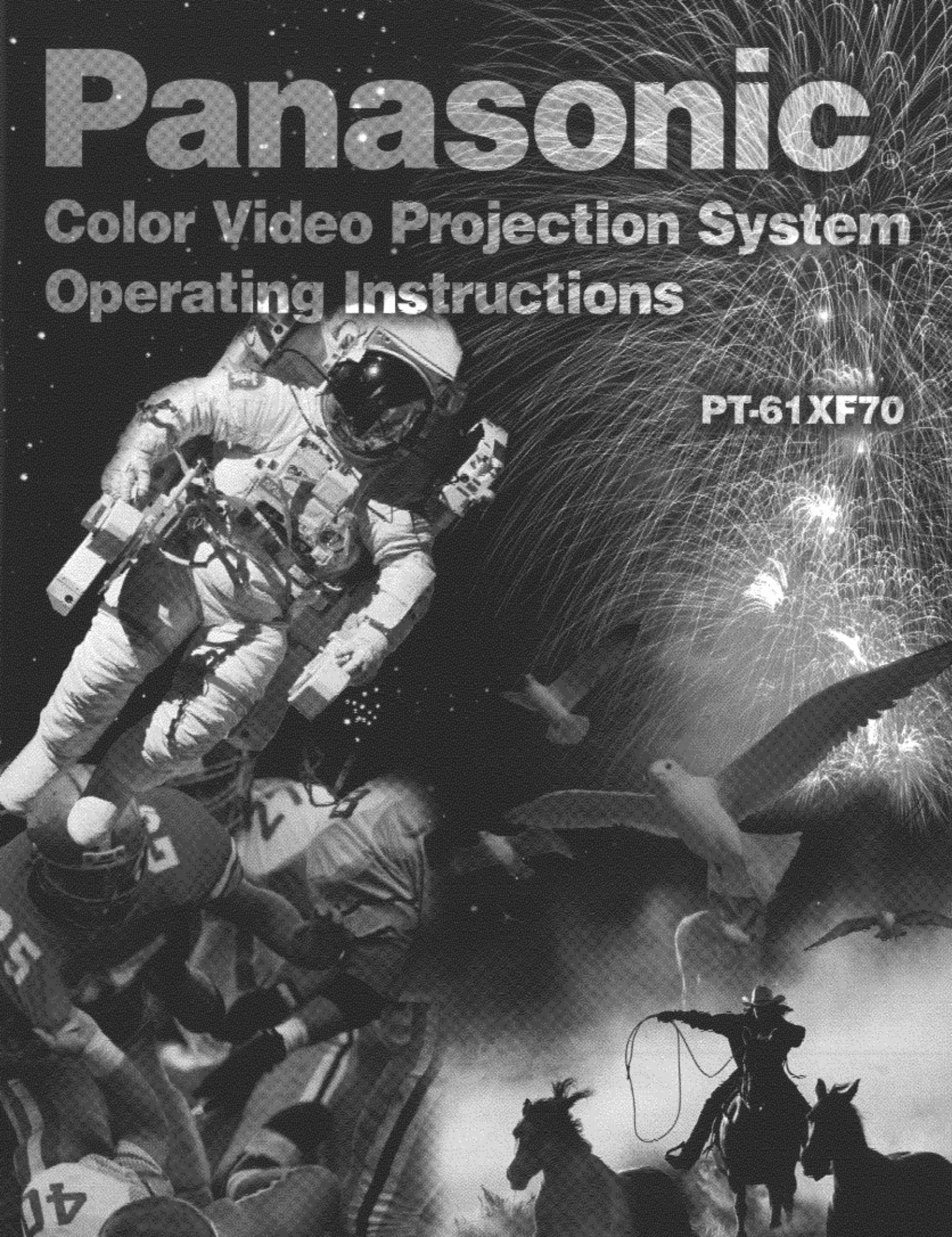
Panasonic

Color Video Projection System
Operating Instructions

PT-61XF70



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Safety Instructions

WARNING

RISK OF ELECTRIC SHOCK DO NOT OPEN

WARNING: To reduce the risk of electric shock do not remove cover or back. No user-serviceable parts inside. Refer servicing to qualified service personnel.

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.

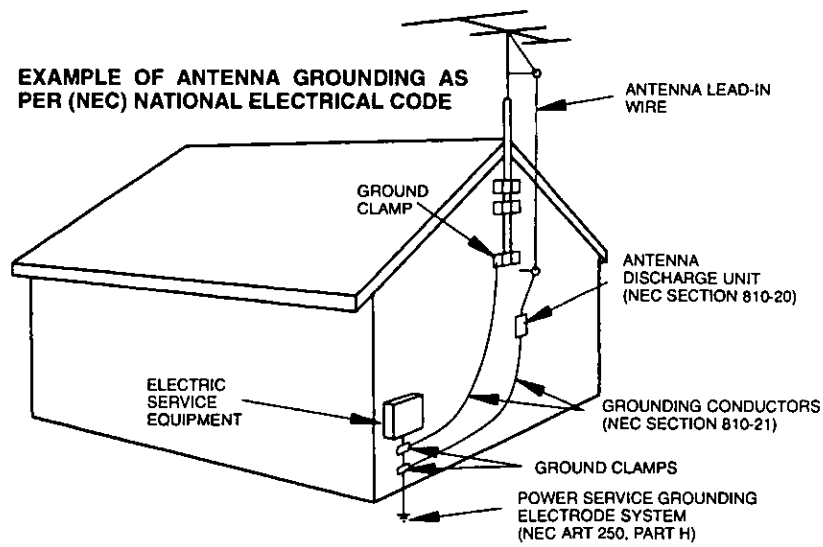
Note to CATV System Installer: This reminder is provided to call the CATV system installer's attention to Article 820–40 of the NEC that provides guidelines for proper grounding and, in particular, specifies that the cable ground shall be connected to the grounding system of the building, as close to 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) VHF 2~13, UHF 14~69, Cable 125 channels
Video Input Jacks (4):	1V p-p, 75 ohm, phono jack type
Audio Input Jacks (4):	500mV rms, 4.7K ohm
To Audio AMP Jacks:	0~2.0V rms 47K ohm
S-VHS Input Jack (2):	S–Video (Y-C) Connector
Stereo Sound	
Dolby Pro Logic Surround	
Exernal Speakers	
Closed Caption Display	
Picture In Picture:	2 Tuner

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**

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: _____

You may register your new projection system on the Internet at:
http://www.prodreg.com/panasonic

About Your Built–In DVD Player:

Before operating your DVD player, please read the DVD–A100 Operating Instructions included with your PT–61XF70 projection television.

Installation

Receiver Location

This unit can be used as an 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.

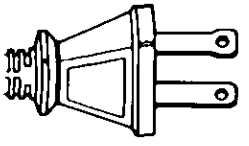
Before you purchase any cables, be sure you know what type of input and output connectors your various components require. Also, determine the length of cable you'll need.

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.

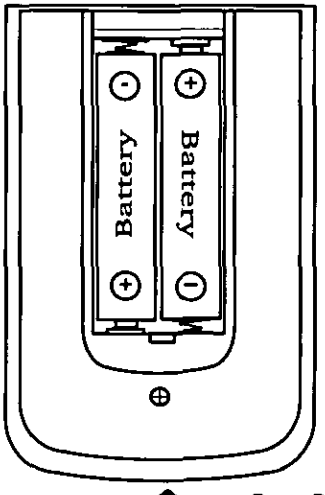


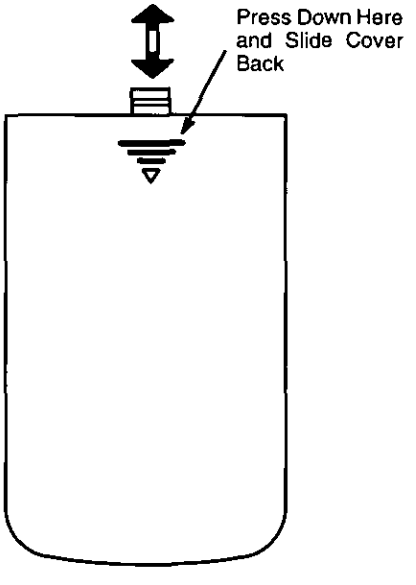
Polarized Plug

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 until the lock snaps.





Helpful Hints:

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.

CAUTION: 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 pair.
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.

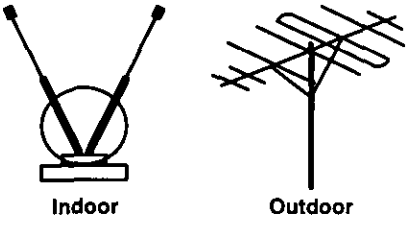
Helpful Hints:

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 51, prior to setting up the remote.

Installation (cont.)

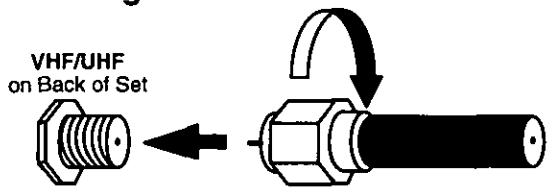
Antenna/Cable Connections

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.)

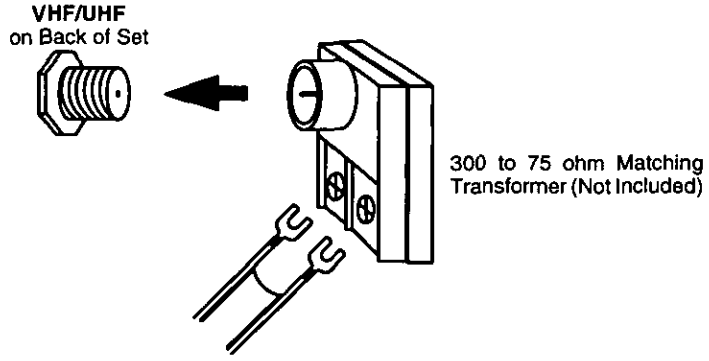


Typical VHF/UHF Antenna

Incoming Cable from Home Antenna (75 Ohm)

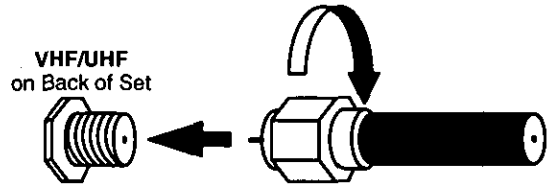


Incoming Cable from Home Antenna (300 Ohm)



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.

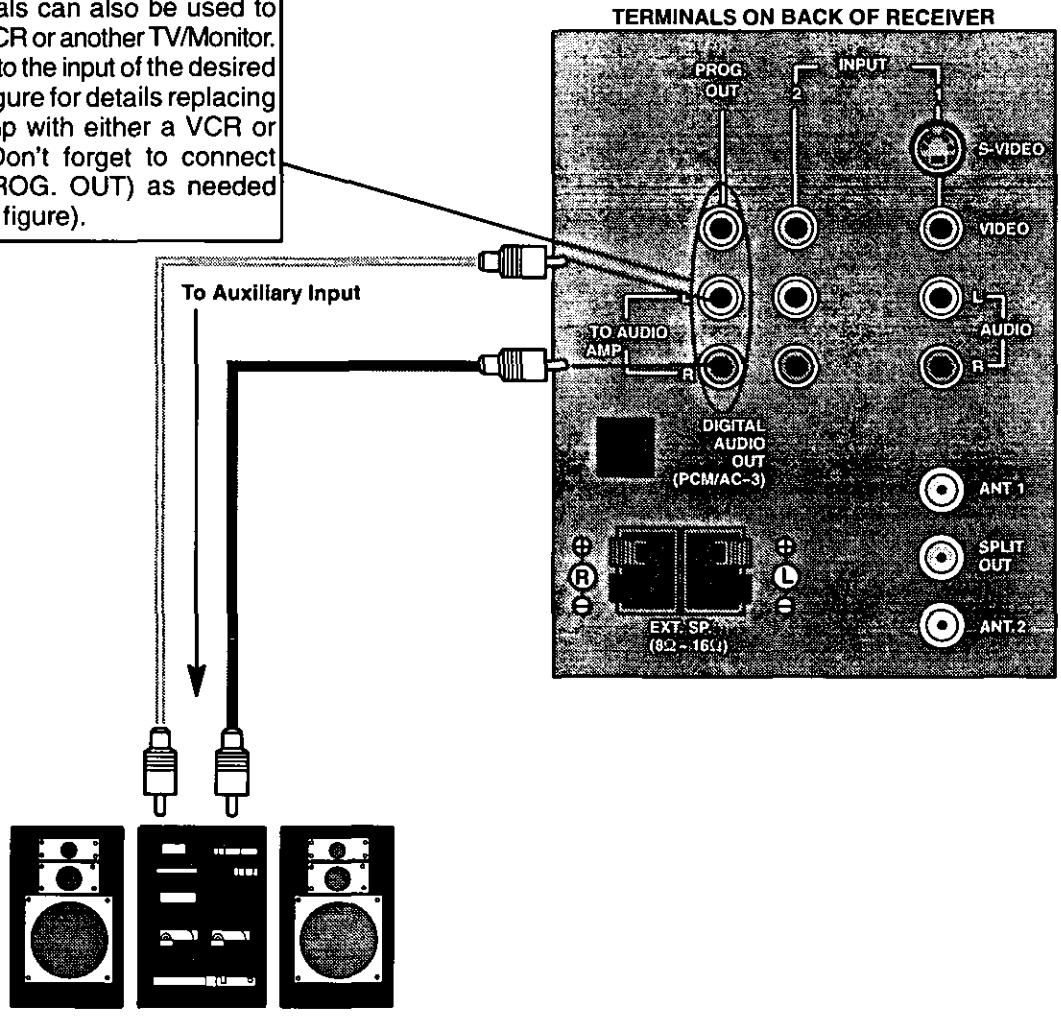
Other Video Equipment

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

Optional Equipment Connection and Operation

Helpful Hints:

These terminals can also be used to connect to a VCR or another TV/Monitor. Connect them to the input of the desired device. See figure for details replacing the Audio Amp with either a VCR or TV/Monitor. Don't forget to connect the video (PROG. OUT) as needed (not shown in figure).



To Audio Amp Connection (Stereo)

- **To Audio Amp**

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

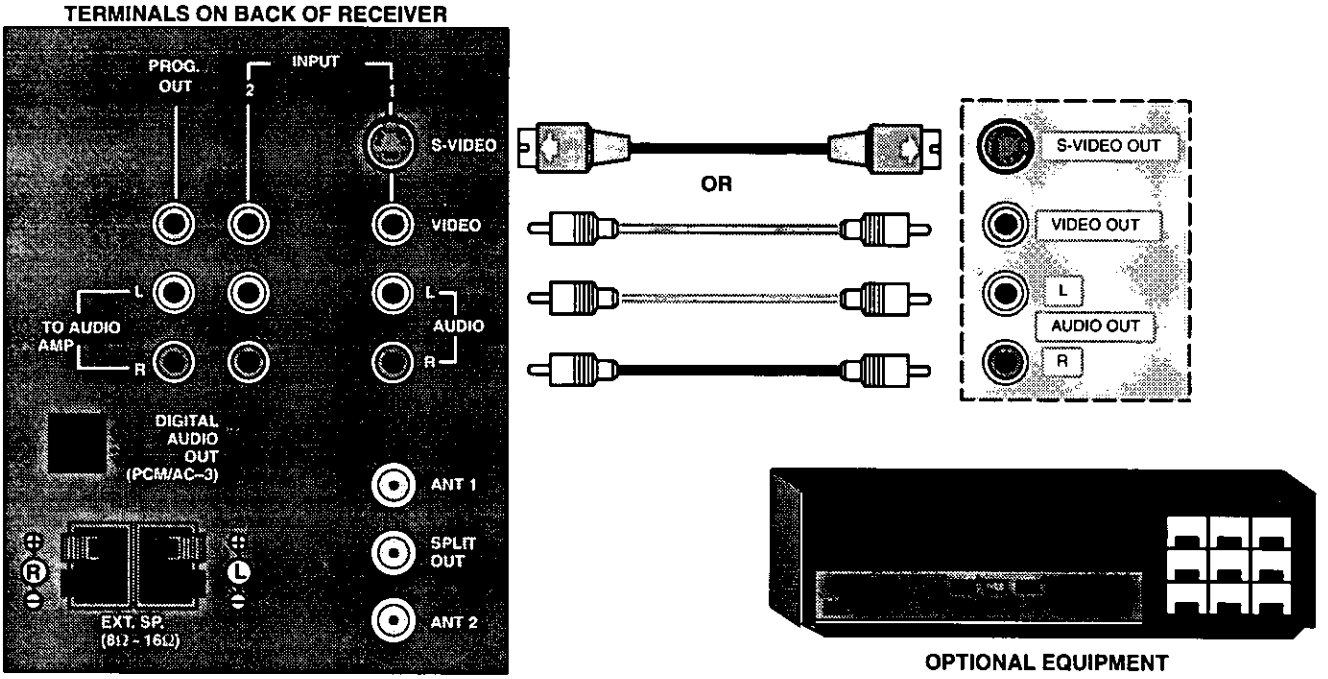
Note: "TO AUDIO AMP" terminals cannot be used to connect directly to external speakers.

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 volume of the TV.
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.

Optional Equipment Connection and Operation (cont.)

S-Video connection is optional and overrides the standard Video connection when connected.



Audio/Video Connection

Operation

1. Connect optional equipment as shown to INPUT 1, 2, 3, or 4 (input 4 is located on front of Receiver).
2. Select the desired Video mode by pressing the TV/VIDEO button (or refer to the Input Select Menu).

Notes:

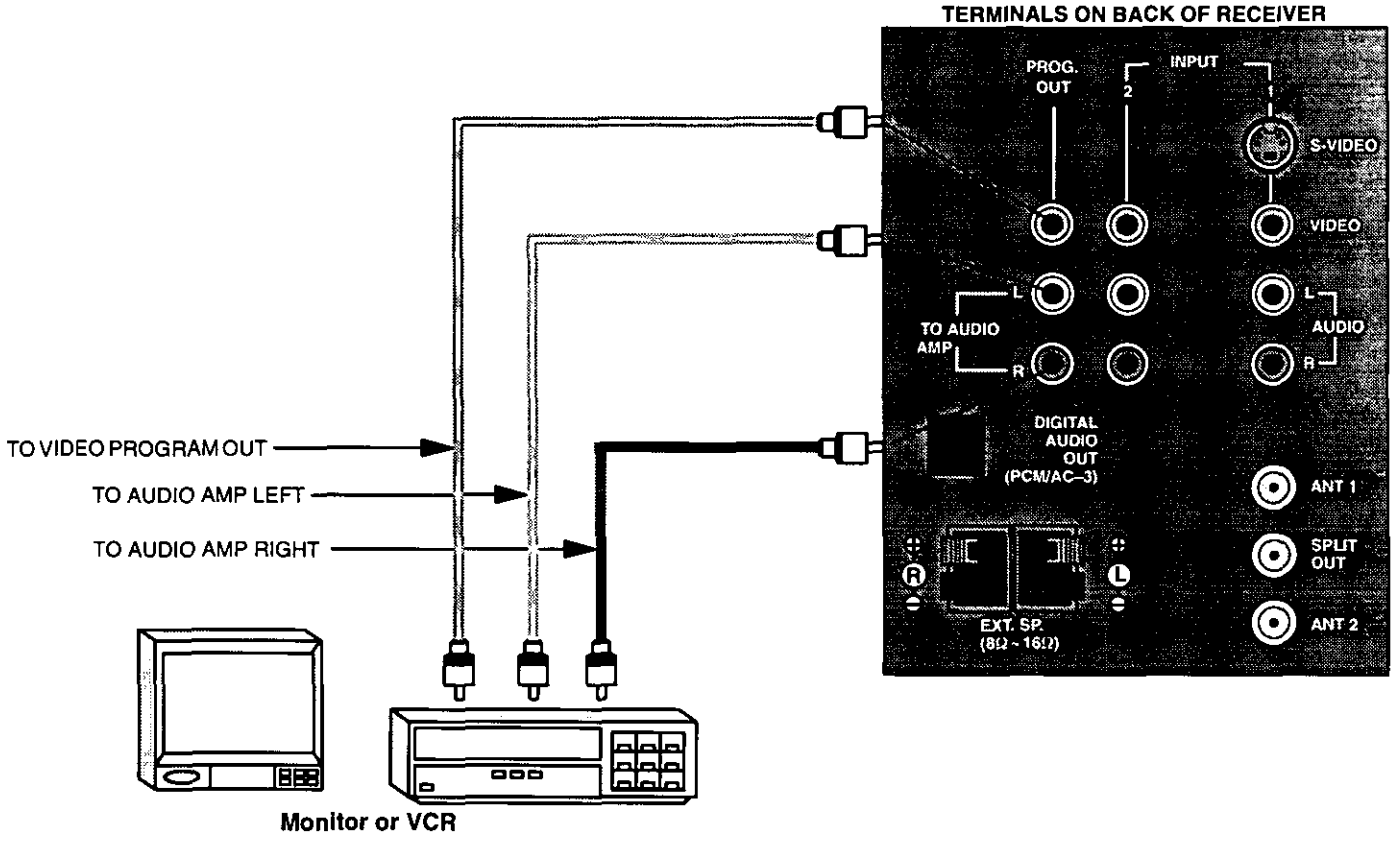
- You must select the VIDEO Mode that corresponds with the terminal that the equipment is connected to– VIDEO 1 for INPUT 1, VIDEO 2 for INPUT 2, VIDEO 3 for INPUT 3 or Video 4 for INPUT 4.
- S-Video is only available with VIDEO 1 and VIDEO 2.
- Connection of optional S-Video automatically disconnects the normal INPUT 1 or 2 Video terminal.

3. Operate optional equipment (VCR-VDP) as instructed in the manual that came with that equipment.

PROG (Program) OUT Connection

Operation

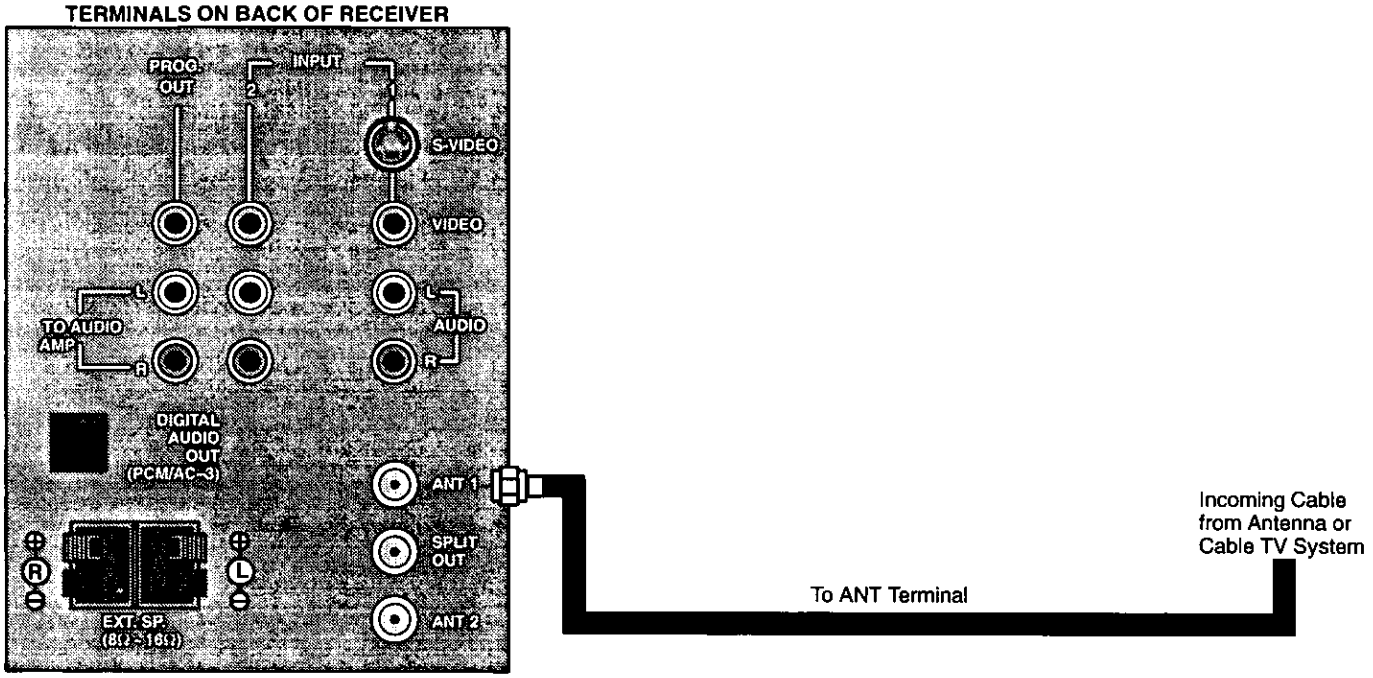
1. Connect optional video equipment as shown.
2. Output terminal signal is same as that being viewed on screen.
3. Monitor or Record as instructed in Optional Equipment Manual.



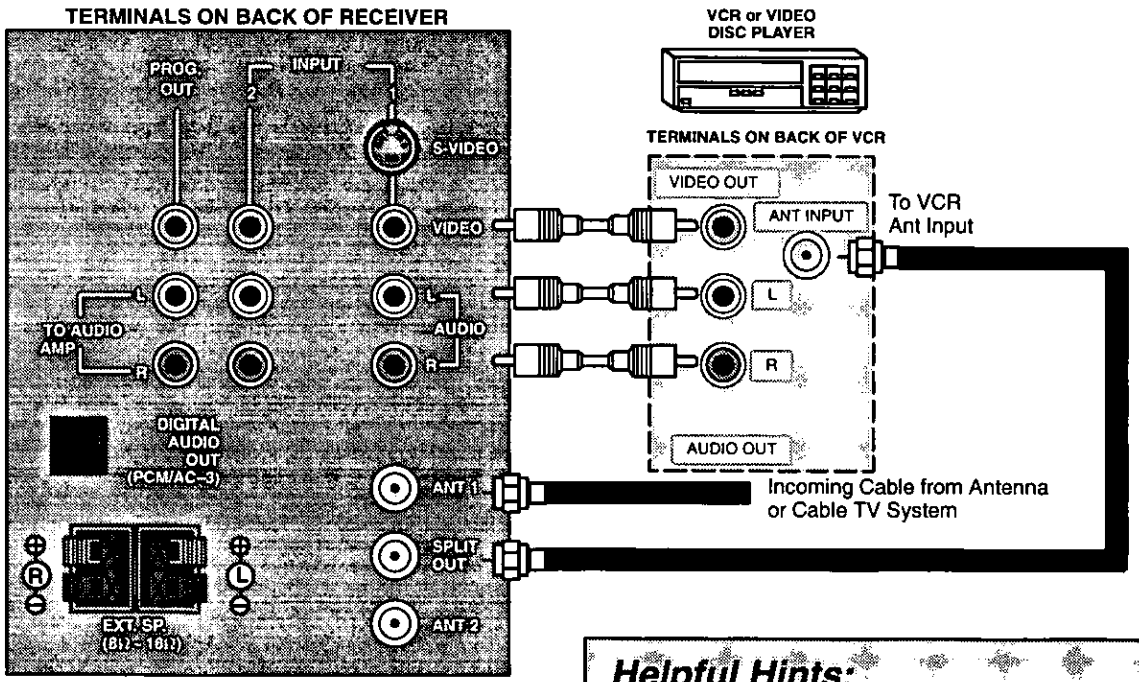
Picture in Picture External Video and Antenna Connection

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



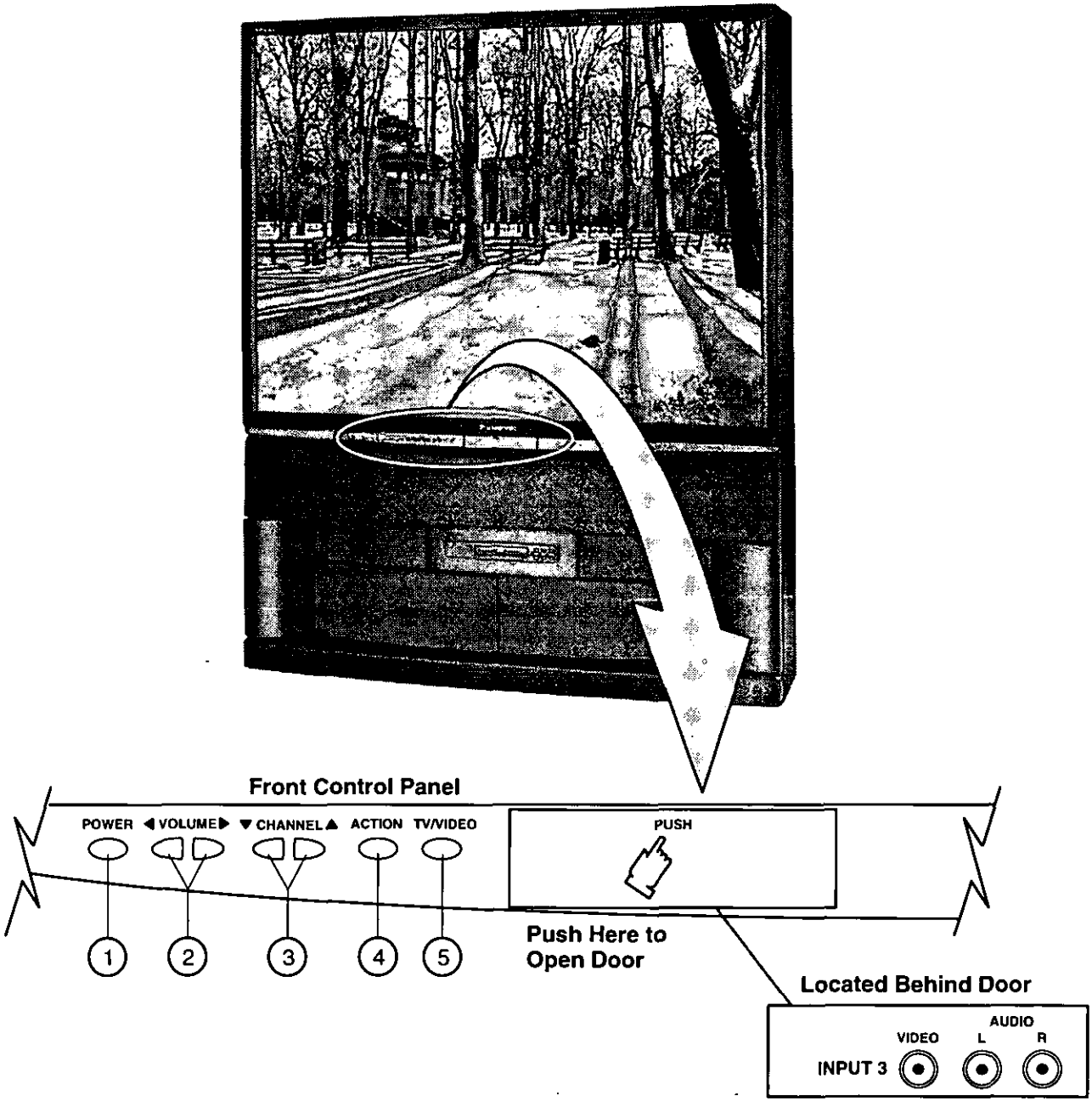
Detail 2 – PIP External Video Connection



Helpful Hints:

The PIP will operate using Audio/Video Input terminals 1, 2, 3, or 4. 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 (TV)



Quick Reference Control Operation

(1) **Power Button** – Press to turn ON or OFF.

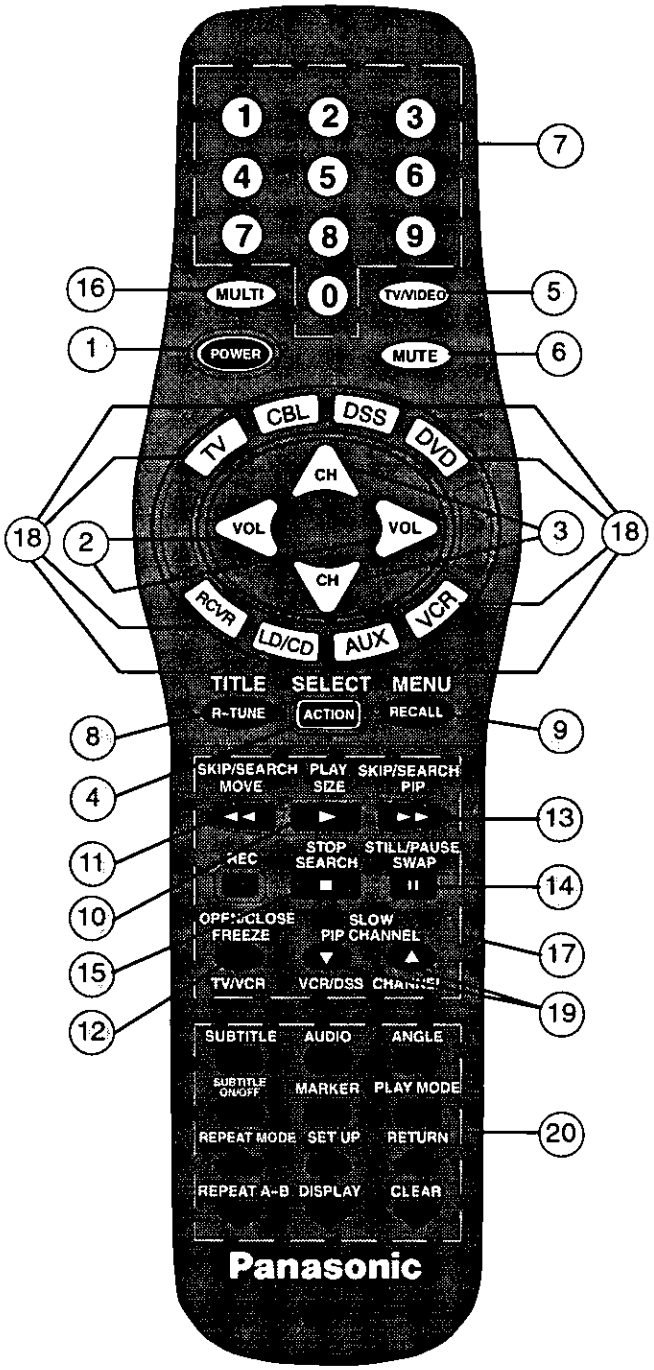
(2) **Volume Buttons** – Press to adjust Sound Level. Press to adjust Audio Menus, Video Menus, and select operating features when menus are displayed.

(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 Inputs for the Main Picture, or the PIP frame (when the PIP frame is displayed).

Location of Controls for the Illuminated Home Theater Remote Unit



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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** (18) 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 another mode button is pressed while operating the television, the TV mode button must be pressed again to reset the TV mode condition.

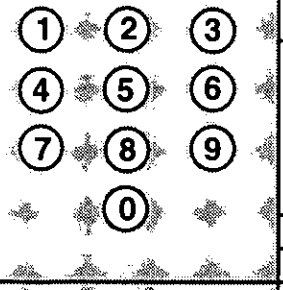
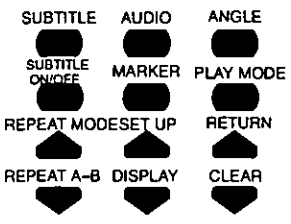
Basic Remote Control Functions for Television Operation

The following is a basic overview of the remote control unit **for television operation. Ensure the TV mode is selected by initially pressing** TV.

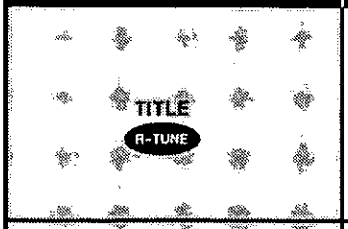
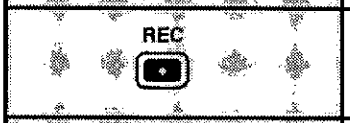
1. **Power Button** – Press to turn the TV ON or OFF.
2. **Volume Buttons** – Press to adjust TV sound level. Use with Channel buttons to navigate in menus.
3. **Channel Buttons** – Press to select channels. Use with Volume buttons to navigate in menus.
4. **Action Button** – Press to display Main Menu and access or exit On-Screen feature and Adjustment Menus.
5. **TV/Video Button** – Press to select TV or one of four (4) 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 to the previous channel.
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 of 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.
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.
20. **DVD Buttons** – These buttons are used to operate the digital video disc player. See DVD Operating Instructions.

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	④ Selects Tuner ⑤ Selects CD Player ⑥ Selects Tape Cassette Player ⑦ VCR 1 ⑧ VCR 2 ⑨ VCR 3
	CD PLAYER	Selects Track Number
	LD PLAYER	Selects Track Number
	ALL COMPONENTS	Programmable Button That Can Operate Up To Six (6) 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
	DVD	DVD 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
	VCR CD	VCR 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
	**DVD PLAYER**	Refer to DVD Operating Guide

Remote Control
Quick Reference Functional Key Chart

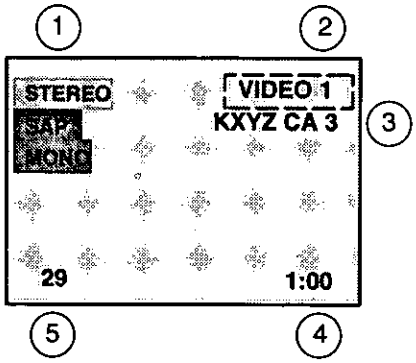
KEY	MODE	FUNCTION
	LDP	Side A/B
	TV	Selects Previously Tuned Channel
	CABLE	Selects Previously Tuned Channel
	VCR	Selects Previously Tuned Channel
	DSS	Selects Previously Tuned Channel
	RECEIVER/AMPLIFIER	Switches between AM and FM
	CD	Selects Next Disc
	TAPE CASSETTE PLAYER	Selects Tape Cassette Player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

Special Functions

Recall Button

Press the RECALL button to review:

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



R-Tune Button – Pressing R-TUNE will switch between the last two channels selected on the numeric keypad.

NOTE: When rapidly scanning channels with CH or CH, pressing R-TUNE will switch between the last channel scanned, and initial channel at the start of scanning.

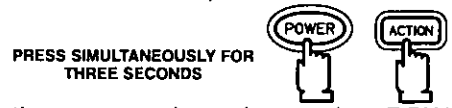
Multi Button

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).**

Procedure

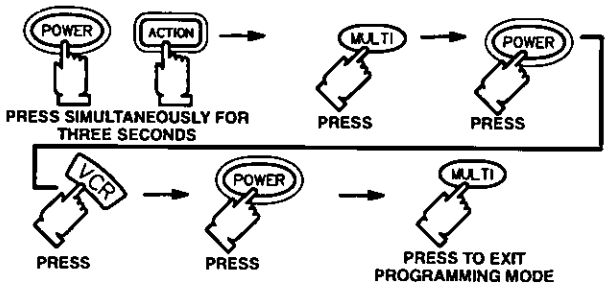
1. Program the Remote for the selected device Infrared access code. Confirm that the Remote Control is compatible with the device.
2. Face the Remote Control transmitter away from all equipment remote sensors.
3. Press and hold the Remote Control POWER button, then press and hold the ACTION button down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



4. After three seconds, 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 pressed 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 Control 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.

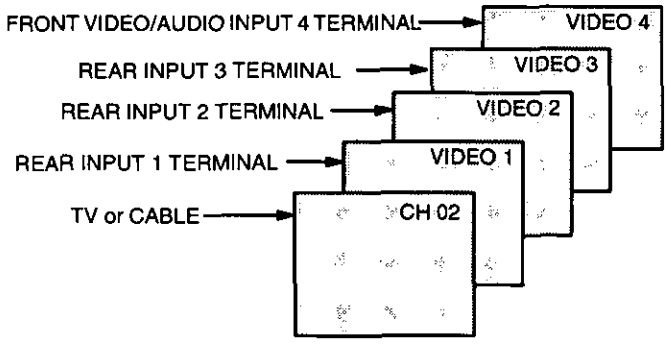
Helpful Hints:

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

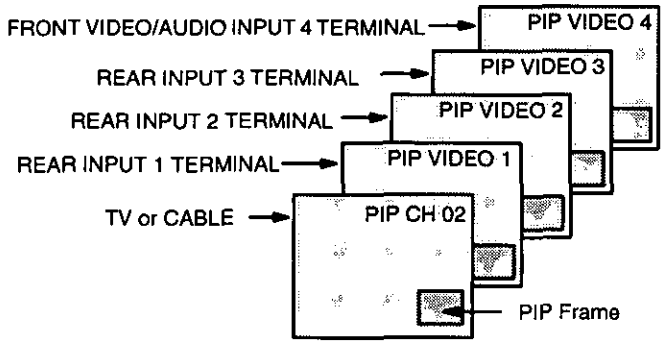
Special Functions (cont.)

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:



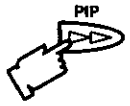
PIP (Picture in Picture) Button – This feature allows the viewer to monitor one channel program while watching another. The monitored source (PIP) can be a different channel or a different video source (such as a VCR) when connected to the input jacks.

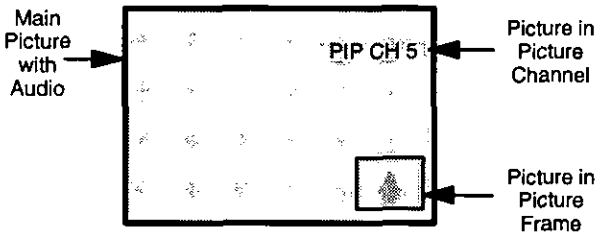
- S-Video connection will also operate the PIP feature.
- When the Main Picture is in Video mode with no signal, the PIP will not operate properly.

PIP Operation

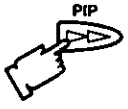
1. Press the TV Mode Selection button to operate TV Remote functions, if necessary.

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



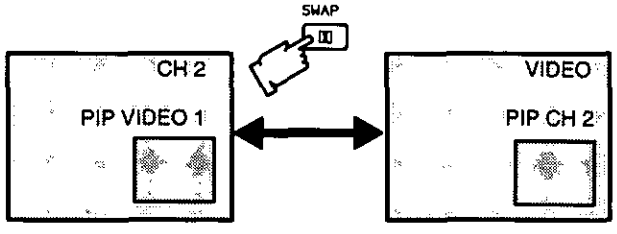


3. Press the PIP button again to cancel PICTURE IN PICTURE feature (if desired).



NOTE: For PIP Video source connection, refer to the Picture in Picture External Video and Antenna Connection 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.



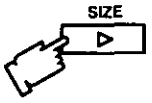
NOTE: Audio will be that of the Main Picture.

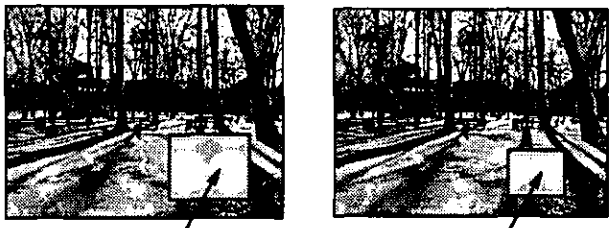
Helpful Hints:

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

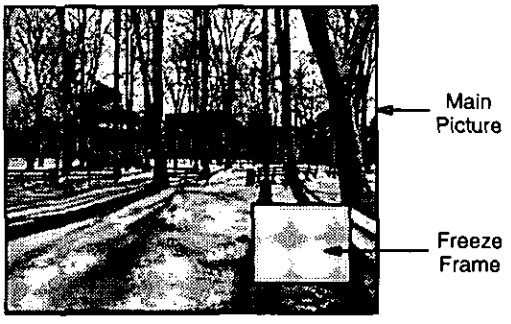
Special Functions (cont.)

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.

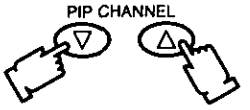


Notes:

- Pressing the FREEZE button when the PIP frame is not displayed will stop action in the Main Picture and display it within a 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

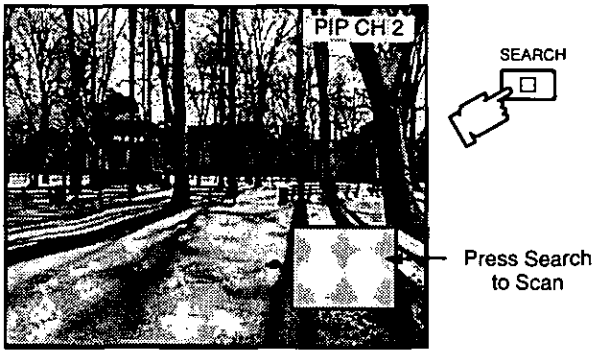
Press the PIP CHANNEL UP/DOWN button while the PIP frame is displayed to sequentially scan through Channels.



Scan Channel Down (next lower)

Scan Channel Up (next higher)

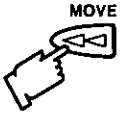
Search Button – The SEARCH button allows you to scan channels in "Channel Scan memory" one at a time. This feature will work with or without an external video signal as the Main Picture.



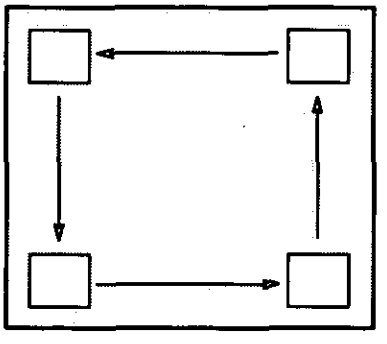
Search Operation

1. 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.
2. Press the search button again to delete search frame, or press the PIP button to stop Search feature on desired channel for PIP frame. Press the PIP button again, to delete PIP frame.

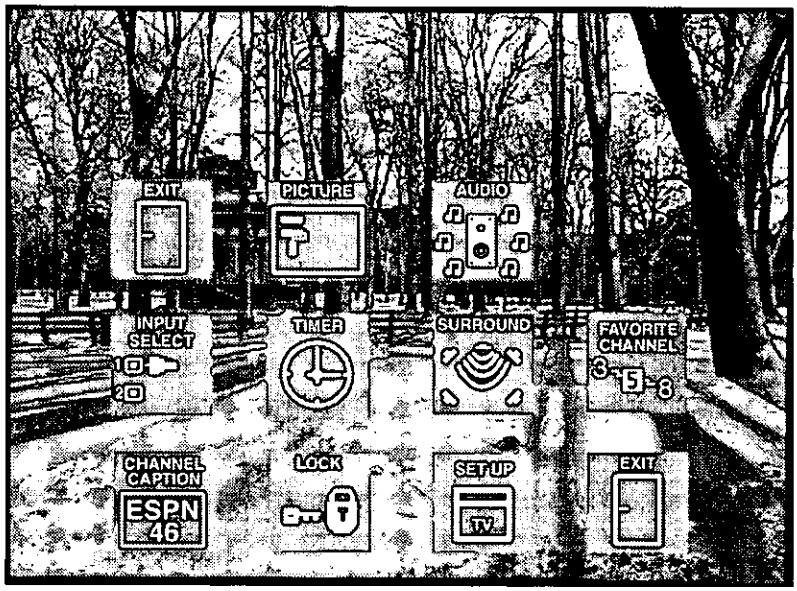
Move Button – This feature allows the viewer to move the PIP frame to any corner of the Main Picture. Activate the PIP frame. Press the MOVE button to move the PIP frame to the desired location.



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

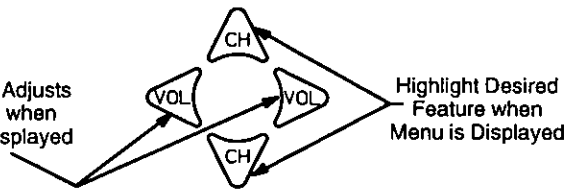


Main Menu



Located On Remote Control

Displays and Exits Menus



Press the ACTION button to display the Main Menu with Icons.

Press CH or CH and VOL or VOL to select the desired Icon when the Main Menu is displayed (selected Icon will be indicated in Red).

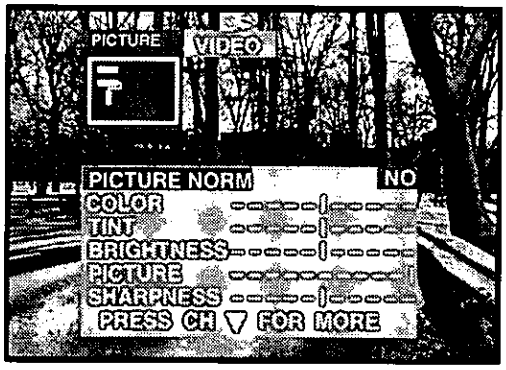
Press ACTION to select and display the desired menu.

To exit the Main Menu first select the EXIT Icon, then press ACTION.

Picture Adjustments

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

1. Press ACTION to display the Main Menu.
2. Press CH ▲ or CH ▼ and VOL ◀ or VOL ▶ to highlight the Picture Icon.
3. Press ACTION to display the Picture Adjustment Menu.

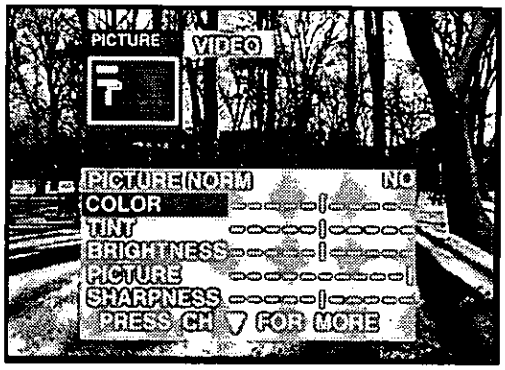


4. Press CH ▲ or CH ▼ to highlight PICTURE NORM.
5. Press VOL ◀ or VOL ▶ to select "SET" to Normalize Color, Tint, Brightness, Picture, and Sharpness.
6. Press ACTION twice to exit menus.

Color, Tint, Brightness, Picture, and Sharpness Adjustments

Before setting the following Picture Adjustments 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 ACTION to display the Main Menu.
2. Press CH ▲ or CH ▼ and VOL ◀ or VOL ▶ to highlight the Picture Icon.
3. Press ACTION to display the Picture Adjustment Menu.



4. Press CH ▲ or CH ▼ to select the desired Picture Adjustment (Color, Tint, Brightness, Picture, or Sharpness).
5. Press VOL ◀ or VOL ▶ to adjust your selection. (The Selected Picture Adjustment will be displayed.)
6. Repeat steps 4 and 5 for the remaining Picture Adjustments.
7. Press ACTION twice to exit menus.

Helpful Hints:

COLOR – adjust for desired color intensity.

TINT – adjust for natural flesh tones.

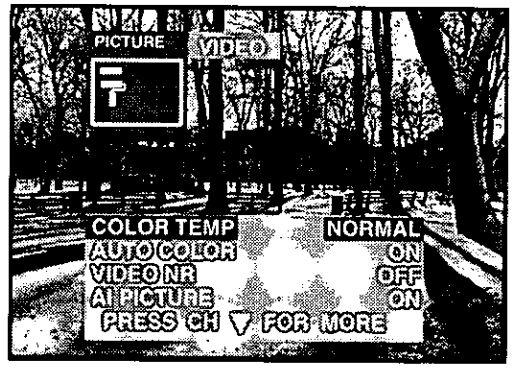
BRIGHTNESS – adjust so dark areas of picture slightly become black for a crisp detail.

PICTURE – adjust the white areas of the picture as desired.

SHARPNESS – adjust for best clarity of outline detail.

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

1. Press ACTION to display the Main Menu.
2. Press CH ▲ or CH ▼ and VOL ◀ or VOL ▶ to highlight the Picture Icon.
3. Press ACTION to display the Picture Adjustment Menu.



4. Press CH ▲ or CH ▼ to highlight COLOR TEMP.
5. Press VOL ◀ or VOL ▶ to select NORMAL, WARM, or COOL.
   - NORMAL (no tint)
   - WARM (reddish tint)
   - COOL (bluish tint)
6. Press ACTION twice to exit menus.

Picture Adjustment (cont.)

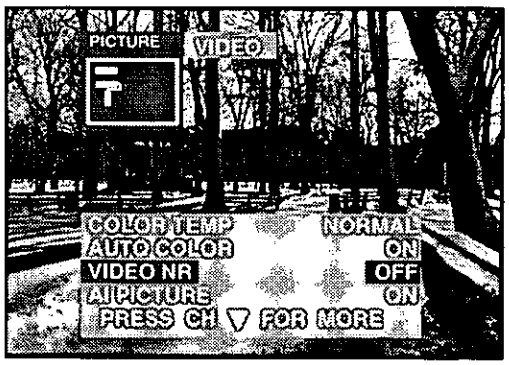
Auto Color – This feature automatically optimizes color adjustment to compensate for signal variations.

1. Press ACTION to display the Main Menu.
2. Press CH ∧ or CH ∨ and VOL ◁ or VOL ▷ to highlight the Picture Icon.
3. Press ACTION to display the Picture Adjustment Menu.

4. Press CH ∧ or CH ∨ to highlight AUTO COLOR.
5. Press VOL ◁ or VOL ▷ to turn Auto Color feature ON or OFF.
6. Press ACTION twice to exit menus.

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

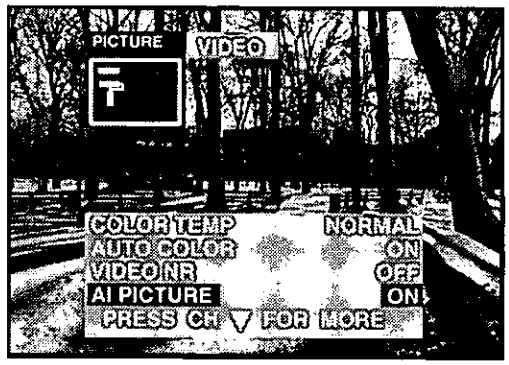
1. Press ACTION to display the Main Menu.
2. Press CH ∧ or CH ∨ and VOL ◁ or VOL ▷ to highlight the Picture Icon.
3. Press ACTION to display the Picture Adjustment Menu.



4. Press CH ∧ or CH ∨ to highlight VIDEO NR (Noise Reduction).
5. Press VOL ◁ or VOL ▷ to turn Video NR feature ON or OFF.
6. Press ACTION twice to exit menus.

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 ACTION to display the Main Menu.
2. Press CH ∧ or CH ∨ and VOL ◁ or VOL ▷ to highlight the Picture Icon.
3. Press ACTION to display the Picture Adjustment Menu.



4. Press CH ∧ or CH ∨ to highlight AI PICTURE.
5. Press VOL ◁ or VOL ▷ to select ON or OFF.
6. Press ACTION twice to exit menus.

Audio Adjustments

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. 30).

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

1. Press ACTION to display the Main Menu.
2. Press CH▲ or CH▼ and VOL◄ or VOL► to highlight the Audio Icon.
3. Press ACTION to display the Audio Adjustment Menu.

4. Press CH▲ or CH▼ to highlight AUDIO NORM.
5. Press VOL◄ or VOL► to select "SET" to normalize Bass and Treble.
6. Press ACTION twice to exit menus.

Bass and Treble – While the AI (Artificial Intelligence) Sound is "ON", the Bass and Treble are automatically set and cannot be selected.

1. Press ACTION to display the Main Menu.
2. Press CH▲ or CH▼ and VOL◄ or VOL► to highlight the Audio Icon.
3. Press ACTION to display the Audio Adjustment Menu.

4. Press CH▲ or CH▼ to highlight BASS or TREBLE.
5. Press VOL◄ or VOL► to adjust for desired audio response.
6. Press ACTION twice to exit 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".

1. Press ACTION to display the Main Menu.
2. Press CH▲ or CH▼ and VOL◄ or VOL► to highlight the Audio Icon.
3. Press ACTION to display the Audio Adjustment Menu.

4. Press CH▲ or CH▼ to highlight MODE.
5. Press VOL◄ or VOL► to select STEREO, SAP (Second Audio Programming), or MONO. The selected mode will be highlighted.
   - STEREO – Two channel Audio reception.
   - SAP – Second Audio Programming (typically used for bilingual audio)
   - MONO – Use when stereo signal is weak.
6. Press ACTION twice to exit menus.

Audio Adjustments (cont.)

[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 for further information.)

1. Press ACTION to display the Main Menu.
2. Press CH ∧ or CH ∨ and VOL ◁ or VOL ▷ to select the Audio Icon.
3. Press ACTION to display the Audio Adjustment Menu.

   Note: Speaker is not displayed in audio menu when the unit is in Pro-Logic mode.

4. Press CH ∧ or CH ∨ to highlight SPEAKER.
5. Press VOL ◁ or VOL ▷ 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 ACTION twice to exit menus.

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 ACTION to display the Main Menu.
2. Press CH ∧ or CH ∨ and VOL ◁ or VOL ▷ to highlight the Audio Icon.
3. Press ACTION to display the Audio Adjustment Menu.

4. Press CH ∧ or CH ∨ to highlight EXTRA BASS.
5. Press VOL ◁ or VOL ▷ to select ON or OFF.
6. Press ACTION 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 ACTION to display the Main Menu.
2. Press CH ∧ or CH ∨ and VOL ◁ or VOL ▷ to highlight the Audio Icon.
3. Press ACTION to display the Audio Adjustment Menu.

   Note: AI Sound is not displayed in audio menu when the unit is in Pro-Logic mode.

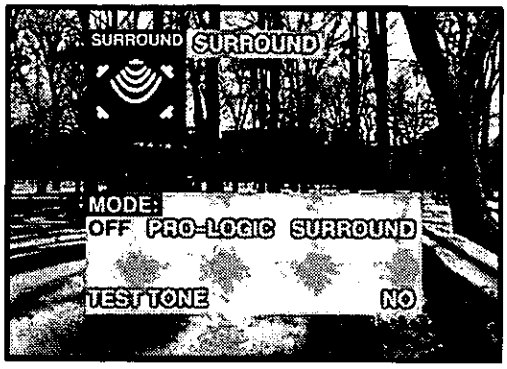
4. Press CH ∧ or CH ∨ to highlight AI SOUND.
5. Press VOL ◁ or VOL ▷ to select AI SOUND ON or OFF.
6. Press ACTION twice to exit menus.

Surround

Surround Mode (Off)

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

1. Press ACTION to display the Main Menu.
2. Press CH ∧ or CH ∨ and VOL ◁ or VOL ▷ to highlight the SURROUND Icon.
3. Press ACTION to display the Surround Menu.

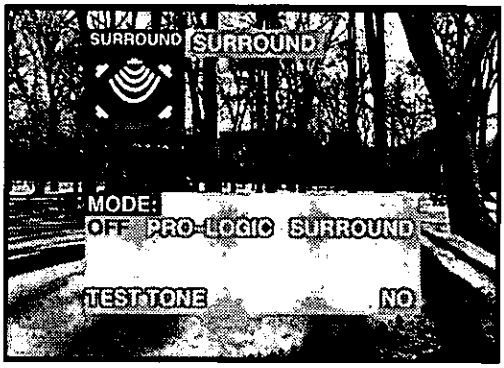


4. Press CH ∧ or CH ∨ to highlight MODE.
5. Press VOL ◁ or VOL ▷ to select OFF.
6. Press ACTION twice to exit menus.

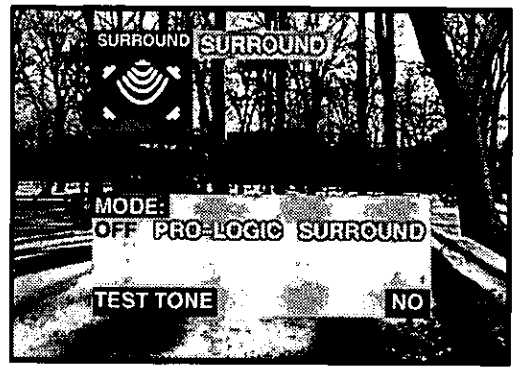
Test Tone for Adjustment of PTV Speakers Audio Balance

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

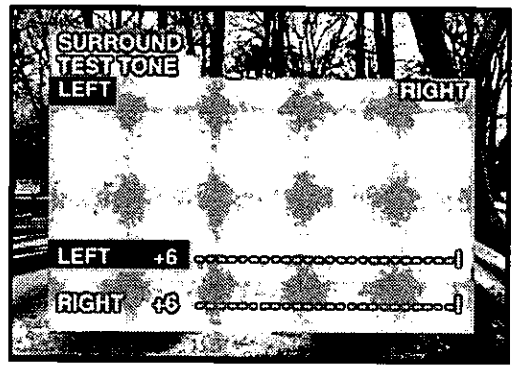
1. Press ACTION to display the Main Menu.
2. Press CH ∧ or CH ∨ and VOL ◁ or VOL ▷ to highlight the SURROUND Icon.
3. Press ACTION to display the Surround Menu.



4. Press CH ∧ or CH ∨ to highlight TEST TONE.



5. Press VOL ◁ or VOL ▷ to display the Surround Test Tone Menu.



6. Press VOL ◁ while the left or right is highlighted to decrease speaker volume, or press the VOL ▷ while the left or right is highlighted to increase speaker volume.
7. Press ACTION three times to exit menus.

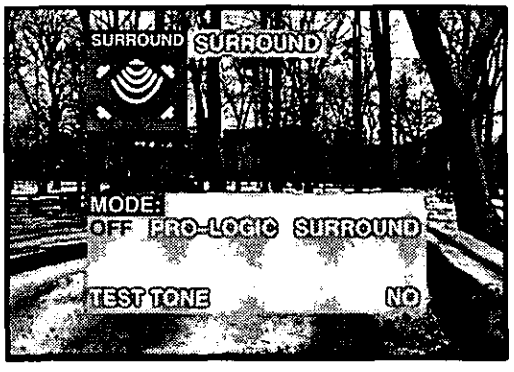
Surround (cont.)

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 section for connection instructions.

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

1. Press ACTION to display the Main Menu.
2. Press CH▲ or CH▼ and VOL◄ or VOL► to highlight the Surround Icon.
3. Press ACTION to display the Surround Menu.

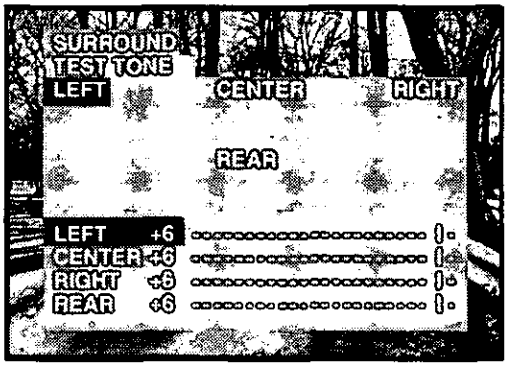


4. Press CH▲ or CH▼ to highlight MODE.
5. Press VOL◄ or VOL► to select PRO-LOGIC.

6. Press CH▲ or CH▼ to highlight SETTING.

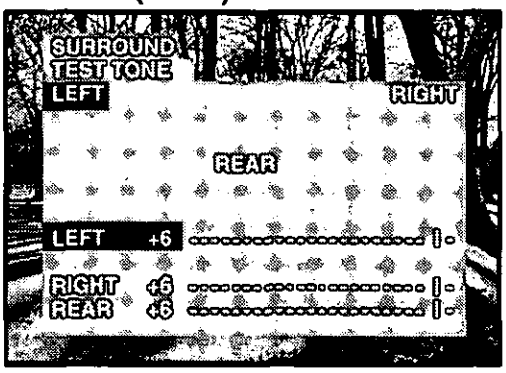
7. Press VOL◄ or VOL► to select WIDE, NORMAL, or PHANTOM.
   - WIDE: When the center speaker sound is the same or larger than the front speakers.
   - NORMAL: When the center speaker sound is smaller than the front speakers.
   - PHANTOM: The sound which would have been sent to the center speaker will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

9. Press VOL◄ or VOL► to display the Surround Test Tone Menu.



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

Surround (cont.)

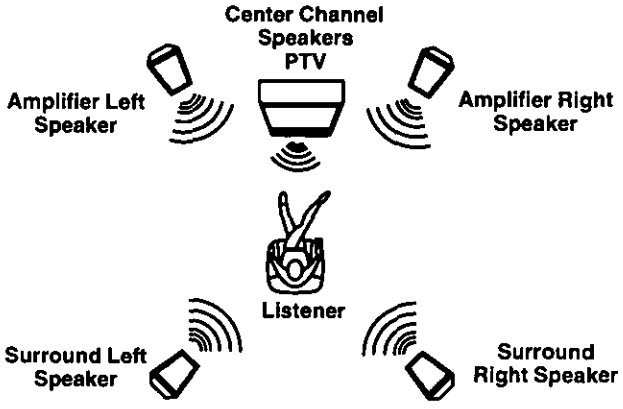


Select Pro-Logic Phantom mode to adjust this menu.

10. Press CH or CH 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).

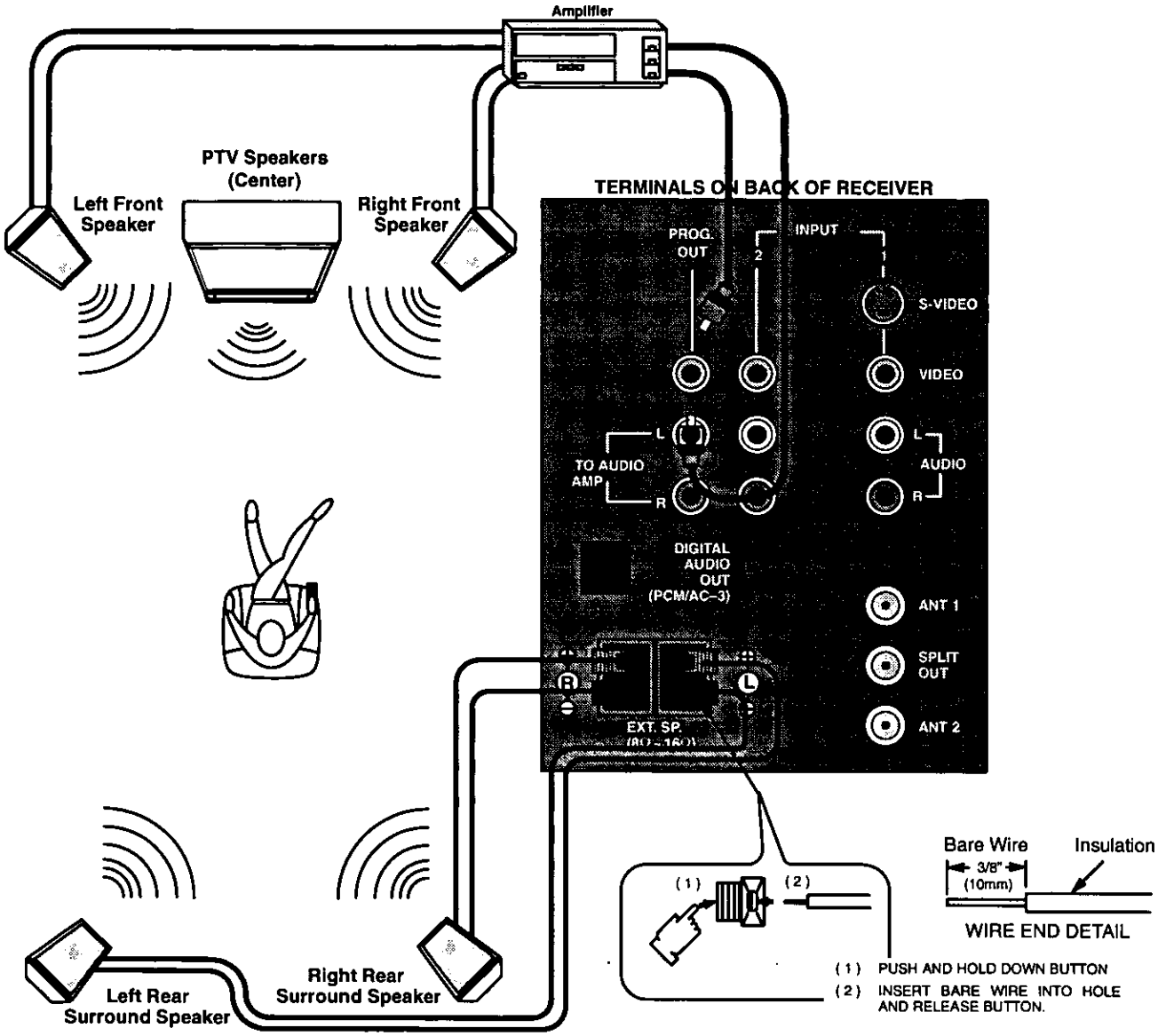
Note: Before adjusting the Test Tone Volume level, the listener should be positioned in the center of all speakers as shown below.



11. Press VOL or VOL 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 ACTION 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:

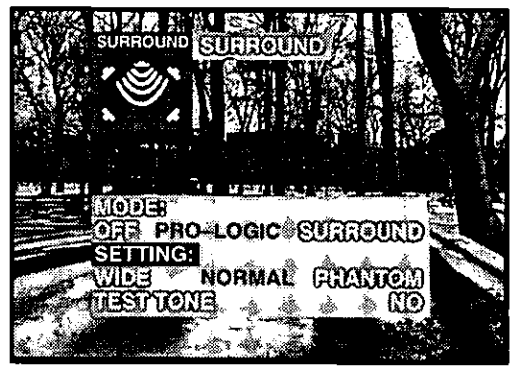
   MODE: PRO-LOGIC

   SETTINGS: WIDE or NORMAL

   (Refer to the Surround Pro-Logic Mode section for setting up menu procedures).

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.

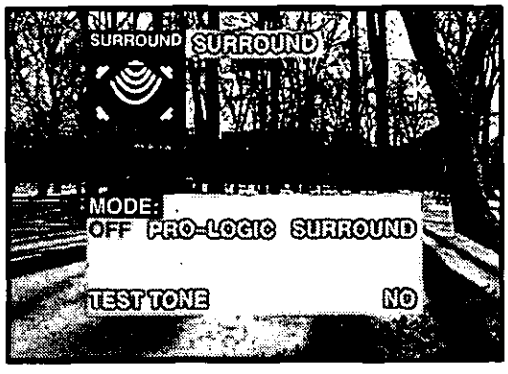
   (Refer to the Surround Pro-Logic section for the procedure to adjust Test Tone levels).



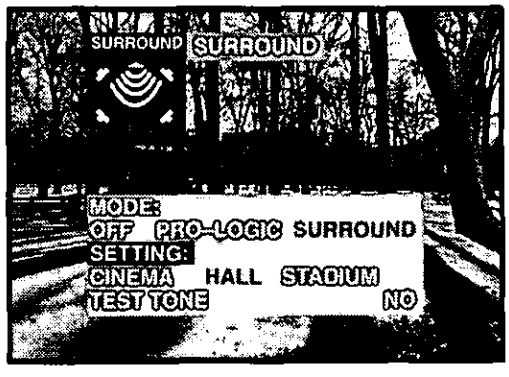
Surround (cont.)

Surround Mode (Cinema/Hall/Stadium)

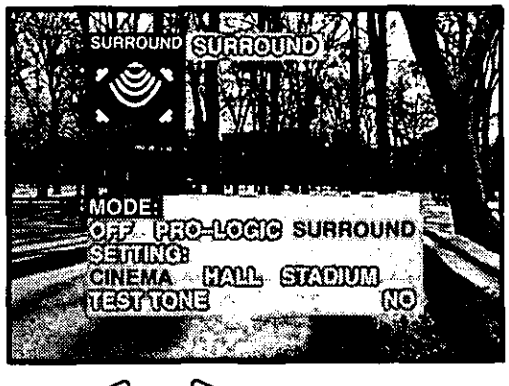
1. Press ACTION to display the Main Menu.
2. Press CH ▲ or CH ▼ and VOL ◀ or VOL ▶ to highlight the Surround Icon.
3. Press ACTION to display the Surround Menu.



4. Press CH ▲ or CH ▼ to highlight MODE.
5. Press VOL ◀ or VOL ▶ to select SURROUND.

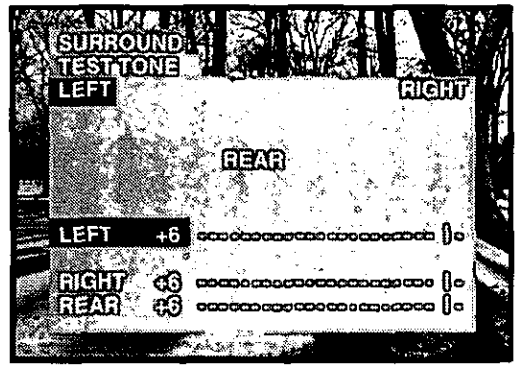


6. Press CH ▲ or CH ▼ to highlight SETTING.

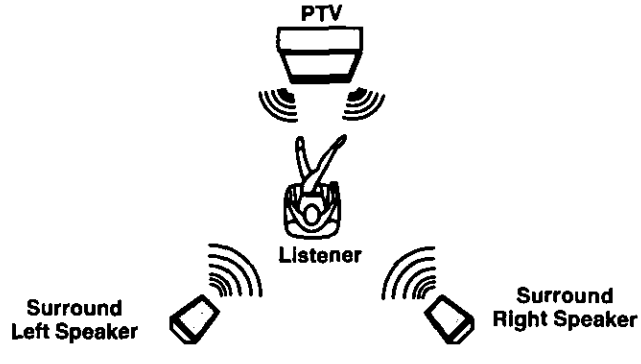


7. Press VOL ◀ or VOL ▶ to select CINEMA, HALL, or STADIUM.
   - CINEMA: The Cinema mode simulates the sound of a good movie theater, with strong bass and spacious feel.
   - HALL: The Hall mode establishes a club atmosphere for pop music and well defined vocals.
   - STADIUM: The Stadium mode creates a vast, high-rooted stadium feeling, regardless of the actual size of your listening room.
8. Press CH ▼ to highlight TEST TONE.

9. Press VOL ◀ or VOL ▶ to display the Surround Test Tone Menu.



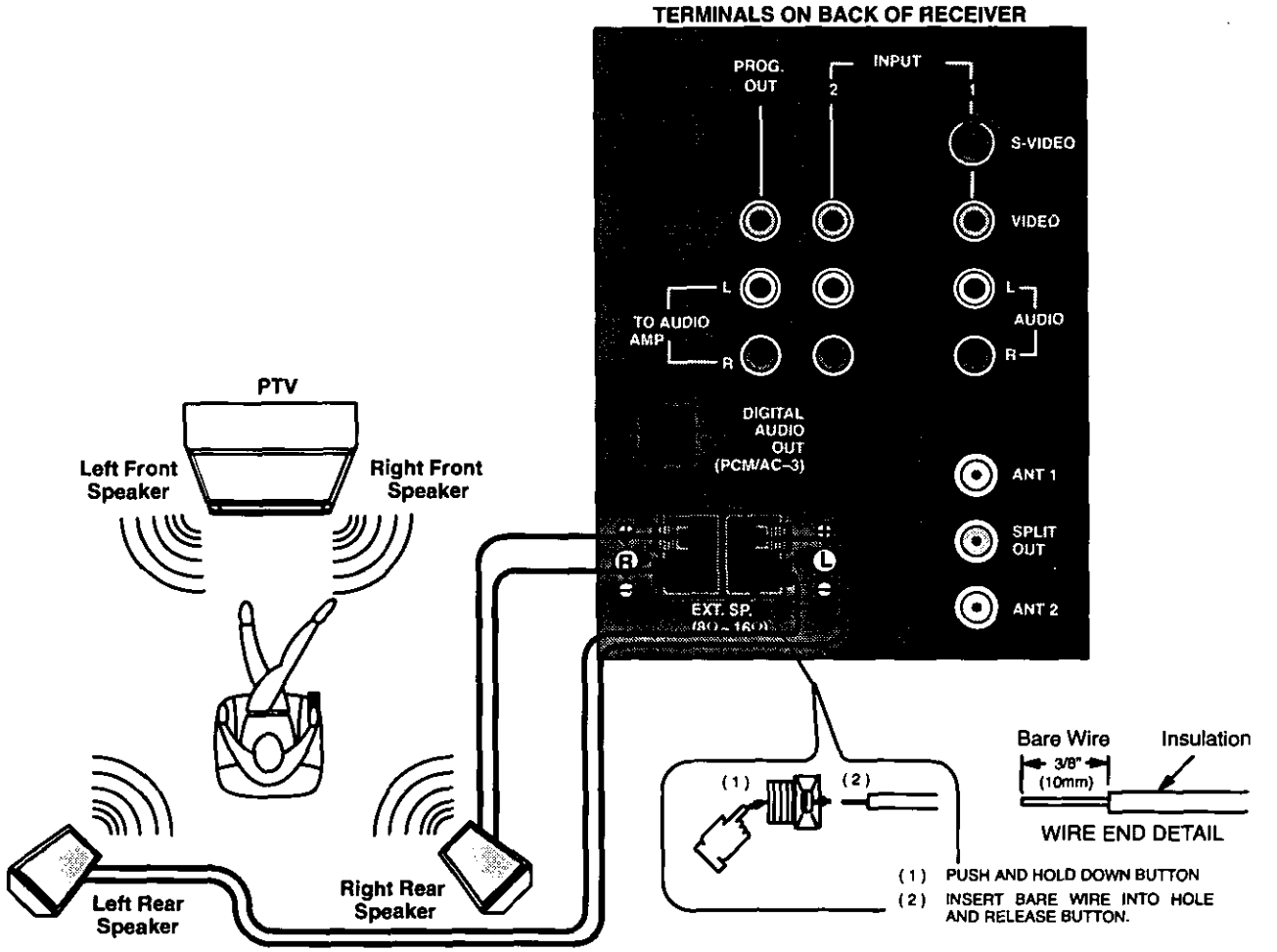
10. Press CH ▲ or CH ▼ to select:
    - LEFT: For adjusting tone for left front PTV speaker.
    - RIGHT: For adjusting tone for right front PTV speaker.
    - REAR: For adjusting tone for rear Surround speakers (left and right).



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

11. Press VOL ◀ or VOL ▶ 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 ACTION 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.

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

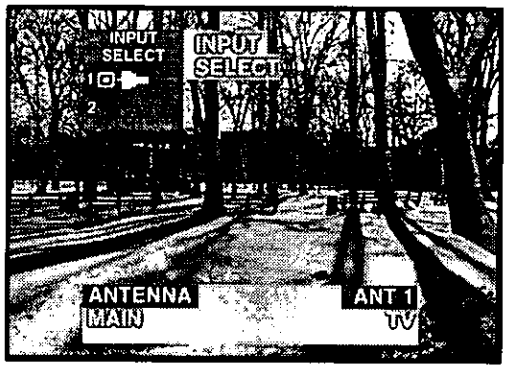
   SETTINGS: CINEMA, HALL, or STADIUM

   (Refer to Surround Mode section for menu operation procedures).
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

1. Press ACTION to display the Main Menu.
2. Press CH ▲ or CH ▼ and VOL ◀ or VOL ▶ to highlight the Input Select Icon.
3. Press ACTION to display the Input Select Menu.



4. Press CH ▲ or CH ▼ to highlight ANTENNA.
5. Press VOL ◀ or VOL ▶ to select ANT 1 or ANT 2.
6. Press ACTION 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).

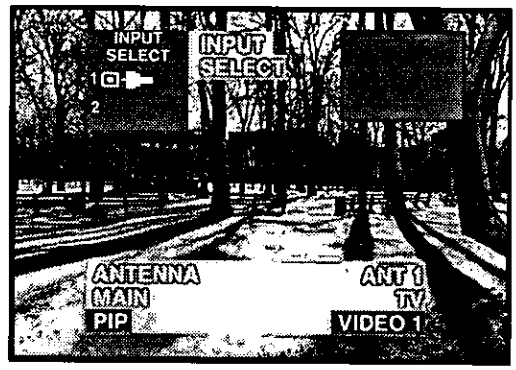
1. Press ACTION to display the Main Menu.
2. Press CH ▲ or CH ▼ and VOL ◀ or VOL ▶ to highlight the Input Select Icon.
3. Press ACTION to display the Input Select Menu.

4. Press CH ▲ or CH ▼ to highlight MAIN.
5. Press VOL ◀ or VOL ▶ to select TV, Video 1, Video 2, or Video 3 for Main Picture Input.
6. Press ACTION twice to exit menus.

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).

1. Press FF PIP to display the PIP frame.
2. Press ACTION to display the Main Menu.
3. Press CH ▲ or CH ▼ and VOL ◀ or VOL ▶ to highlight the Input Select Icon.
4. Press ACTION to display the Input Select Menu.



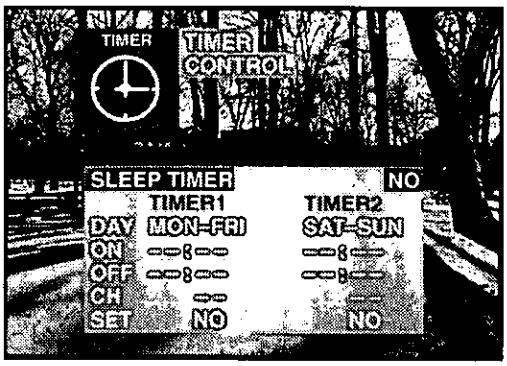
5. Press CH ▲ or CH ▼ (when the PIP frame is displayed) to highlight PIP.
6. Press VOL ◀ or VOL ▶ to select TV, Video 1, Video 2, or Video 3 for the PIP frame Input.
7. Press ACTION twice to exit menus.

Timer Feature

Sleep Timer – This feature is used for automatic 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 ACTION to display the Main Menu.
2. Press CH ▲ or CH ▼ and VOL ◀ or VOL ▶ to highlight the Timer Icon.
3. Press ACTION to display the Timer Control Menu.



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

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

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.

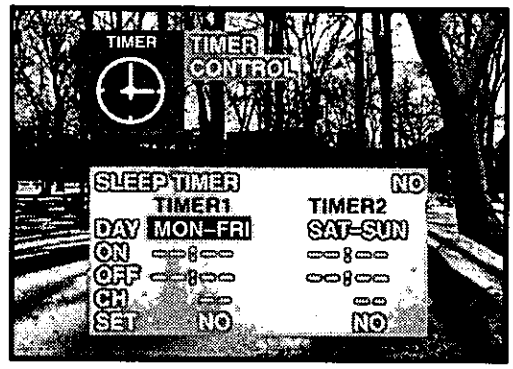
This feature is useful so that the TV will not remain **ON** unattended for an extended period of time.

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.)

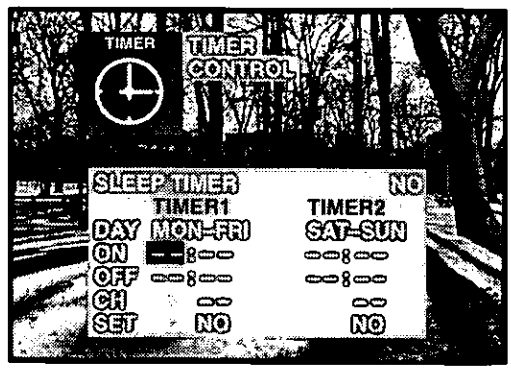
1. Press ACTION to display the Main Menu.
2. Press CH ▲ or CH ▼ and VOL ◀ or VOL ▶ to highlight the Timer Icon.
3. Press ACTION to display the Timer Control Menu.



4. Press CH ▲ or CH ▼ 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 VOL ◀ or VOL ▶ 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 CH ▼ to highlight the ON (Hours) position.

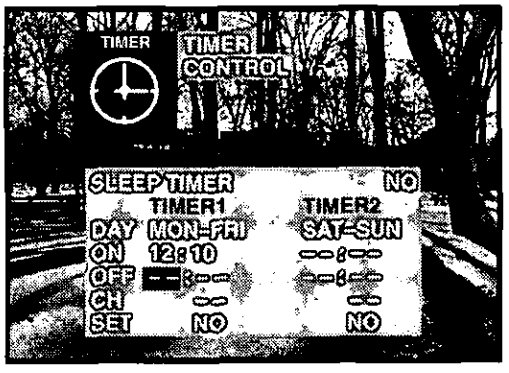


Timer Feature (cont.)

8. Press VOL◁ or VOL▷ to set the desired time for the Receiver to turn ON.

   Note: Press CH▽ to change selection from hours to minutes.

9. Press CH▽ to highlight the OFF (Hours/Minutes) position.



10. Press VOL◁ or VOL▷ to set the time you wish the Receiver to turn OFF.

    Note: Press CH▽ to change selection from hours to minutes.

11. Press CH▽ to highlight the CH position.

12. Press VOL◁ or VOL▷ to select a channel (from Program Channel Memory) that you want to be tuned to when the set turns ON.

13. Press CH▽ to highlight the SET position.

14. Press VOL▷ to activate or VOL◁ to deactivate Timer 1.
    - YES=Feature is activated
    - NO=Feature is not activated

15. Press CH▽ to set Timer 2 (if desired). Follow Steps 6 through 14.

16. Press ACTION twice to exit menus.

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

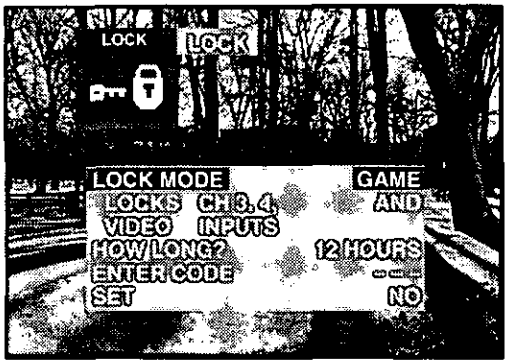
Lockout Mode – This feature allows you to lockout:

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

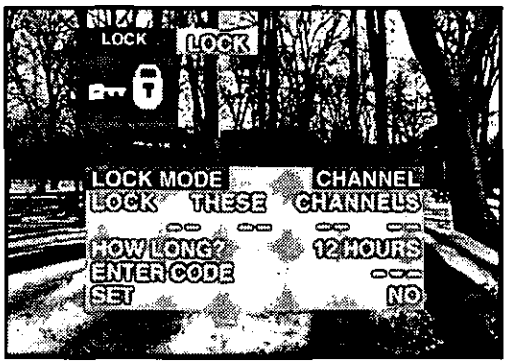
Note: This feature will Lockout your selection for up to 48 hours. Be sure to understand this feature before attempting its use. **Use a code that you will easily remember.**

1. Press ACTION to display the Main Menu.
2. Press CH ▲ or CH ▼ and VOL ◀ or VOL ▶ to highlight the Lock Icon.
3. Press ACTION to display the Lock Menu.

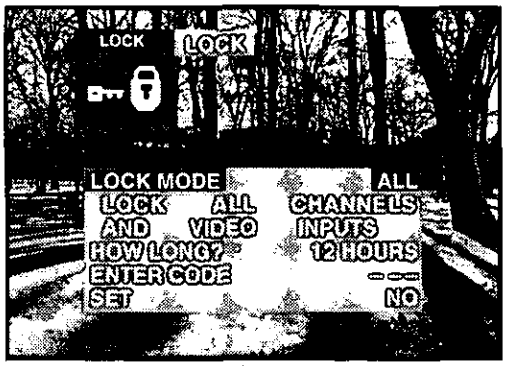
   Note: When the Lockout Menu is displayed, the Lock mode option will be highlighted.
4. Press VOL ◀ or VOL ▶ to select GAME, CH (CHANNEL), or ALL.



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

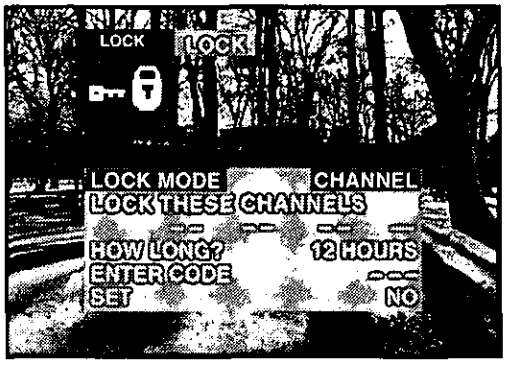


Channels Lockout Menu
(up to 4 Channels)



All Lockout Menu
(All Channels plus Video Inputs)

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



Step A

Press CH ▼ to highlight "LOCK THESE CHANNELS".

Step B

Then use the Remote Control Numeric Keypad to select a channel you desire to lockout.

Step C

Press CH ▼ to select next Channel position.

Step D

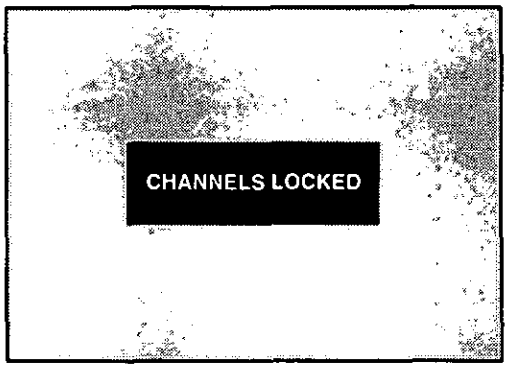
Then repeat Step B and C until desired Channels are locked out (up to 4 Channels).

5. Press CH ▼ to highlight "HOW MANY HOURS".
6. Press VOL ◀ or VOL ▶ to select 12, 24, or 48 (hours lockout time).
7. Press CH ▼ to highlight "ENTER CODE" then enter a 3-digit code by using the Remote Control Numeric Keypad.

   IMPORTANT NOTE: Use a code you can easily remember.

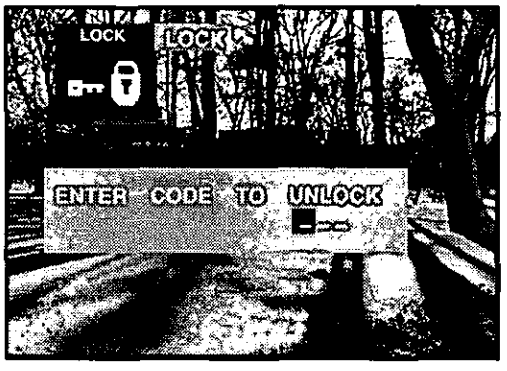
Lockout Features (cont.)

8. Press VOL to activate Lock feature. "CHANNELS LOCKED" will display On Screen.

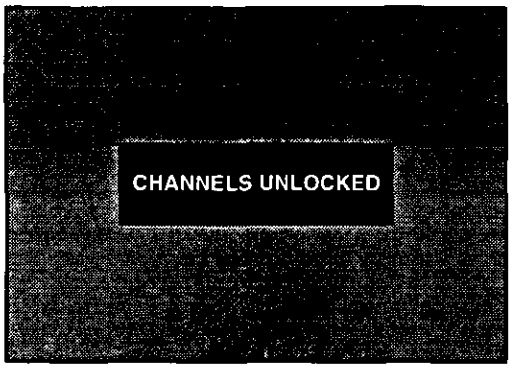


Lock Feature Activated

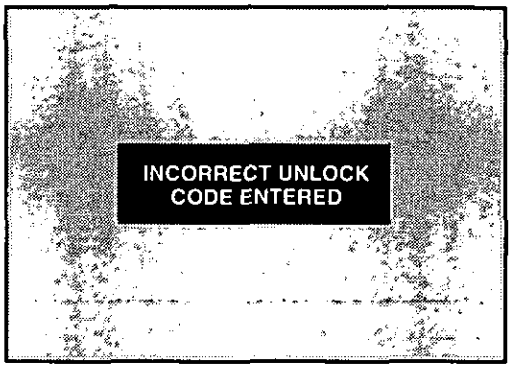
Unlock – Follow Steps 1 through 3 from previous page and enter the same 3-digit code as in Step 7. Channel Unlocked display will appear.



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 or CH, ALL or FAV (Favorite) Channels.

1. Press ACTION to display the Main Menu.
2. Press CH or CH and VOL or VOL to highlight the Favorite Channel Icon.
3. Press ACTION to display the Favorite Channel Menu.

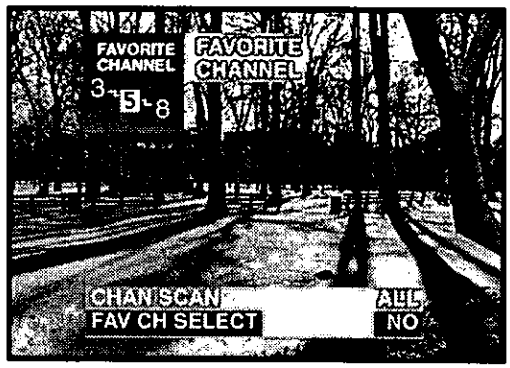
4. Press CH or CH to highlight CHAN SCAN.
5. Press VOL or VOL to select ALL or FAV (Favorite).
   - ALL – The CH or CH will access all channels in Channel Memory.
   - FAV – The CH or CH will only access channels in Favorite Channel Select Memory.
6. Press ACTION twice to exit menus.

Helpful Hints:

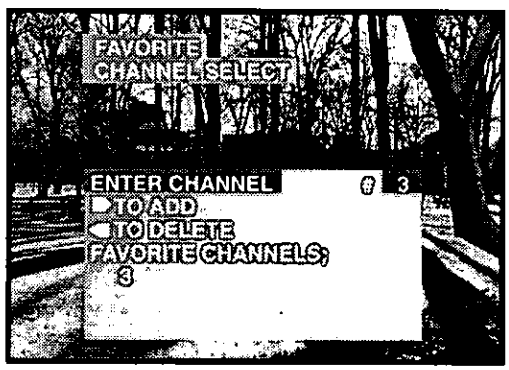
After Auto Channel Programming has completed, the first 15 channels selected (or less depending on existing channels in memory) will automatically be added to Favorite Channel memory.

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 ACTION to display the Main Menu.
2. Press CH or CH and VOL or VOL to highlight the Favorite Channel Icon.
3. Press ACTION to display the Favorite Channel Menu.



4. Press CH or CH to highlight CHAN SCAN. Then, press VOL or VOL to select FAV option for Favorite Channels setting.
5. Press CH or CH to highlight "FAV CH SELECT".
6. Press VOL or VOL 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 or CH).
8. Press VOL to add or press VOL to delete channel(s) from Favorite Channel Memory.
9. Repeat Steps 7 and 8 to continue adding or deleting channels (up to 15 channels may be stored in Favorite Channel Memory).

   Note: When your desired channels have been programmed, press ACTION to exit the menu.
10. Press CH or CH to scan through the Favorite Channels programmed.

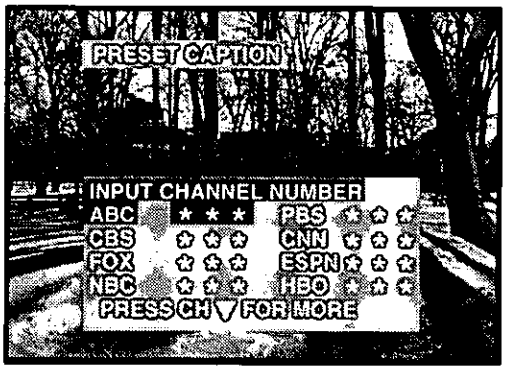
Channel Caption Features

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 RECALL.

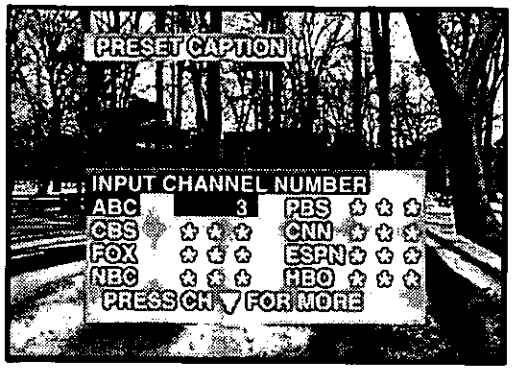
1. Press ACTION to display the Main Menu.
2. Press CH ∧ or CH ∨ and VOL ◁ or VOL ▷ to highlight the Channel Caption Icon.
3. Press ACTION to display the Channel Caption Menu.

4. Press CH ∧ or CH ∨ to highlight PRESET CAPTION.
5. Press VOL ◁ or VOL ▷ to display the Preset Caption Menu.



6. Press CH ∧ or CH ∨ 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).

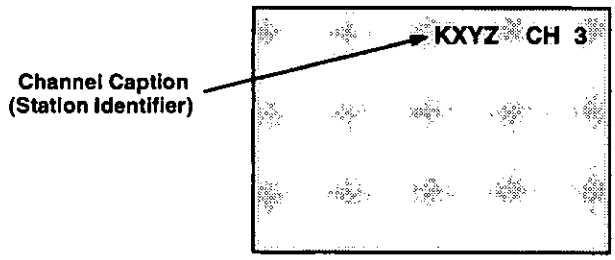
   Note: **To delete** an assigned channel number from channel caption, press VOL ◁ while the assigned channel number is highlighted.



8. Press CH ∨ to select a different Preset Channel Caption, then repeat step 7 until all desired Preset Channel Captions have an assign channel number.
9. Press ACTION three times to exit menus.

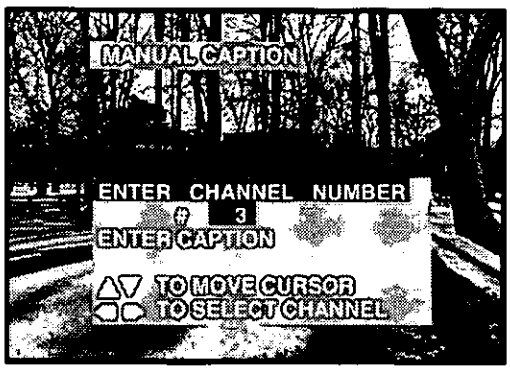
Channel Caption Features (cont.)

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

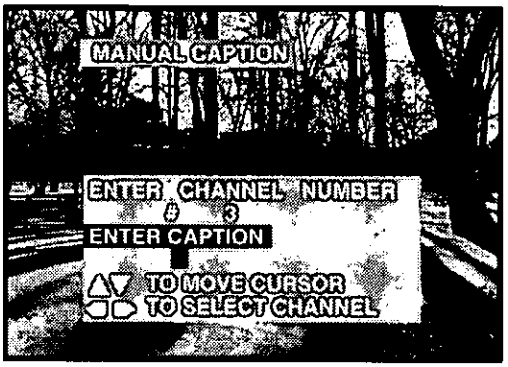


1. Press to display the Main Menu.
2. Press CH▲ or CH▼ and VOL◄ or VOL► to highlight the Channel Caption Icon.
3. Press ACTION to display the Channel Caption Menu.

4. Press CH▲ or CH▼ to highlight MANUAL CAPTION.
5. Press VOL◄ or VOL► to display the MANUAL CAPTION menu.



6. Use the Remote Control Keyboard or VOL◄ or VOL► to enter channel number your wish to assign a channel caption (station identifier).
7. Press CH▼ to highlight ENTER CAPTION.



8. Press VOL◄ or VOL► to select first character in channel caption (station identifier).
9. Press CH▼ to move to second character position, and repeat steps 7 and 8 until the complete caption is entered (up to 4 characters).
10. Press CH▼ repeatedly to highlight ENTER CHANNEL NUMBER. Then repeat steps 6 through 10 to continue adding channel caption (station identifiers).
11. Press ACTION three times to exit menus.

Set-Up Features

Set Time – Clock (when set) will display On Screen at initial turn on, after a channel change and when pressing RECALL. It must be set to operate the dual Timer feature.

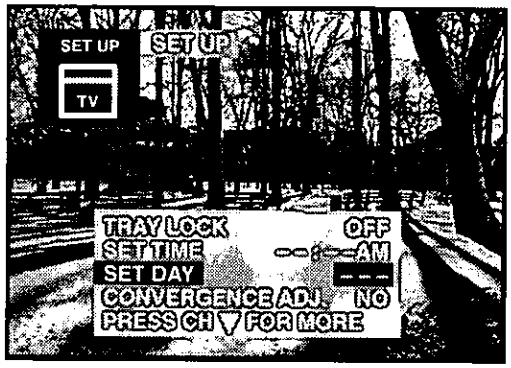
1. Press ACTION to display the Main Menu.
2. Press CH ∧ or CH ∨ and VOL ◁ or VOL ▷ to highlight the Set Up Icon.
3. Press ACTION to display the Set Up Menu.

4. Press CH ∧ or CH ∨ to highlight SET TIME hours.

5. Press VOL ◁ or VOL ▷ to Set Hours (set AM/PM accordingly).
6. Press CH ∨ to highlight minutes position.
7. Press VOL ◁ or VOL ▷ to set minutes.
8. Press ACTION twice to exit menus.

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

1. Press ACTION to display the Main Menu.
2. Press CH ∧ or CH ∨ and VOL ◁ or VOL ▷ to highlight the Set Up Icon.
3. Press ACTION to display the Set Up Menu.



4. Press CH ∧ or CH ∨ to highlight SET DAY.
5. Press VOL ◁ or VOL ▷ to select proper day of the week.
6. Press ACTION twice to exit menus.

Tray Lock – The tray lock must be set to extend or retract the compact disc tray.

1. Press ACTION to display the Main Menu.
2. Press CH ∧ or CH ∨ and VOL ◁ or VOL ▷ to highlight the Set Up Icon.
3. Press ACTION to display the Set Up Menu.

4. Press CH ∧ or CH ∨ to highlight TRAY LOCK.
5. Press VOL ◁ or VOL ▷ to select ON or OFF.
6. Press ACTION twice to exit menus.

Set-Up Features (cont.)

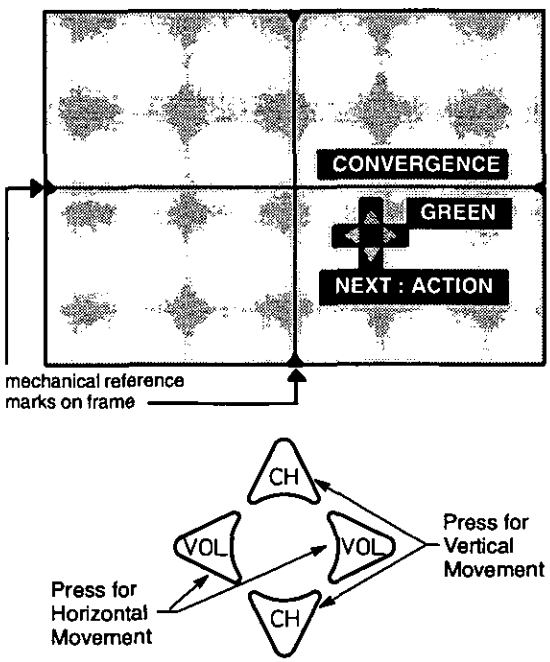
Convergence Adj. (Adjustment) – This unit incorporates a special ***Digital Convergence Adjustment*** feature. For the convenience of the customer, this adjustment is preset at the factory. Adjustment may be required when the Receiver is moved due to the influence of earth's magnetic field on the projection 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 ACTION to display the Main Menu.
2. Press CH ∧ or CH ∨ and VOL ◁ or VOL ▷ to highlight the Set Up Icon.
3. Press ACTION to display the Set Up Menu.
4. Press CH ∨ to highlight CONVERGENCE ADJ.

5. Press VOL ◁ or VOL ▷ to display the Convergence Adjustment screen.

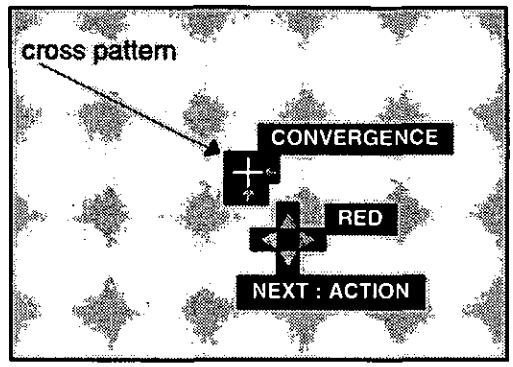


6. Green horizontal and vertical test lines must be present at the screen frame mechanical reference marks.
7. Align the Green test marks with the frame mechanical reference marks. Press VOL ◁ or VOL ▷ on Remote Control for horizontal movement and CH ∧ or CH ∨ on Remote Control for the vertical movement.

Red Adjusment

8. Press ACTION on the Remote Control to display red adjustment menu.

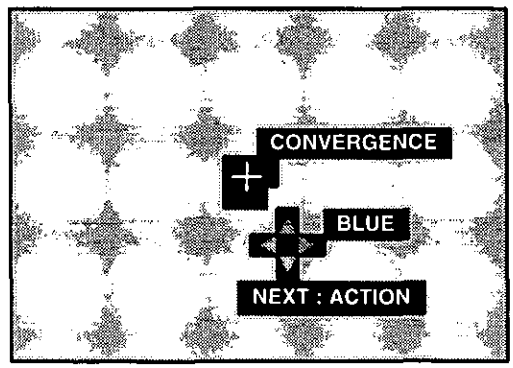
   Note: A properly converged cross pattern will appear as white with a minimum of red color fringing.



9. Align the Red Cross with the white cross pattern at the center of the screen. Press VOL ◁ or VOL ▷ on Remote Control for horizontal movement and CH ∧ or CH ∨ on Remote Control for the vertical movement.

Blue Adjustment

10. Press ACTION on the Remote Control to display blue adjustment menu.



11. Align the Blue Cross with the white cross pattern at the center of the screen. Press VOL ◁ or VOL ▷ on Remote Control for horizontal movement and CH ∧ or CH ∨ on Remote Control for the vertical movement.
12. Press ACTION 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.)

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.

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 ACTION to display the Main Menu.
2. Press CH▲ or CH▼ and VOL◄ or VOL► to highlight the Set Up Icon.
3. Press ACTION to display the Set Up Menu.

4. Press CH▲ or CH▼ to highlight Mode.
5. Press VOL◄ or VOL► to select TV or CABLE.
6. Press ACTION twice to exit menus.

Auto Program – The Auto Programming feature allows you to place all channels with a video signal into Channel Scan Memory. When you press CH▲ or CH▼, 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 ACTION to display the Main Menu.
2. Press CH▲ or CH▼ and VOL◄ or VOL► to highlight the Set Up Icon.
3. Press ACTION to display the Set Up Menu.

4. Press CH▲ or CH▼ to highlight AUTO PROGRAM.
5. Press VOL◄ or VOL► to start Auto Programming Scan. Channels will automatically advance until all channels have been scanned.

   Note: Channel numbers with video signal present will turn blue which indicates stored in Channel Scan Memory.
6. Press ACTION 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).

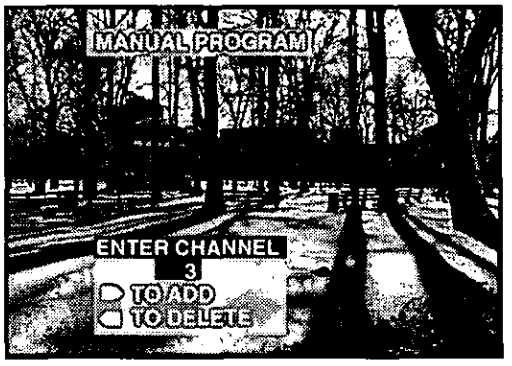
Up to 15 channels will be programmed into the FAVORITE Channel Scan after Auto Programming Scan has been completed. Any original channels that were programmed into FAV CHANNEL will remain. (Refer to Favorite Channel Scan for deleting unwanted channels.)

Set-Up Features (cont.)

Manual Program – This feature allows you to select which channels are placed into Channel Scan Memory, so when you press CH or CH, only those channels you desire will be accessed.

1. Press ACTION to display the Main Menu.
2. Press CH or CH and VOL or VOL to highlight the Set Up Icon.
3. Press ACTION to display the Set Up Menu.

4. Press CH or CH to highlight MANUAL PROGRAM.
5. Press VOL or VOL to display Manual Program Menu.



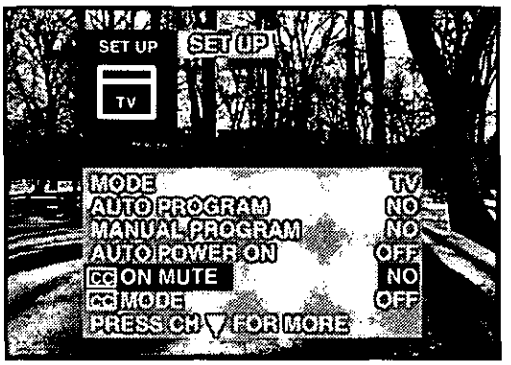
6. Use the Remote Control Numeric Keypad (0 through 9 buttons) or CH or CH to select channels.
7. Press VOL to add channel(s) to memory (blue). Press VOL to delete channel(s) from memory (yellow).
8. Repeat Steps 6 and 7 to continue adding or deleting channels.
9. Press ACTION twice to exit menus.

CC Closed Caption – 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.

CC On Mute – Activates the On-Screen Closed Caption feature, when MUTE on the Remote Control is pressed. To deactivate press MUTE 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 ACTION to display the Main Menu.
2. Press CH or CH and VOL or VOL to highlight the Set Up Icon.
3. Press ACTION to display the Set Up Menu.



4. Press CH or CH to highlight CC ON MUTE.
5. Press VOL or VOL 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 ACTION twice to exit menus.
7. Press MUTE when the program being viewed is broadcast with Closed Caption to activate.

   Note: Press MUTE again to deactivate.

Set-Up Features (cont.)

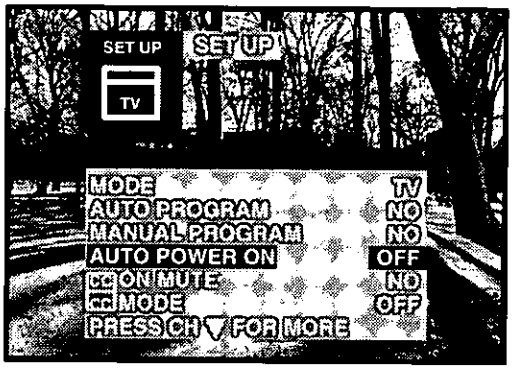
CC Mode – Activates the On–Screen Closed Caption feature. When activated this feature will remain on until OFF is selected in this menu.

1. Press ACTION to display the Main Menu.
2. Press CH ∧ or CH ∨ and VOL ◁ or VOL ▷ to highlight the Set Up Icon.
3. Press ACTION to display the Set Up Menu.

4. Press CH ∧ or CH ∨ to highlight CC MODE.
5. Press VOL ◁ or VOL ▷ 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 ACTION twice to exit menus.

Auto Power On – Automatically turns the television on when a VCR, Cable Box, etc., are powered. The Television needs to be plugged into the switched outlet of the device. Setting the Auto Power On feature will cancel the time and timer control settings. The Main Menu Icon for the TIMER CONTROL will be replaced with an EXIT Icon.

1. Press ACTION to display the Main Menu.
2. Press CH ∧ or CH ∨ and VOL ◁ or VOL ▷ to highlight the Set Up Icon.
3. Press ACTION to display the Set Up Menu.



4. Press CH ∧ or CH ∨ to highlight AUTO POWER ON.
5. Press VOL ◁ or VOL ▷ to select SET.
6. Press ACTION 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, AUX** (for **Cassette Players, Second VCR** or a **DVD**) and **Television**.

Code Known

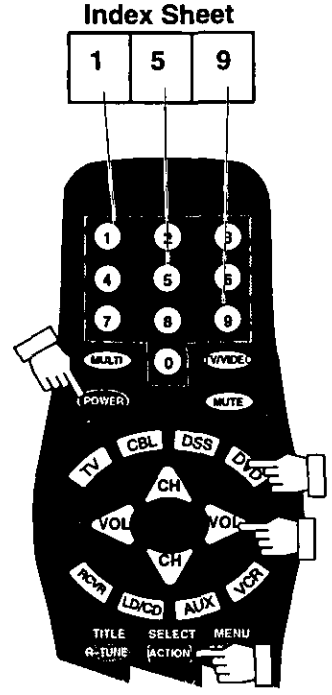
Use the following procedure for setting up the remote control using the numerical buttons when the component's remote code is known.

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 ACTION 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.

6 **Code From Index Sheet**



TNQ2AE011

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 ACTION 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 ACTION 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.

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.**

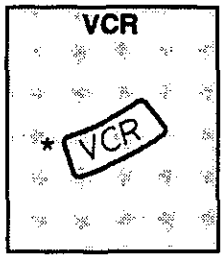
CABLE Cable TV Converter Box	**VCR** Video Cassette Recorder	**CD** Compact Disc Player
DSS Digital Satellite System	**RCVR** Receiver or Amplifier	**LD** Laser Disc Player
Other Component	Other Component	Other Component
Other Component	Other Component	Other Component

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

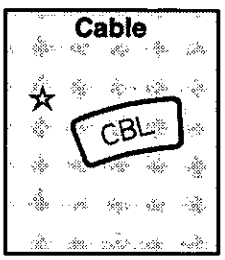
VCR Brand	Code(s)	VCR Brand	Code(s)
Admiral	048	MTC	000, 240
Adventura	000	Multitech	000, 072
Aiko	278	NEC	038, 041, 067, 104
Aiwa	000	Nikko	037
Akai	041, 061	Nikon	034
American High	035	Noblex	240
Asha	240	Olympus	035
Audiovox	037	Optimus	037, 048, 104, 162, 454
Beaumark	240	Panasonic	035, 162, 225,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

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
		Pulsar	000
Allegro	153	Radio Shack	015
Archer	153	RCA	021
Century	153	Regal	020, 259
Citizen	153	Rembrandt	011
Contec	019	Scientific Atlanta	008, 017, 477
Everquest	015	Samsung	144
Garrard	153	Scientific Atlanta	008, 017, 477
Gemini	015	Signal	015
General Instrument	011, 476	Signature	011
Goldstar	144	Sprucer	021
Hamlin	020, 259	Starcom	003, 015
Hitachi	011	Stargate	015
Hytex	007	Starquest	015
Jasco	153	Tocom	012, 013
Jerrold	003, 011, 012, 014, 015, 476	Toshiba	000
		Tusa	015
Memorex	000	Unika	153
Oak	007, 019	United Artists	007
Panasonic	000, 021, 107	United Cable	003
Paragon	000	Universal	153
Philips	153	Zenith	000

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 LD/CD Players

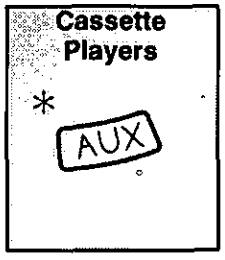
Brand of CD Players	Code(s)	Brand of CD Players	Code(s)
Aiwa	124, 157	Onkyo	101
CA Audio Lab	029	Optimus	000, 032, 037, 305, 468
Carver	157		
Denon	003	Panasonic	029, 367
DKK	000	Philips	157
Emerson	305	Pioneer	032, 305, 468
Fisher	048	Proton	157
Genexxa	032, 305	QED	157
Hitachi	032	Quasar	029
JVC	072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

CASSETTE PLAYERS, RECEIVERS, and AMPLIFIERS Infrared Codes Index

The Universal Infrared Remote Control is capable of operating many brands of Cassette Deck, 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 Deck, Receivers, and Amplifiers may not operate. The Universal Remote Control is not designed to control all features that are available in all models.

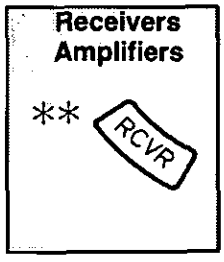
NOTE: After entering the proper infrared code, press the Remote **AUX** Selection Mode button (*). Then refer to the Remote Control Key Functions section, for Remote Cassette Players function key listing.



Code Index For Cassette Players

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

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 Amplifiers

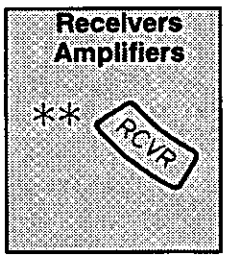
Brand of Receiver / Amplifier	Code(s)	Brand of Receiver / Amplifier	Code(s)
Carver	269	Philips	269
Linn	269	Pioneer	013, 300
Magnavox	269	Technics	308
Marantz	269	Wards	013
Optimus	013, 300	Yamaha	354

CASSETTE PLAYERS, RECEIVERS, and TELEVISIONS
Infrared Codes Index

The Universal Infrared Remote Control is capable of operating many brands of Cassette Players, Receivers, or Amplifiers. Refer to page 51 for programming procedures.

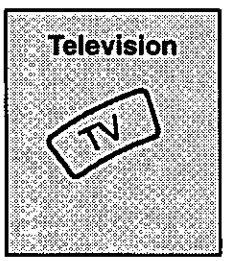
NOTE: The Universal Remote Control memory is limited. Some models of Cassette Players, Receivers, and Amplifiers may not operate. The Universal Remote Control is not designed to control all features that are available in all models.

NOTE: After entering the proper infrared code, press the Remote **RCVR** Selection Mode button (✳✳). To operate the Remote Receiver or Amplifier function buttons, refer to pages 18 and 19 for Remote Control Key Functions.



Code Index for Receivers

Brand of Receiver / Amplifier	Code(s)	Brand of Receiver / Amplifier	Code(s)
ADC	531	Panasonic	039
Aiwa	121, 158, 189	Penney	195
Capetronic	531	Philips	189
Carver	042, 189	Pioneer	014, 080, 531
Casio	195	Quasar	039
Clarinette	195	RCA	531
Denon	004	Realistic	195
Fisher	042, 219	Sansui	189
JVC	074	Sanyo	219
Kenwood	027, 186	Sharp	186
Lloyd's	195	Sherwood	502
Magnavox	189, 195, 531	Sony	158
Marantz	039, 189	Technics	039, 208, 309, 518
MCS	039	Victor	074
Modulaire	195	Wards	014, 042, 080, 158, 189
Nakamichi	347	Yamaha	176, 186
Onkyo	135	Yorx	195
Optimus	080, 186, 219, 531		



Codes for Television

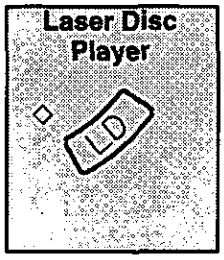
Brand of DVD	Code(s)
Matsushita	250
Optimus	250
Panasonic	250
Quasar	250
Technics	250

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 page 51 for programming procedures.

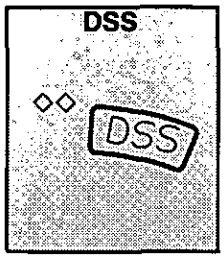
NOTE: The Universal Remote Control memory is limited. Some models of Laser Disc, DSS Digital Satellite System, and DVD (Digital Videodisc) may not operate. The Universal Remote Control is not designed to control all features that are available in all models.

NOTE: After entering the proper infrared code, press the Remote **LD** Selection Mode button (◇). To operate the Remote Laser Disc function buttons, refer to pages 18 and 19 for Remote Control Key Functions.



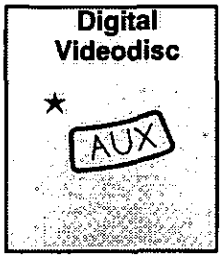
Codes for Laser Disc	
Brand of Laser Disc	**Code(s)**
Mitsubishi	059
NAD	059
Panasonic	204
Pioneer	059
Quasar	204
Sony	201

NOTE: After entering the proper infrared code, press the Remote **DSS** Selection Mode button (◇◇). To operate the Remote Satellite function buttons, refer to pages 18 and 19 for Remote Control Key Functions.



Codes for DSS (Digital Satellite System)	
Brand of Satellite	**Code(s)**
AlphaStar	772
Echostar	775
HTS	775
Hughes Network Systems	749
Panasonic	701
RCA	566
Sony	639
Toshiba	790

NOTE: After entering the proper infrared code, press the Remote **AUX** Selection Mode button (★). To operate the Remote DVD (Digital Videodisc) function buttons, refer to pages 18 and 19 for Remote Control Key Functions.

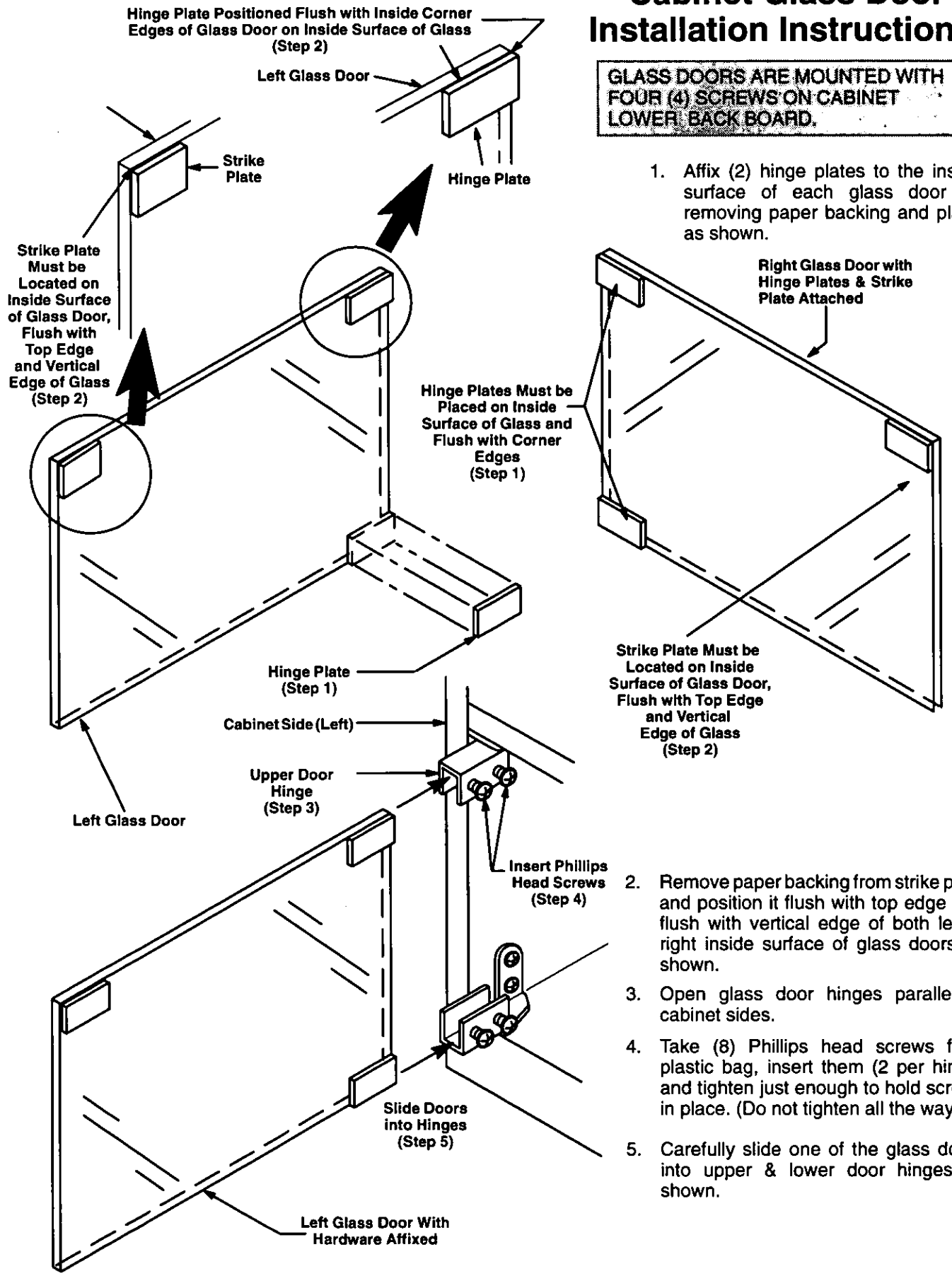


Codes for DVD (Digital Videodisc)	
Brand of DVD	**Code(s)**
Panasonic	490

Cabinet Glass Door Installation Instructions

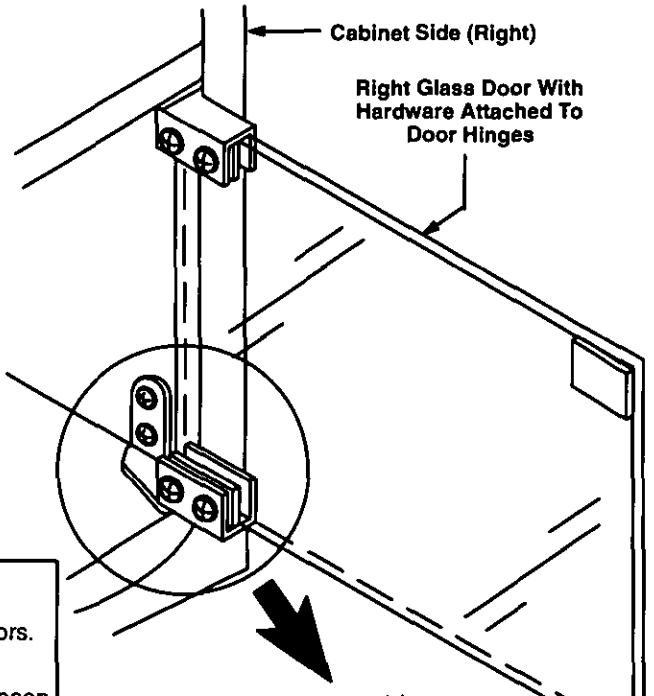
GLASS DOORS ARE MOUNTED WITH FOUR (4) SCREWS ON CABINET LOWER BACK BOARD.

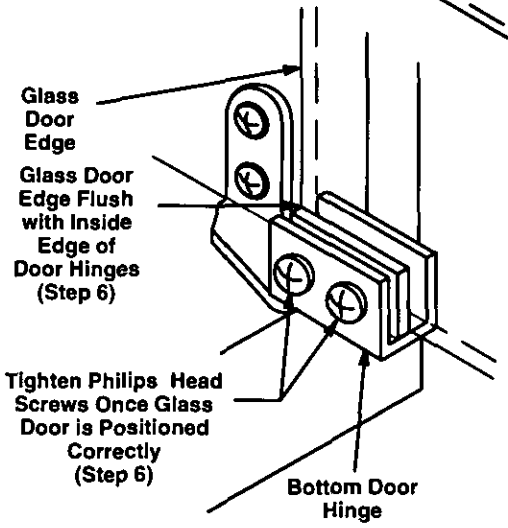
1. Affix (2) hinge plates to the inside surface of each glass door by removing paper backing and place as shown.



2. Remove paper backing from strike plate and position it flush with top edge and flush with vertical edge of both left & right inside surface of glass doors as shown.
3. Open glass door hinges parallel to cabinet sides.
4. Take (8) Phillips head screws from plastic bag, insert them (2 per hinge) and tighten just enough to hold screws in place. (Do not tighten all the way).
5. Carefully slide one of the glass doors into upper & lower door hinges as shown.

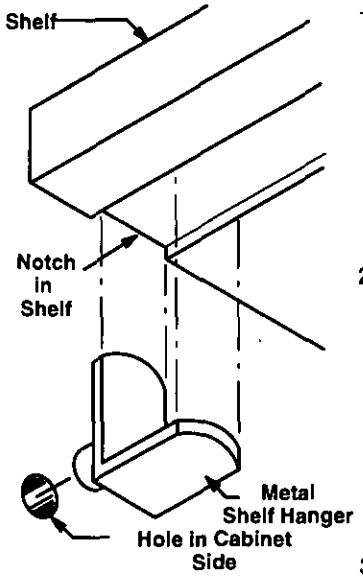
6. Hold glass door in place with the back edge of glass flush with inside back edge of upper & lower door hinges and against top of the upper hinge, then tighten (4) hinge screws per glass door.
7. Repeat Steps 6 & 7 for the other glass door.
8. Once both glass doors are attached, close them slowly to ensure doors are aligned properly and the (2) strike plates catch on to the cabinet mounted magnetic latches.
9. If the glass doors are binding anywhere against the cabinet or each other they are mis–aligned and must be corrected.
10. To do so, simply loosen the Phillips head screws on the side(s) that is not aligned and adjust (move) glass door(s) accordingly and re–tighten screws.



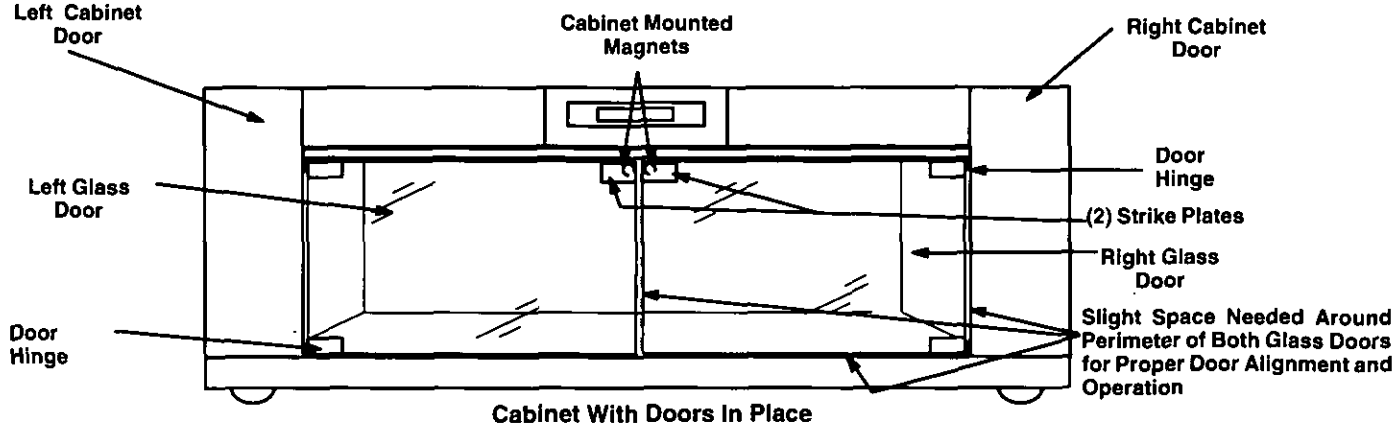


Side Shelves Mounting Instructions

NOTE: Side shelves are located behind left and right cabinet doors.



1. The cabinet shelves have been mounted in the middle shelf position (1 each side) with (8) metal shelf hangers (4 per cabinet shelf) and for shipping, (4) shipping blocks (2 per cabinet shelf). Remove these (4) shipping blocks for free movement of the shelves.
2. If the top or bottom position is desired for mounting the shelf, lift and hold or rest the shelf diagonally while removing the (4) metal shelf hangers and reposition them accordingly. **NOTE:** Do not use glue, so you can change shelf position at a later time if you wish.
3. Next, lift and rest shelf on one side of the cabinets' shelf hangers and then lower it down on the opposite side.



Cabinet With Doors In Place

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.

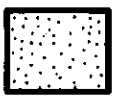
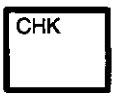
Screen Cleaning

The projection screen has a protective shield which is fully washable by using these 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.

Notes

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	– ANTENNA LOCATION, DIRECTION AND/OR CONNECTION
MULTIPLE IMAGE	NOISY SOUND	– ANTENNA DIRECTION AND/OR LOCATION – ANTENNA LEAD–IN WIRE
INTERFERENCE	NOISY SOUND	– ELECTRICAL APPLIANCES, MOTORS, LIGHTS, CARS AND TRUCKS, AND MEDICAL EQUIPMENT
NORMAL PICTURE	NO SOUND	– VOLUME CONTROL SETTING – MUTE CONTROL (IF APPLICABLE) – TRY ANOTHER CHANNEL – TV SPEAKER SWITCH (IF APPLICABLE) IN THE OFF POSITION
 NO VIDEO	NOISY SOUND	– TV OR CABLE TUNING MODE SET TO PROPER SETTING – ANTENNA INPUT CORRECT (IF APPLICABLE)
NO PICTURE	NO SOUND	– CHECK THAT AC POWER LINE IS PLUGGED INTO AC OUTLET – BRIGHTNESS AND AUDIO CONTROLS SET IMPROPERLY – TRY ANOTHER CHANNEL
NO COLOR	NORMAL SOUND	– COLOR CONTROL SETTINGS – TRY ANOTHER CHANNEL
BLACK PICTURE	NO SOUND	– TV IN VIDEO MODE WITH NO SIGNAL
DISCOLORATION	NORMAL SOUND	– ADJUST GEOMAGNETIC CORRECTION LOCATED IN THE SET–UP MENU (IF APPLICABLE)
DISCOLORED PICTURE	NORMAL SOUND	– MOVE UNSHIELDED SPEAKERS AWAY FROM PICTURE TUBE – TURN OFF SET. ALLOW TO COOL. TURN SET BACK ON
 CHK MODE	NORMAL SOUND	– PRESS AND HOLD ACTION **AND** POWER BUTTONS ON THE CONTROL PANEL AT THE SAME TIME FOR 5 SECONDS. SCREEN WILL SHUT OFF, THEN TURN BACK ON. TV WILL BE SET TO CHANNEL 3 AND CYCLE THROUGH A SPECIAL TEST

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