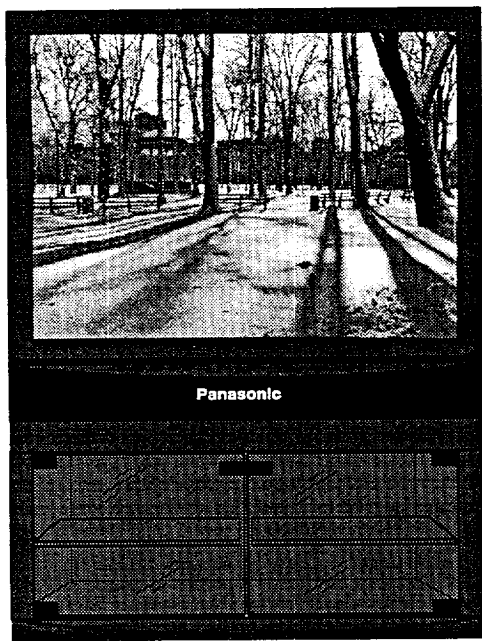


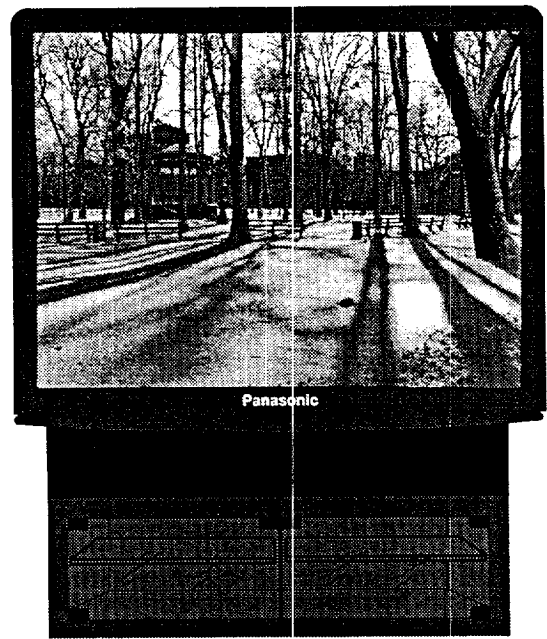
Panasonic®

Color Video Projection System

Operating Instructions



PT-51G46
PT-51G46C



PT-61G46

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

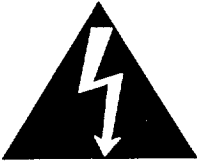

**NOTE: The Cabinet Glass Doors Installation Instructions
are located in the back of this Manual.**

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Printed in U.S.A.

TQB2AA0109-1

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.

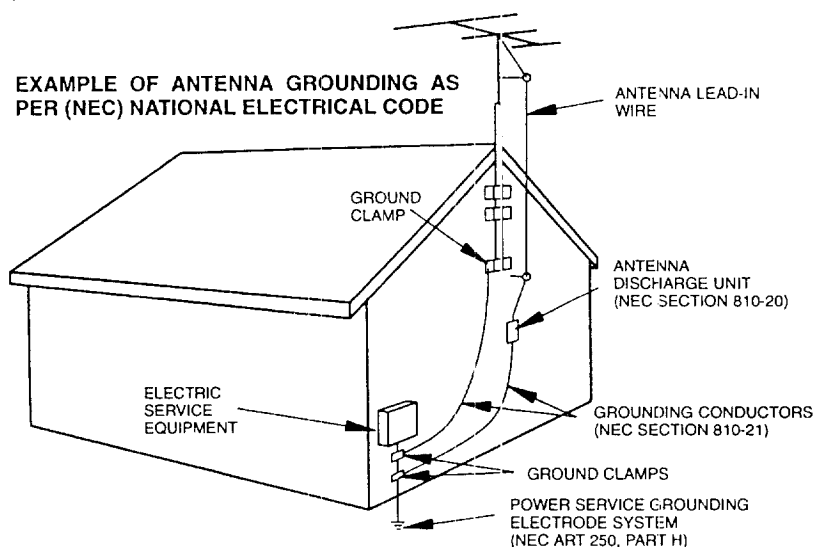


The exclamation point within a triangle is intended to tell the user that important operating and servicing instructions are in the papers with the appliance.

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 310 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, DSS 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: Any marking or retained image on the picture tube resulting from fixed image use is not considered 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 (3):	1V p-p, 75 ohm, phono jack type (PT-61G46)
Video Input Jacks (2):	1V p-p, 75 ohm, phono jack type (PT-51G46)
Audio Input Jacks (3):	500mV rms 47KΩ (PT-61G46)
Audio Input Jacks (2):	500mV rms 47KΩ (PT-51G46)
To Audio AMP Jacks:	0~2.0V rms 4.7KΩ
S-VHS Input Jack (1):	S-Video (Y-C) Connector
Stereo Sound	
Closed Caption Display	
Picture In Picture:	1 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: _____

Care and Cleaning

Plastic Cabinets

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

Wood Cabinets

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

Remote Control Transmitter

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

Screen Caution

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

Screen Cleaning

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

Power Loss

Prolonged power interruption causes the following features to reset to their factory preset state.

FEATURE	FACTORY PRESET STATE	FEATURE	FACTORY PRESET STATE
POWER	OFF	SLEEP TIMER	NO/OFF
VOLUME	APPROX.-1/3	TIMER	NO/OFF
CHANNEL	CH 03	ANTENNA MODE	CABLE
PROGRAM MEMORY	UNPROGRAMMED	TV/VIDEO	TV
VIDEO MENUS	NORMALIZED	NOISE REDUCTION	OFF
AUDIO MENUS	NORMALIZED	PIP FEATURES	OFF
STEREO/SAP/MONO	STEREO	AUTO COLOR	ON
CLOCK	NOT SET	MENU LANGUAGE	ENGLISH

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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.

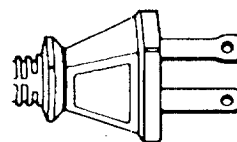
Before you purchase any cables, be sure you know what type of input and output connectors your various components require. Also determine the length of cable you'll need.

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.

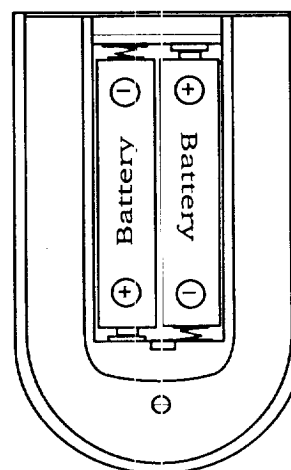


Polarized Plug

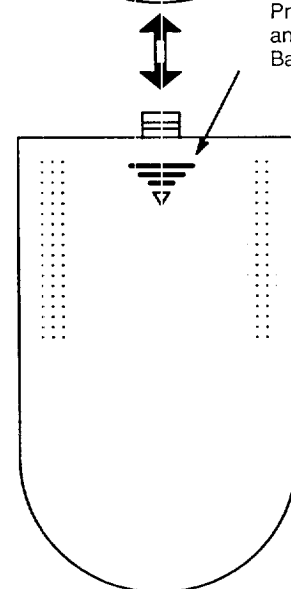
Remote Control Battery Installation

Batteries: Use two "AA" batteries.

1. Install the batteries as shown in the battery compartment.
(Polarity (+) or (-) must be correct.)



Press Down Here
and Slide Cover
Back



Helpful Hints:

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

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.
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.

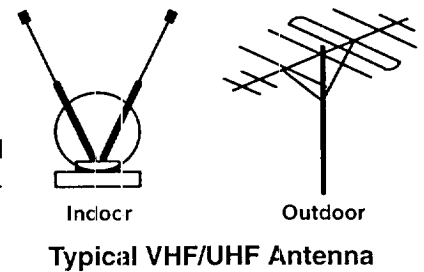
Helpful Hints:

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 in the Infrared Remote Codes for Specific Components section, prior to setting up the remote.

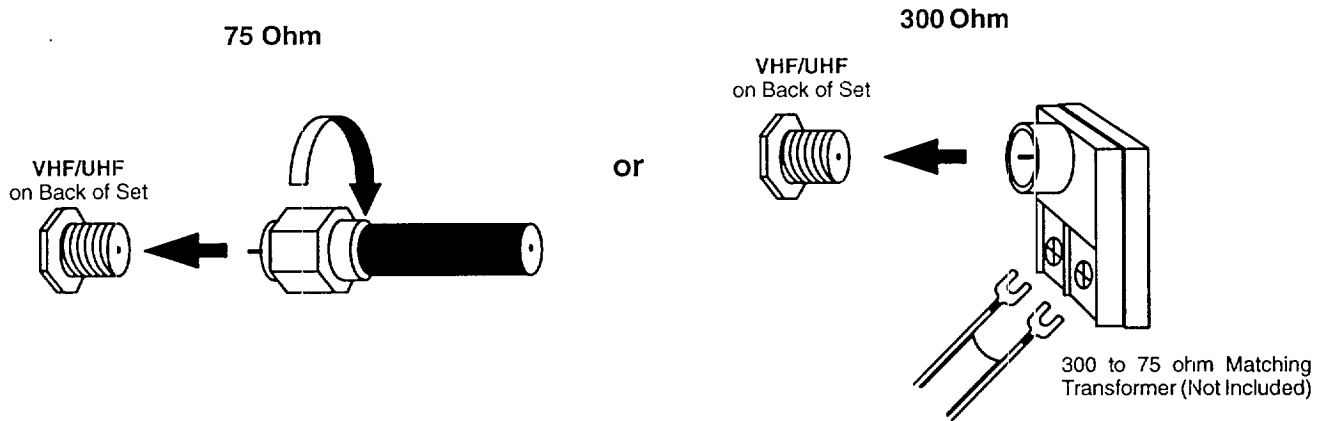
Installation (cont.)

Antenna/Cable Connections

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

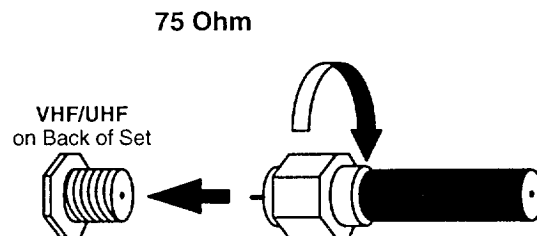


Incoming Cable from Home Antenna



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 Cable from Cable Company



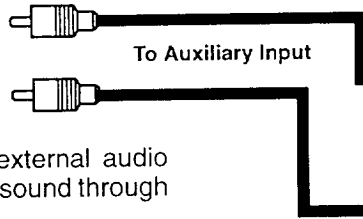
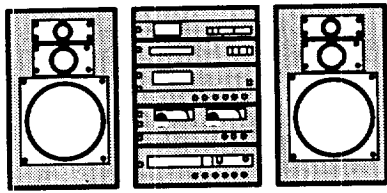
Note: Certain cable systems offset some channels to reduce interference or have Premium (scrambled) channels. A cable converter box is required for proper reception. Check with your local Cable company for compatibility requirements.

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

To Audio AMP Connection (Stereo)

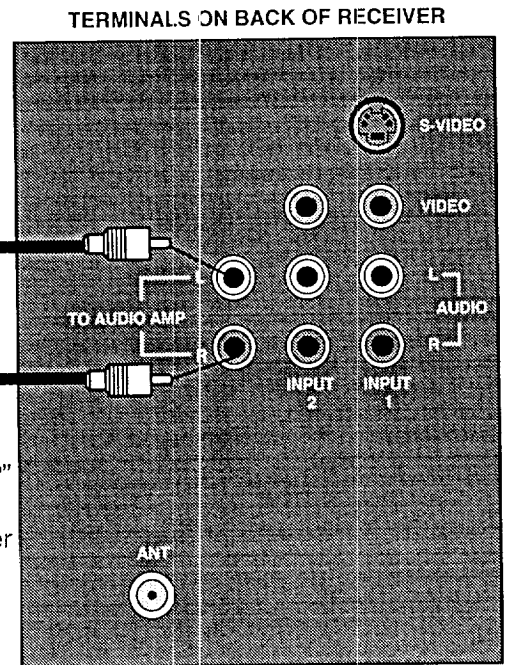


Connect **To Audio AMP** to an external audio amp auxiliary input for monitoring sound through a stereo system.

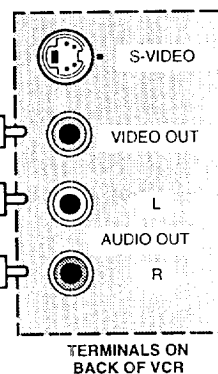
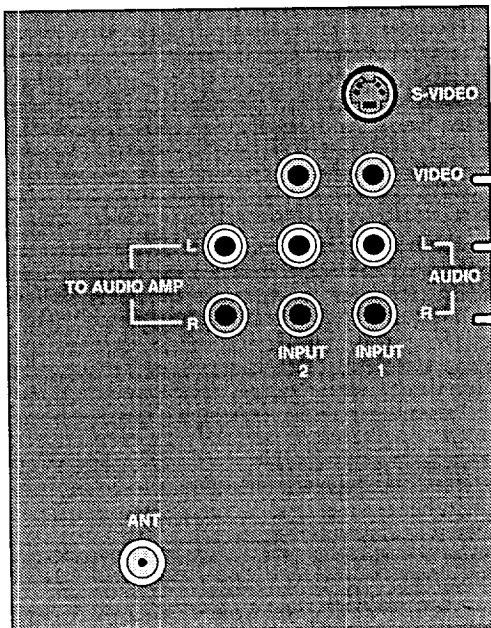
Note: "TO AUDIO AMP" terminals cannot be used for external speakers.

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

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



Video/Audio Connection



Operation

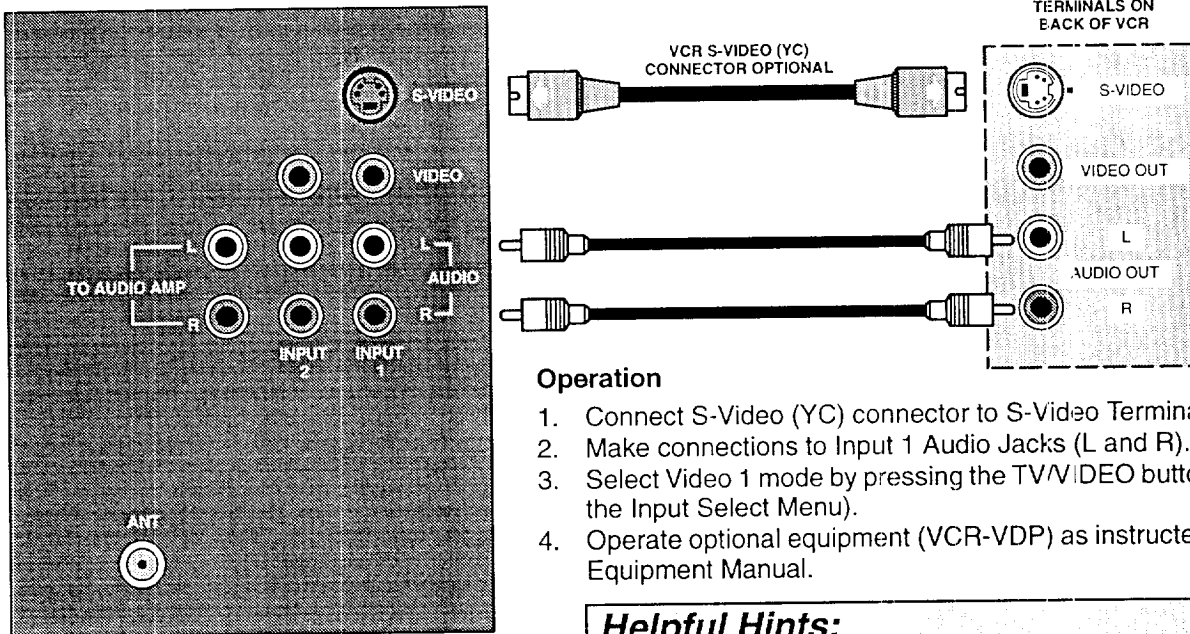
1. Connect optional equipment as shown to INPUT 1, 2, or 3 (input 3 is located on front of Receiver). **PT-51G46 models have two (2) Video Inputs.**
2. Select the desired Video mode by pressing the TV/VIDEO button (or refer to the Input Select Menu).

Note: You must select the same VIDEO Mode that the equipment is connected to.

3. Operate optional equipment (VCR-VDP) as instructed in Optional Equipment manual.

Optional Equipment Connection and Operation (cont.)

S-Video Connection



TERMINALS ON BACK OF RECEIVER

TERMINALS ON BACK OF VCR

Operation

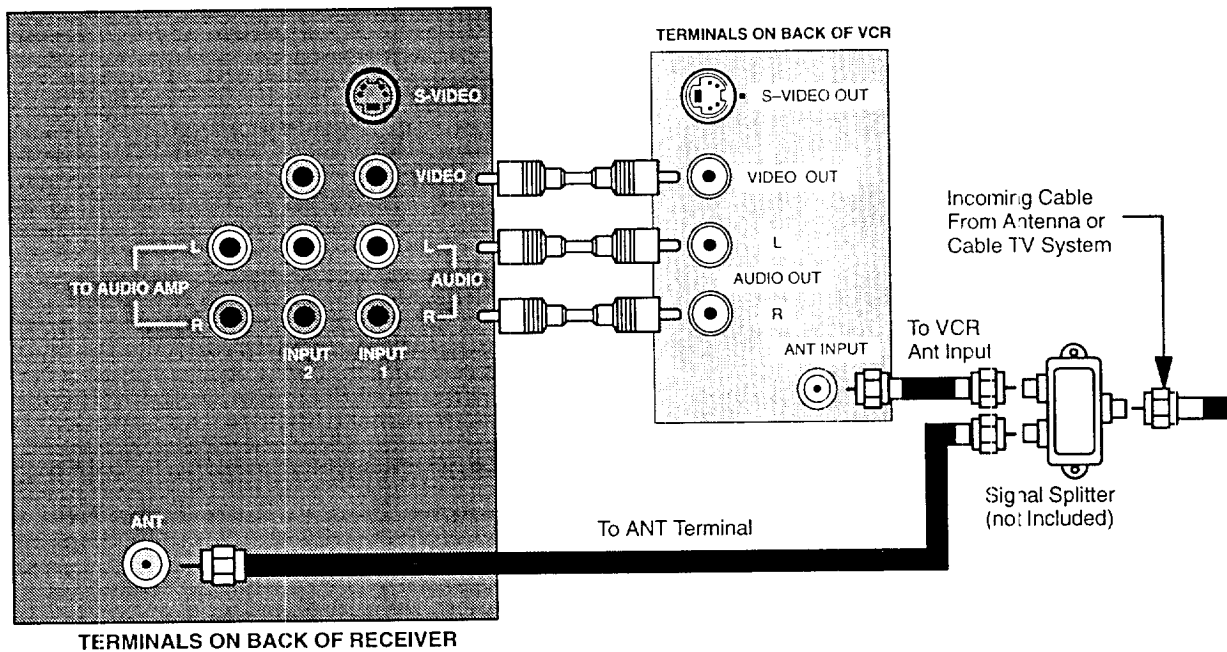
1. Connect S-Video (YC) connector to S-Video Terminal 1.
2. Make connections to Input 1 Audio Jacks (L and R).
3. Select Video 1 mode by pressing the TV/VIDEO button (or refer to the Input Select Menu).
4. Operate optional equipment (VCR-VDP) as instructed in Optional Equipment Manual.

Helpful Hints:

The user must select the same VIDEO Mode that the equipment is connected to. Connection of optional S-VIDEO jack automatically disconnects the normal Video Input 1 jack.

Picture in Picture External Video and Antenna Connection

This Receiver has the "PICTURE IN PICTURE" feature. For the proper operation of this feature a second video source is required (such as a VCR). We recommend that you make your antenna and External Video connection as shown below when a second video source is available.



TERMINALS ON BACK OF RECEIVER

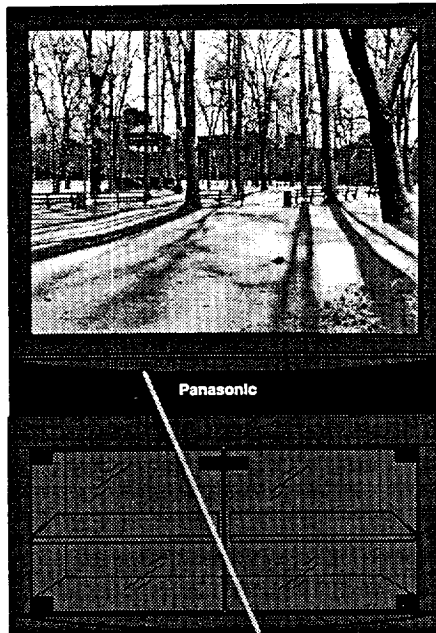
TERMINALS ON BACK OF VCR

Helpful Hints:

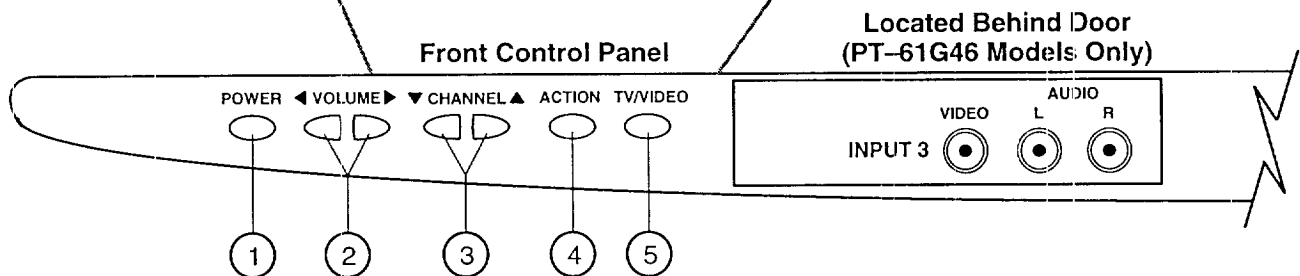
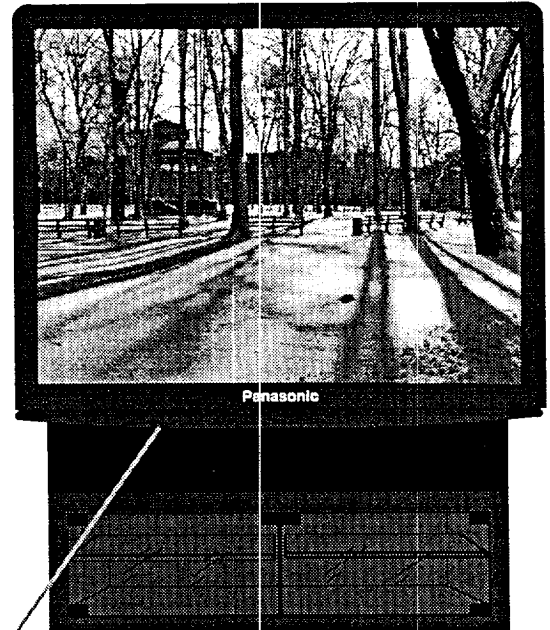
The PIP will operate using Audio/Video input terminals. Use the TV/VIDEO button (when the PIP frame is displayed) to select proper mode. The PIP feature will operate using S-Video input terminal 1.

Location of Controls (Receiver)

PT-51G46 Models



PT-61G46 Models



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 three Video Inputs for the Main Picture, or the PIP frame (when the PIP frame is displayed). **Note: PT-51G46 models have two (2) Video Inputs.**

Location of Controls (Remote)

Basic Remote Control Functions

The following is an overview of the Remote Control unit for television operation. Ensure the TV mode is selected by initially pressing .

Multi Button

Programmable to operate up to six Remote Control Function buttons simultaneously.

Power Button

Press to turn ON or OFF.

Mode Selection Buttons

Select the operation mode for the remote control.

Volume Buttons

Press to adjust TV sound level. Use with Channel buttons to navigate in menus.

Action Button

Press to display Main Menu and access or exit On Screen feature and Adjustment Menus.

R-Tune (Rapid Tune) Button

Press to switch to the previous channel.

PIP Move Button

Press to position PIP frame to any corner of the Main Picture (when PIP frame is displayed).

PIP Freeze Button

Press to stop action in the Main Picture or PIP frame (when the PIP frame is displayed).

PIP Size Button

Press to select size of PIP frame (when the PIP frame is displayed).

Keyboard "0 through 9" Buttons

Press desired channel number to randomly access any channel.

TV/Video Button

Press to select TV or one of three (3) Video Inputs, for the Main Picture or the PIP frame (when the PIP frame is displayed). **Note: PT-51G46 models have two (2) Video Inputs.**

Mute Button

Press to mute sound. A second press resumes sound.

Channel Buttons

Press to select channels. Use with Volume buttons to navigate in menus.

Recall Button

Press to display Time, status of Sleep Timer, Channel, Video Mode, Channel Caption (Station Identifier) and Audio Mode.

PIP (Picture In Picture) Button

Press to display the PIP frame, press again to remove PIP frame.

PIP Swap Button

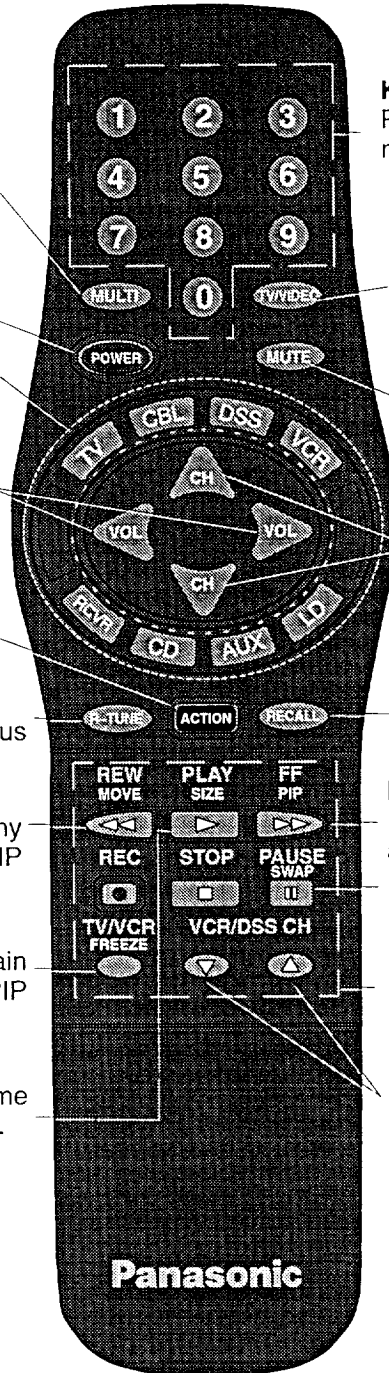
Press to interchange PIP frame with Main Picture (when the PIP frame is displayed).

VCR Function Buttons

Programmable to operate many brands of VCR's.

VCR/DSS Channel Buttons

Select VCR or DSS Up/Down channels.



Home Theater Remote Control
TNQ2AE007-1

Note:

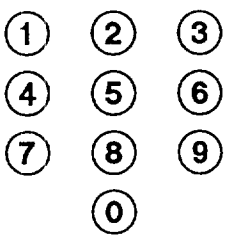
















For more information on the Remote Control, please refer to the Remote Control Quick Reference Functional Key Chart.

Helpful Hints:

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












Remote Control

Quick Reference Functional Key Chart

KEY	MODE	FUNCTION
	TV VCR, VCR 2 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
	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, VCR 2 LDP CABLE RECEIVER/AMPLIFIER	Mutes TV Audio Mutes Audio Mutes Audio
	TV	TV Mode Selection for Remote Control
	CABLE	Cable Mode Selection for Remote Control
	DSS (DIGITAL SATELLITE SYSTEM)	DSS Mode Selection for Remote Control
	VCR, VCR 2	VCR Mode Selection for Remote Control
	RECEIVER/AMPLIFIER	Receiver/Amplifier Mode Selection for Remote Control
	COMPACT DISC	CD Mode Selection for Remote Control
	CASSETTE PLAYER, VCR 2, DVD	AUX Mode Selection for Remote Control Enables User to Operate a Tape Cassette Player, Digital Video Disc or Second VCR
	LASER DISC PLAYER	LD Mode Selection for Remote Control
 	TV CABLE DSS LDP CD RECEIVER/AMPLIFIER DVD	Channel Up/Down, Menu Navigation Channel Up/Down DSS Guides and Menu Navigation Skip FF, REW Preset or Tuning Frequency Skip FWD/Skip REW
 	TV CABLE DSS RECEIVER/AMPLIFIER VCR, VCR 2 LDP	Volume Up/Down, Menu Navigation Volume Up/Down DSS Guides and Menu Navigation Volume Up/Down TV Volume Up/Down TV Volume Up/Down

Remote Control

Quick Reference Functional Key Chart (cont.)

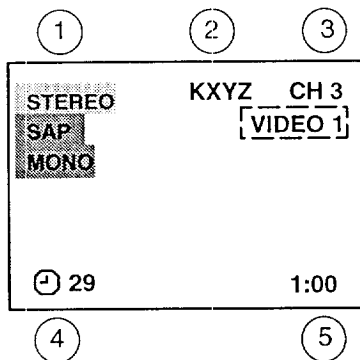
KEY	MODE	FUNCTION
	LDP TV CABLE VCR, VCR 2 DSS RECEIVER/AMPLIFIER CD TAPE CASSETTE PLAYER	Side A/B Switches Between Two (2) Channels Switches Between Two (2) Channels Switches Between Two (2) Channels Switches Between Two (2) Channels Switches between AM and FM Selects Next Disc Selects Tape Cassette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

Special Functions

Recall Button

Press the RECALL button to review:

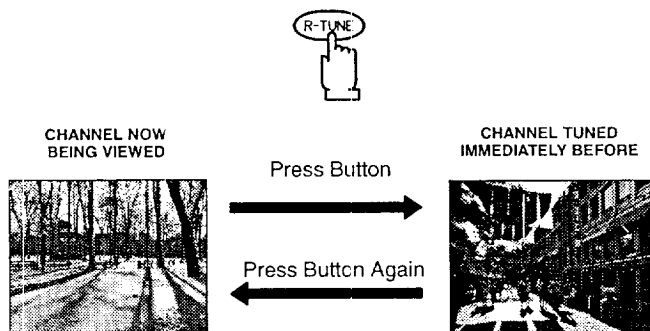
- ① Audio Mode status
- ② Channel Caption (Station Identifier)
- ③ CH number or Video Input selected
- ④ Sleep Timer status
- ⑤ Clock time



R-Tune Button

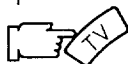
Pressing the R-TUNE (RAPID TUNE) button will switch between the last two channels selected on the numeric keypad.

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



Helpful Hints:

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



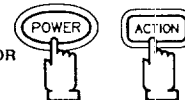
Multi Button

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 POWER button, then press and hold the ACTION button down at the same time for three seconds. (All previous commands are erased.)

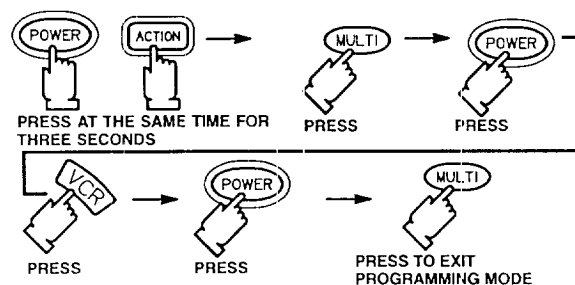
PRESS AT THE SAME TIME FOR THREE SECONDS



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

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

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



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

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

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

Special Functions (cont.)

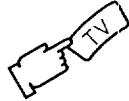
PIP (Picture in Picture) Button

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

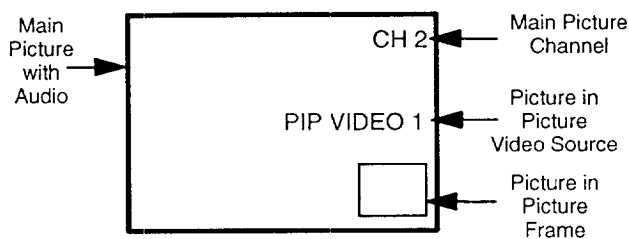
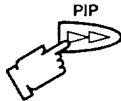
- S-Video connection will also operate the PIP feature (refer to OPTIONAL S-VIDEO VHS CONNECTION section).
- When the Main Picture is in Video mode with no signal, the PIP will not operate properly.

PIP Operation

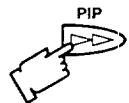
1. Turn VCR ON and select a desired channel.
2. Press the TV Mode Selection button to operate TV Remote functions, if necessary.



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



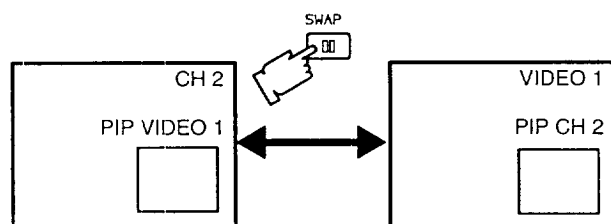
4. Press the PIP button again to cancel PICTURE IN PICTURE feature (if desired).



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

Swap Button

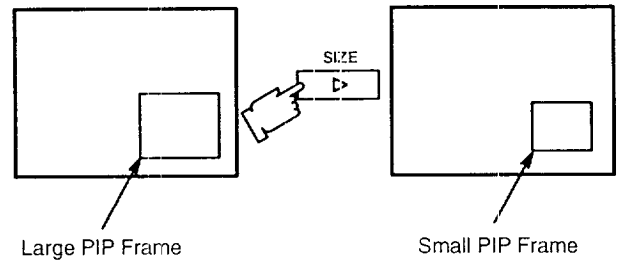
Press the SWAP button (when the PIP frame is displayed) to interchange what is being viewed on the Main Picture with that of the PIP frame.



Note: Audio will be that of Main Picture.

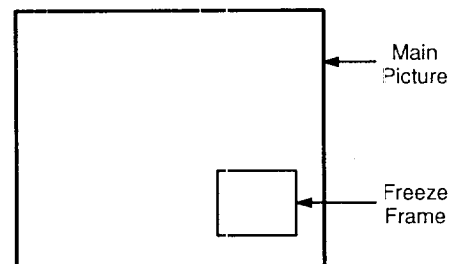
Size Button

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



Freeze Button

Press the FREEZE button to stop action in the PIP frame.

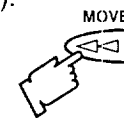


Notes:

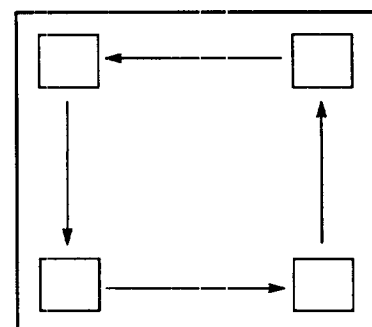
- Pressing the FREEZE button when the PIP frame is not displayed, will stop action in the Main Picture and display it within the PIP frame.
- Pressing the FREEZE button when PIP frame is displayed, will stop action in the PIP frame. Press the FREEZE button again to continue action.
- Press the PIP button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

Move Button

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

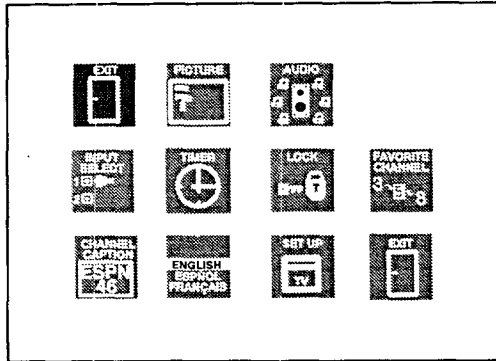


Note: Each time MOVE button is pressed (when the PIP frame is displayed), the PIP frame will move counterclockwise as illustrated.



Main Menu

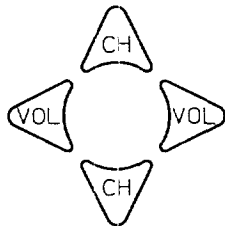
(Trilingual Animated Icons)



NOTE: Only the selected Icon will be animated.



Display and Exit Menus



CH BUTTONS
Highlight Desired Feature when Menu is Displayed

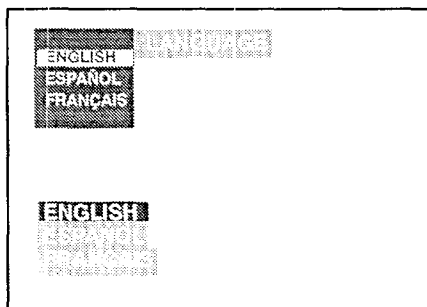
VOL BUTTONS
Selects or Adjusts Features when Menu is Displayed

Located On Remote Control

Menu Language Selection

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

1. Press **ACTION**.
2. Press **CH** or **CH** and **VOL** or **VOL** to highlight the Language: ENGLISH/ESPAÑOL/FRANÇAIS icon.
3. Press **ACTION** to display the Language select Menu.



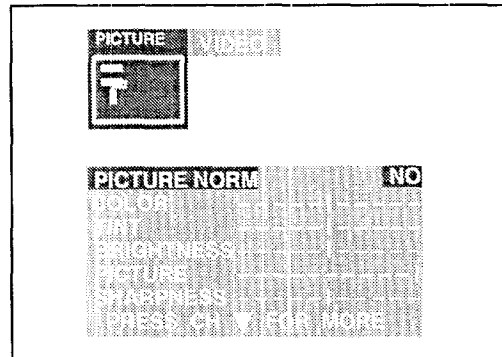
4. Press **CH** or **CH** to select ENGLISH, ESPAÑOL or FRANÇAIS for the Language Menu.
5. Press **ACTION** twice to exit menus.

Picture Adjustments

Picture Norm

Use to reset Color, Tint, Brightness, Picture, and Sharpness adjustments back to a factory preset level.

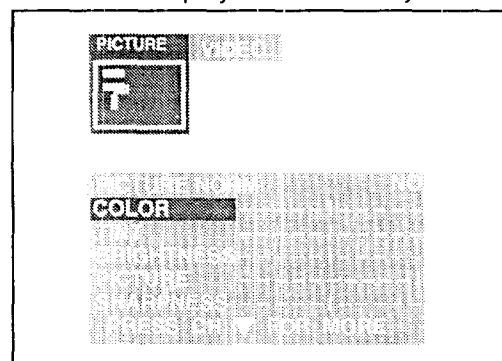
1. Press **ACTION**.
2. Press **CH** or **CH** and **VOL** or **VOL** to highlight the Picture Icon.
3. Press **ACTION** to display the Picture Adjustment Menu.



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

1. Press **ACTION**.
2. Press **CH** or **CH** and **VOL** or **VOL** to highlight the Picture Icon.
3. Press **ACTION** to display the Picture Adjustment Menu.


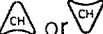
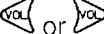



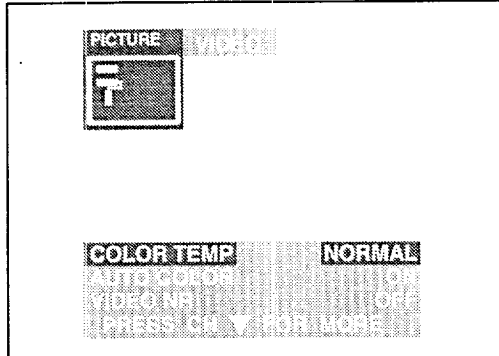
4. Press **CH** or **CH** to select the desired Picture Adjustment (Color, Tint, Brightness, Picture, or Sharpness).
5. Press **VOL** or **VOL** to adjust your selection. (The Selected Picture Adjustment will be displayed.)
6. Repeat steps 4 and 5 for the remaining Picture Adjustments.
7. Press **ACTION**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

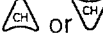
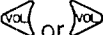

Picture Adjustments (Cont.)

Color Temp

To select from three (3) options for picture temperature.


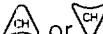


1. Press .
2. Press  or  to highlight the Picture Icon.
3. Press  to display the Picture Adjustment Menu.

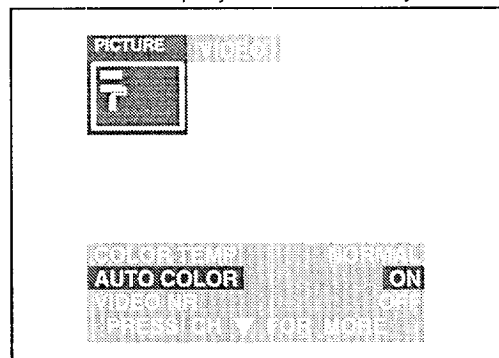





4. Press  to highlight COLOR TEMP.
5. Press  to select NORMAL, WARM, or COOL.
 - NORMAL (no tint)
 - WARM (reddish tint)
 - COOL (bluish tint)
6. Press  twice to exit menus.

Auto Color

To automatically optimize color adjustment to compensate for signal variations.



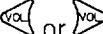

1. Press .
2. Press  or  to highlight the Picture Icon.
3. Press  to display the Picture Adjustment Menu.

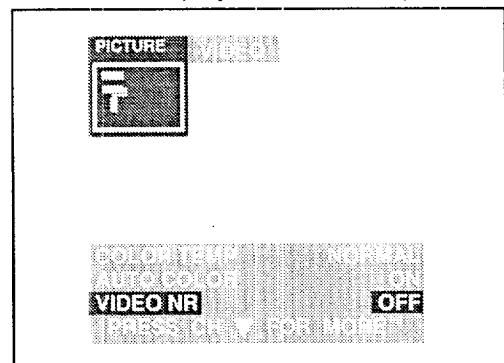



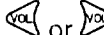

4. Press  to highlight AUTO COLOR.
5. Press  to select ON or OFF.
6. Press  twice to exit menus.

Video NR (Noise Reduction)

To reduce video noise (snow in picture) due to weak signal.

1. Press .
2. Press  or  to highlight the Picture Icon.
3. Press  to display the Picture Adjustment Menu.



4. Press  to highlight VIDEO NR (Noise Reduction).
5. Press  to select ON or OFF.
6. Press  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.

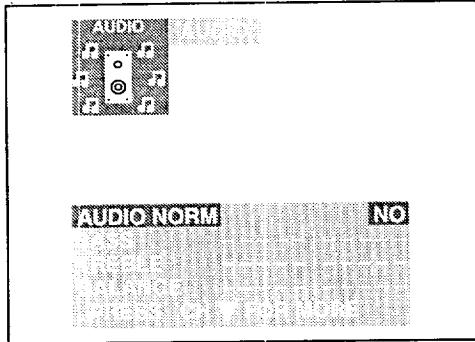
SHARPNESS – Adjust for best clarity of outline detail.






Audio Adjustments

Audio Norm







This feature is used to reset BASS, TREBLE, and BALANCE back to a factory preset level. **Note:** Bass and Treble is automatically set when AI Sound is ON.

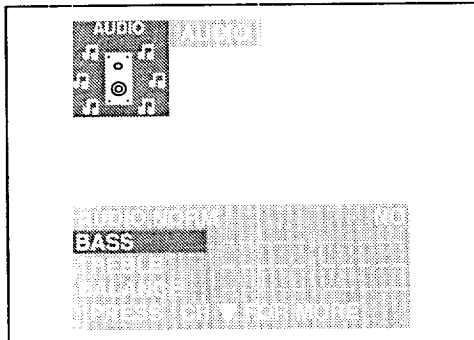
1. Press .
2. Press  or  and  or  to highlight the Audio Icon.
3. Press  to display the Audio Adjustment Menu.








4. Press  or  to highlight AUDIO NORM.
5. Press  or  to select SET to normalize Bass, Treble, and Balance.
6. Press  twice to exit menus.

Bass, Treble, and Balance

1. Press .
2. Press  or  and  or  to highlight the Audio Icon.
3. Press  to display the Audio Adjustment Menu.









4. Press  or  to highlight BASS, TREBLE, or BALANCE.
5. Press  or  to adjust for desired audio response.
6. Press  twice to exit menus.

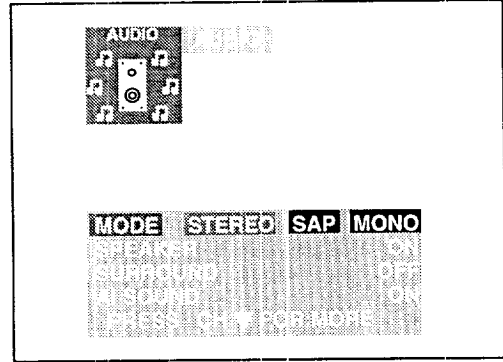
Helpful Hints:






BASS – To increase or decrease the Bass response.
TREBLE – To increase or decrease the Treble response.
BALANCE – To emphasize the LEFT/RIGHT speaker volume.

Mode (Stereo/SAP/Mono)

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

1. Press .
2. Press  or  and  or  to highlight the Audio Icon.
3. Press  to display the Audio Adjustment Menu.



4. Press  or  to highlight MODE.
5. Press  or  to select STEREO, SAP (Second Audio Programming), or MONO. The selected mode will be highlighted.
6. Press  twice to exit menus.

Helpful Hints:

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

Audio Adjustments (cont.)

Speaker

This feature is used to turn the internal speakers “ON” or “OFF”. It is used when the TV is connected to an External Audio Amplifier. (Refer to “To Audio Amp Connection” section for further information.)

1. Press **(ACTION)**.
2. Press **CH** or **CH** and **VOL** or **VOL** to highlight the Audio Icon.
3. Press **(ACTION)** to display the Audio Adjustment Menu.

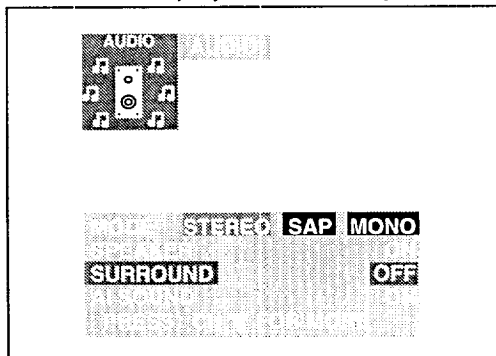


4. Press **CH** or **CH** to highlight SPEAKER.
5. Press **VOL** or **VOL** to select ON, OFF&VAO or OFF&FAO.
 - ON – TV SPEAKERS operate normally.
 - OFF&VAO (Variable Audio Output) – TV SPEAKERS off, the sound output varies according to the TV volume. Use the TV remote to control the volume, muting, 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.

Surround

Use the Surround Feature to enhance audio response when listening to Stereo broadcasts.

1. Press **(ACTION)**.
2. Press **CH** or **CH** and **VOL** or **VOL** to highlight the Audio Icon.
3. Press **(ACTION)** to display the Audio Adjustment Menu.

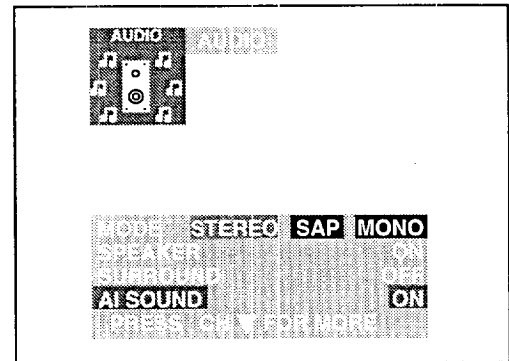


4. Press **CH** or **CH** to highlight SURROUND.
5. Press **VOL** or **VOL** to select ON or OFF.
6. Press **(ACTION)** twice to exit menus.

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.

1. Press **(ACTION)**.
2. Press **CH** or **CH** and **VOL** or **VOL** to highlight the Audio Icon.
3. Press **(ACTION)** to display the Audio Adjustment Menu.


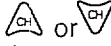
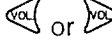



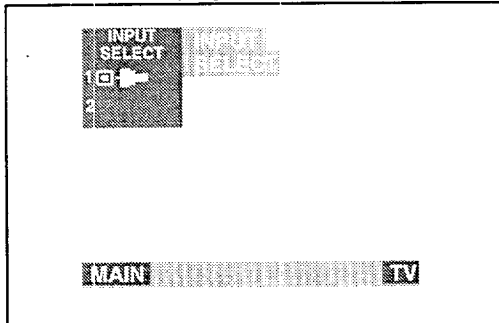
4. Press **CH** or **CH** to highlight AI SOUND.
5. Press **VOL** or **VOL** to select ON or OFF.
6. Press **(ACTION)** twice to exit menus.

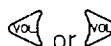

Input Select

Main (Picture) Input Selection

Selecting TV Mode Operation or one of three Video Inputs for the Main Picture (used with optional accessory Video equipment).



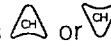


1. Press .
2. Press  and  to highlight the Input Select Icon.
3. Press  to display the Input Select Menu.

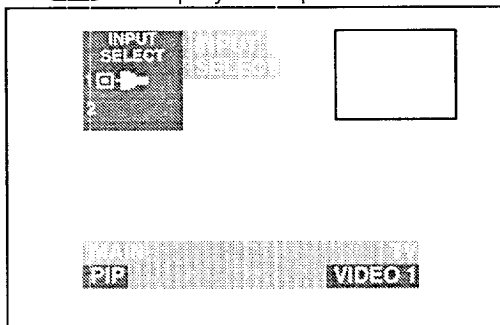


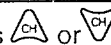
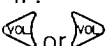

4. Press  to select TV, VIDEO 1, VIDEO 2, or VIDEO 3 for Main Picture Input. **NOTE: PT-51G46 models have two (2) Video Inputs.**
5. Press  twice to exit menus.

PIP Input Selection

Selecting TV Mode Operation or one of three Video Inputs for the PIP (Picture in Picture) frame when the PIP frame is displayed (used with optional accessory Video equipment).

1. Press  (PIP button) to display the PIP frame.
2. Press .
3. Press  and  to highlight the Input Select Icon.
4. Press  to display the Input Select Menu.




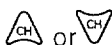
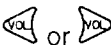

5. Press  (when the PIP frame is displayed) to highlight PIP.
6. Press the  to select TV, VIDEO 1, VIDEO 2, or VIDEO 3 for the PIP frame Input. **NOTE: PT-51G46 models have two (2) Video Inputs.**
7. Press  twice to exit menus.

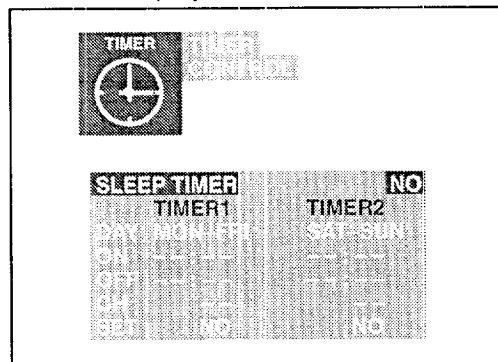
Timer Features

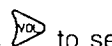

Sleep Timer

To automatically turn TV 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 .
2. Press  and  to highlight the Timer Icon.
3. Press  to display the Timer Control Menu.



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

Note: To deactivate Sleep Timer, in step 4, set to "NO".

Timer Features (Cont.)

Special Feature:

Automatic "OFF" after 90 minutes.

This 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.

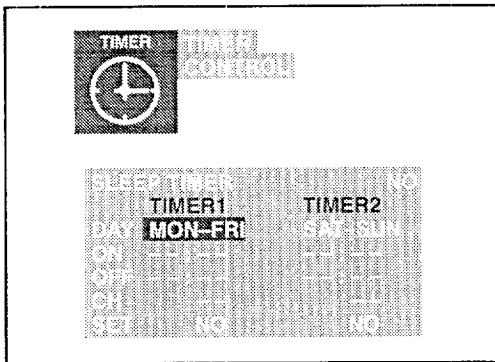
Programming the **OFF** timer will also cancel the automatic **OFF** feature.





Dual Program Timer

Turn the TV on to a desired channel and then turn the TV 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.)

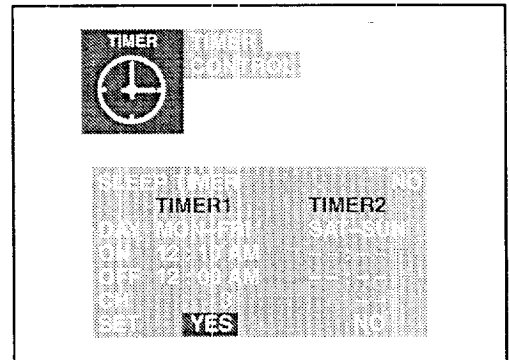
1. Press .
2. Press  or  and  or  to highlight the Timer Icon.
3. Press  to display the Timer Control Menu.







4. Press  or  to highlight the TIMER 1 or TIMER 2 setting.
 - Day or days in which the Timer is activated
 - ON (time) – hours and minutes
 - OFF (time) – hours and minutes
 - CH – desired channel to be tuned to 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  or  to set the day/days for the TV 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  to highlight ON (Hours/Minutes).
8. Press  or  to set the desired time for the TV to turn ON.
Note: Press  to change selection from hours to minutes.
9. Press  to highlight OFF (Hours/Minutes).
10. Press  or  to set the desired time for the TV to turn OFF.
Note: Press  to change selection from hours to minutes.
11. Press  to highlight CH.
12. Press  or  to select a desired channel (from Program Channel Memory) for the TV to be tuned to when it turns ON.
13. Press  to highlight SET.

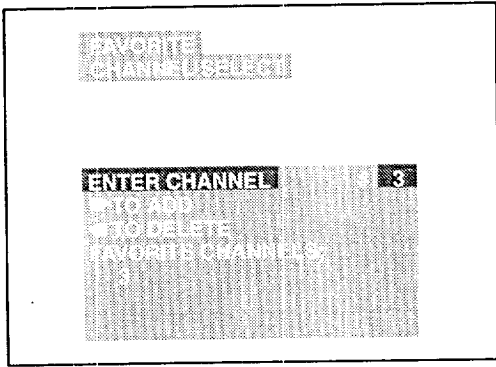


14. Press  to activate or  to deactivate Timer 1.
 - YES=Feature is activated
 - NO=Feature is not activated
15. Press  to set Timer 2: (if desired). Follow Steps 5 through 14.
16. Press  twice to exit menus.

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.

Favorite Channel Select (cont.)



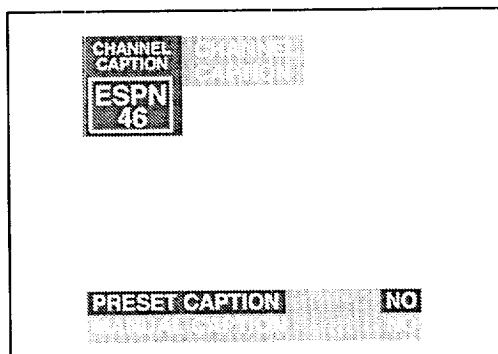
7. Enter the channel number to be added or deleted from Favorite Channel Memory (using the Remote Keyboard or or).
8. Press to add or press to delete channel(s) from Favorite Channel Memory.
9. Repeat Steps 7 and 8 to continue adding or deleting channels (up to 15 channels may be stored in Favorite Channel Memory).
10. When desired channels have been programmed, press twice to return to selected program.
11. Press or to scan through the Favorite Channels that are programmed.

Channel Caption Features

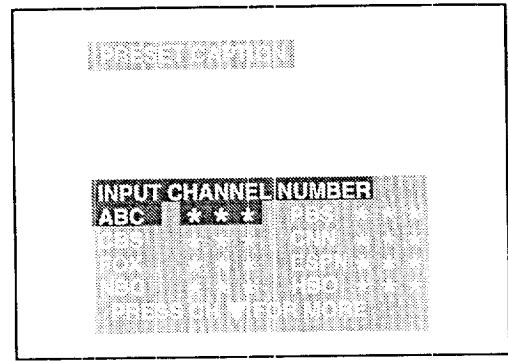
Preset Caption

Select from 56 preset captions, and assign corresponding channel numbers utilized in the user's area. Captions are easily assigned to the channel numbers the viewer selects by following the simple steps outlined below. The channel number will then display, along with preset captions when changing channels or pressing the Recall button.

1. Press .
2. Press or and or to highlight the Channel Caption Icon.
3. Press to display the Channel Caption Menu.



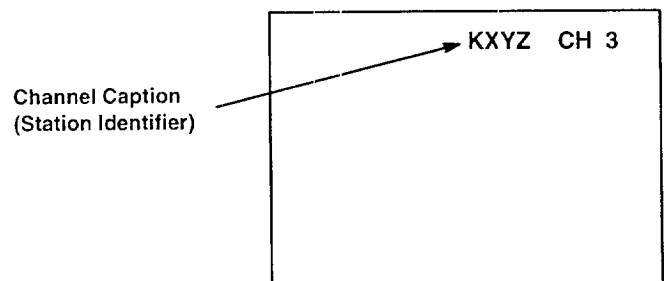
4. Press or to highlight PRESET CAPTION.
5. Press or to display the Preset Caption Menu.



6. Press or to highlight the desired Preset Channel Caption.
7. Use the Remote Control keyboard to assign the channel number to the Channel Caption in the user's area (Refer to the local TV guide).
Note: To delete an assigned channel number from channel caption, press while the assigned channel number is highlighted.
8. Press to select a different Preset Channel Caption, then repeat steps 6 and 7 until all desired Preset Channel Captions have an assign channel number.
9. Press three times to exit menus.

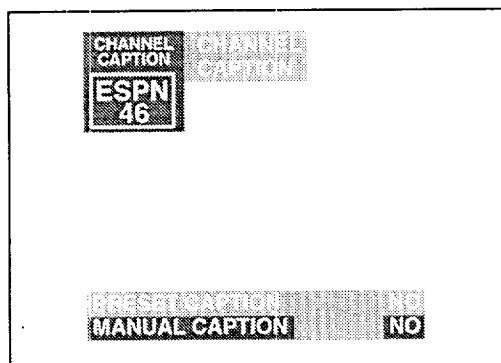
Manual Caption





Enabling the user to enter up to 30 station identifiers into memory (each station identifier can contain up to four (4) characters). The station identifier will then display, along with the channel number when changing channels or pressing .

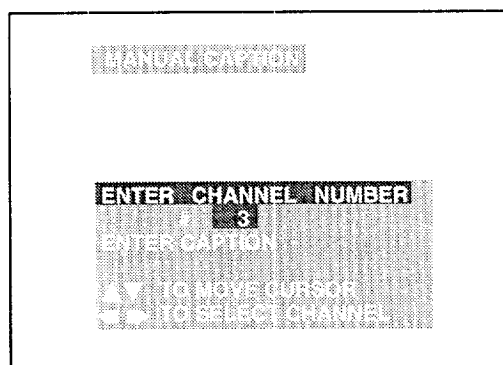





1. Press .
2. Press or and or to highlight the Channel Caption Icon.
3. Press to display the Channel Caption Menu.

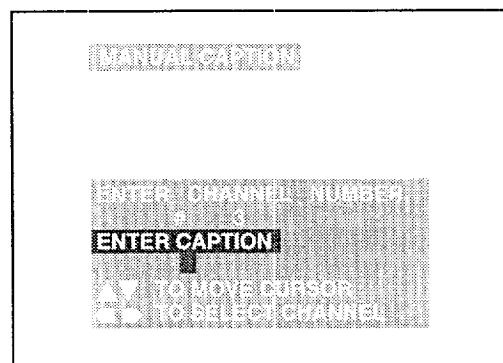
Manual Caption (cont.)









4. Press  or  to highlight MANUAL CAPTION.
5. Press  or  to display the MANUAL CAPTION menu.



6. Use the Remote Control Keyboard or  or  to select the channel number where the channel caption is to be added (STATION IDENTIFIER).
7. Press  to highlight ENTER CAPTION.



8. Press the  or  to select the first character in channel caption (STATION IDENTIFIER).
9. Press  button to move to the second character position. Repeat steps 8 and 9 until the complete caption is entered (up to four (4) characters).
10. Press  or  repeatedly to highlight ENTER CHANNEL NUMBER. Then repeat steps 6 through 10 to continue adding channel caption (STATION IDENTIFIERS).
11. Press  three times to exit menus.

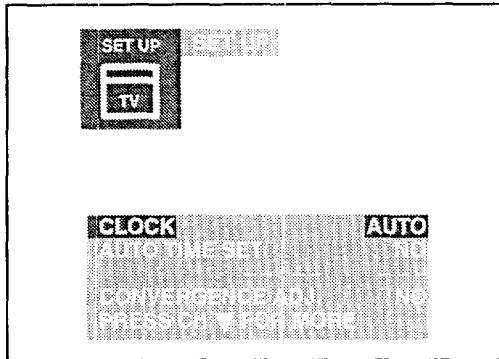
Set-Up Features

Clock (Auto)

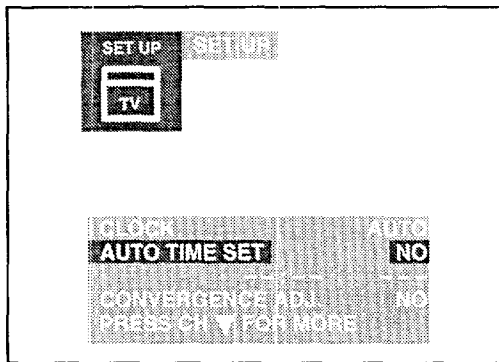
This feature automatically adjusts the TV clock to the correct time whenever the TV is tuned to a PBS (Public Broadcasting Service) station for 10 minutes, or until the correct time and day are displayed (Refer to your local TV guide for PBS channel number).

Follow these procedures to automatically set the TV clock.

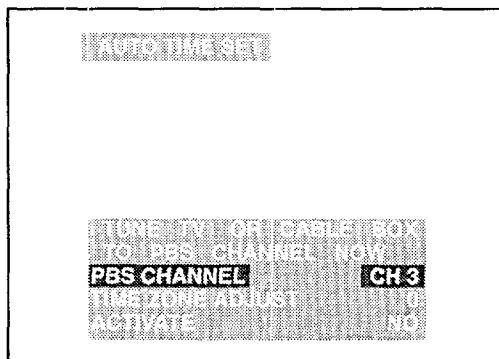
1. Press **ACTION**.
2. Press **CH** or **CH** and **VOL** or **VOL** to highlight the Set Up Icon.
3. Press **ACTION** to display the Set Up Menu.



4. Press **CH** or **CH** to highlight CLOCK.
5. Press **VOL** or **VOL** to select AUTO (if necessary).
6. Press **CH** to highlight AUTO TIME SET.



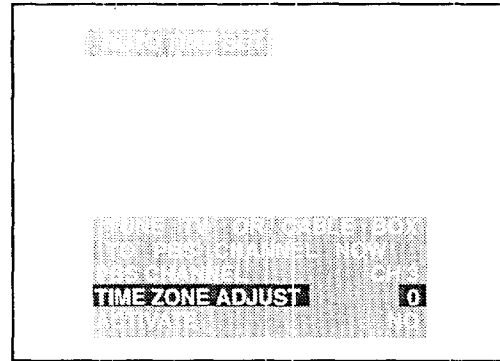
7. Press **VOL** or **VOL** to display the AUTO TIME SET Menu.
8. Press **CH** to highlight PBS CHANNEL.



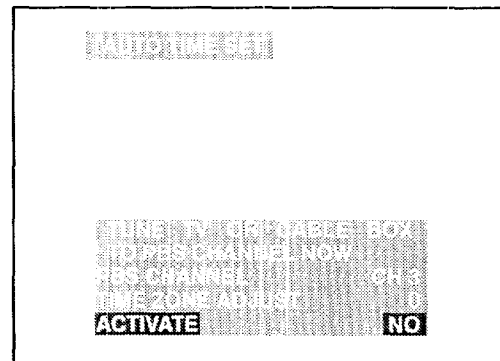
9. Tune TV or Cable Box to PBS channel, using the Remote Control Keyboard or **VOL** or **VOL** to enter PBS channel number.

10. Press **CH** to highlight TIME ZONE ADJUST.

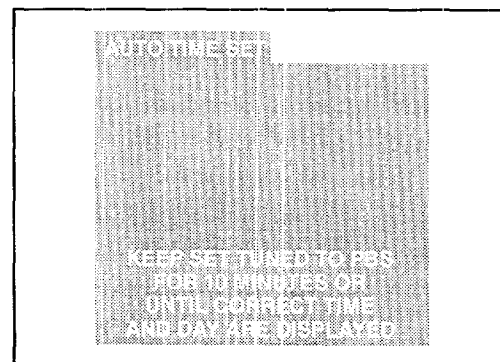
Note: There is a plus or minus one-hour offset that can be programmed to adjust the clock, should there be a time zone difference between the PBS TV station and the viewer.



11. Press **VOL** for minus one-hour offset or **VOL** for plus one-hour offset (if necessary).
12. Press **CH** to highlight ACT VATE.



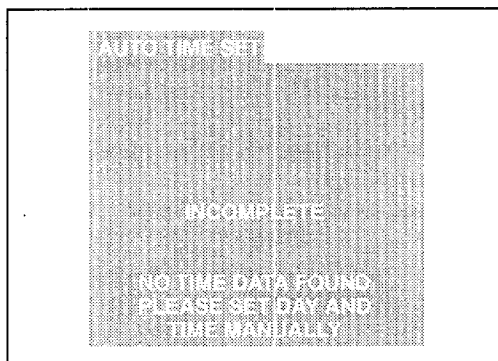
13. Press **VOL** or **VOL** to display the AUTO TIME SET submenu.



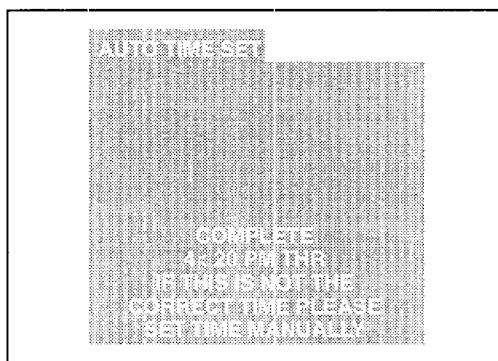
WAITING FOR CORRECT TIME AND DAY

Set-Up Features (cont.)

Clock Auto (cont.)



INCOMPLETE READ MENU



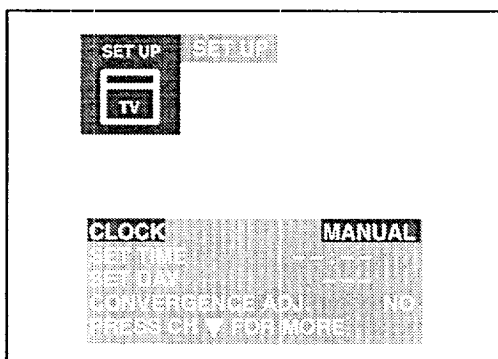
COMPLETED READ MENU

14. Press **(ACTION)** four times to exit menus.

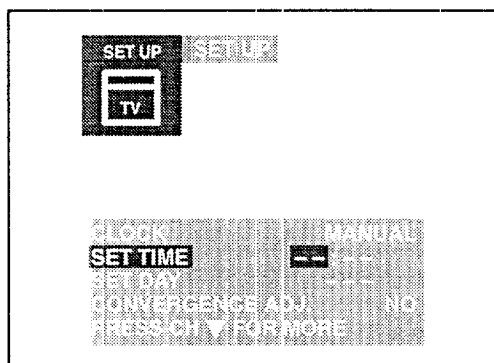
Clock (Manual)

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

1. Press **(ACTION)**.
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 CLOCK.
5. Press **(VOL)** or **(VOL)** to select MANUAL.
6. Press **(CH)** to highlight SET TIME.

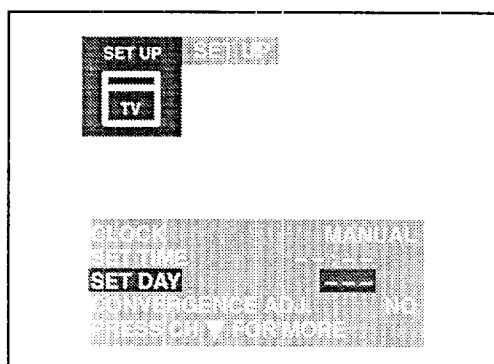


7. Press **(VOL)** or **(VOL)** to Set Hours (set AM/PM accordingly).
8. Press **(CH)** to highlight minutes position.
9. Press **(VOL)** or **(VOL)** to set minutes.
10. Press **(ACTION)** twice to exit menus.

Set Day

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

1. Press **(ACTION)**.
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 CLOCK.
5. Press **(VOL)** or **(VOL)** to select MANUAL.



6. Press **(CH)** to highlight SET DAY.
7. Press **(VOL)** or **(VOL)** to select proper day of the week.
8. Press **(ACTION)** twice to exit menus.

Set-Up Features (cont.)

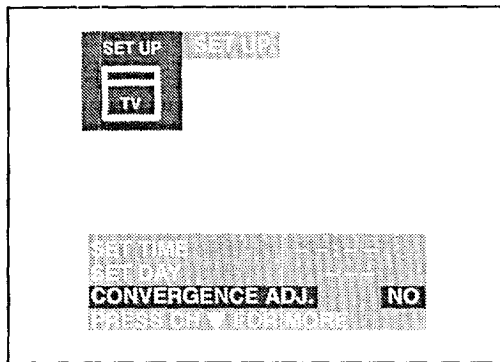
Convergence Adjustment.

This TV incorporates a special **Digital Convergence Adjustment** feature. For the convenience of the customer, this adjustment is preset at the factory. However, adjustment may be required when the TV is moved (due to the influence of earth's magnetic field on the projection tubes.) Convergence may be adjusted as follows:

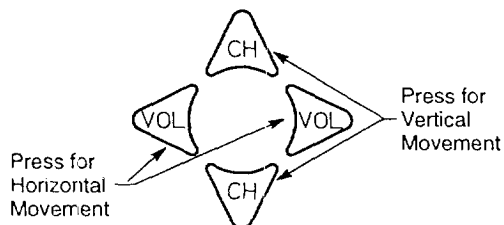
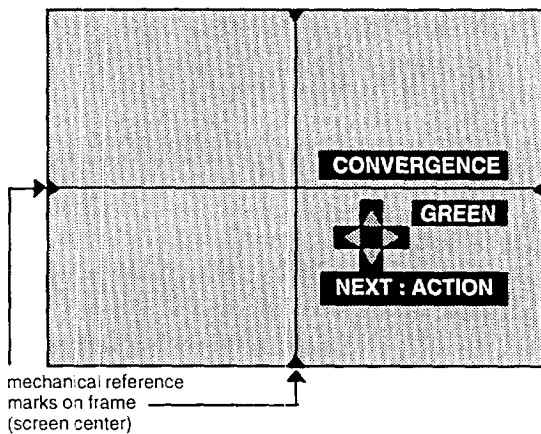
Green Adjustment

Turn the TV ON and tune in a channel that has a clear picture. The test pattern requires a received channel for stabilization. Green is the standard reference for the convergence adjustment procedure.

1. Press **(ACTION)**.
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 lines appear on the screen.

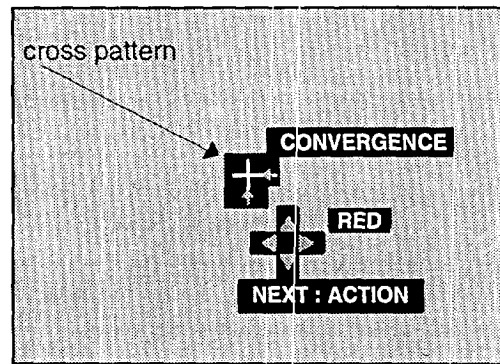


7. Align the horizontal and vertical lines with the frame mechanical reference marks. Press **(VOL)** or **(VOL)** on Remote Control for moving the vertical line and **(CH)** or **(CH)** for moving the horizontal line.

Red Adjustment

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

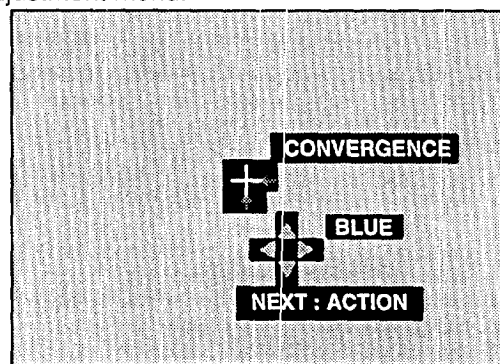
Note: A properly converged cross pattern will appear white with a minimum of red color fringing.



9. Align the Red Cross with the white cross pattern at the center of the screen. Press **(VOL)** or **(VOL)** on the Remote Control for horizontal movement and **(CH)** or **(CH)** for vertical movement.

Blue Adjustment

10. Press **(ACTION)** on the Remote Control to display the 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)** for 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.)

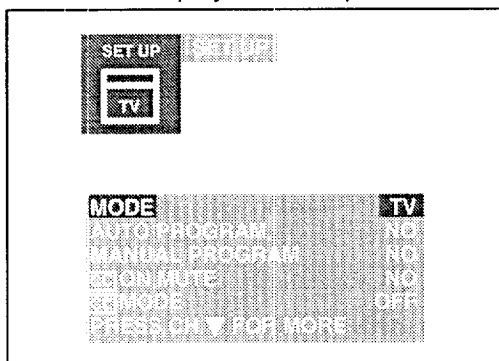
Mode (TV or Cable)

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

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

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

1. Press **(ACTION)**.
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.

Helpful Hints:

After Auto Programming:

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

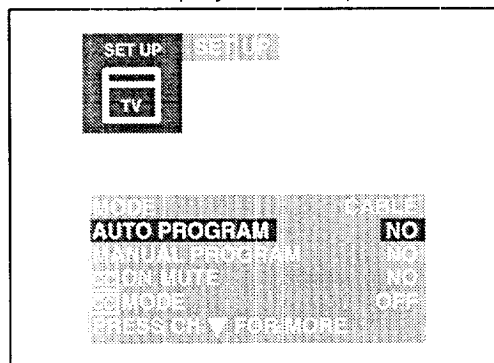
Up to 15 channels will be programmed into the FAVORITE Channel Scan after Auto Programming Scan has been completed. Any original channels that were programmed into FAV CHANNEL will remain. (Refer to Favorite Channel Scan for deleting unwanted channels.)

Auto Program

Used to Place all channels carrying a video signal into Channel Scan Memory. When **CH** or **CH** is pressed, only channels with a video signal will be accessed.

Note: TV or Cable Tuning mode must be set properly.

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

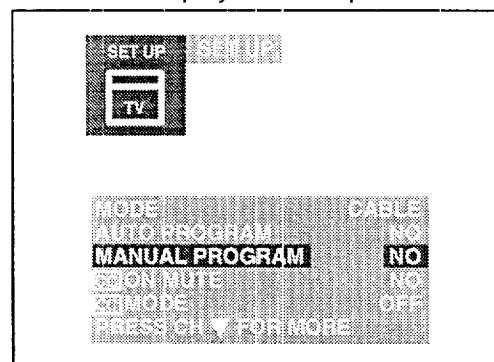


4. Press **CH** or **CH** to highlight AUTO PROGRAM.
5. Press **VOL** or **VOL** to start Auto Programming Scan. Channels will automatically advance until all channels have been scanned.
Note: Channel numbers with video signal present will turn blue. This indicates that channel is included in the Channel Scan Memory.
6. Press **(ACTION)** twice to exit menus.

Manual Program

To select which channels are placed into Channel Scan Memory. When **CH** or **CH** is pressed, only desired channels will be accessed.

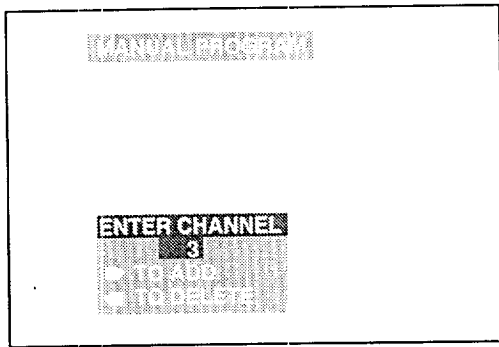
1. Press **(ACTION)**.
2. Press **CH** or **CH** and **VOL** or **VOL** to highlight the Set Up Icon.
3. Press **(ACTION)** to display the Set Up Menu.



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

Set-Up Features (cont.)

Manual Program (cont.)



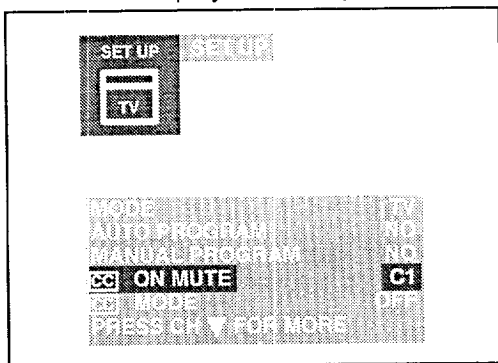
- Use the Numeric Keypad (0 through 9 buttons) or or to select channels.
- Press to add channel(s) to memory (blue). Press to delete channel(s) from memory (yellow).
- Repeat Steps 6 and 7 to continue adding or deleting channels.
- Press twice to exit menus.

CC On Mute

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

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

- Press .
- Press or and or to highlight the Set Up Icon.
- Press to display the Set Up Menu.



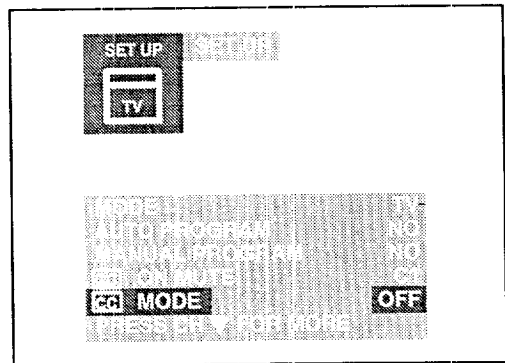
- Press or to highlight **CC ON MUTE**.
 - Press or to select NO (OFF), C1, C2, C3, or C4.
- Note:** Recommended menu Set Up for Closed Caption when using Mute Button.
- CC ON MUTE: C1
 - CC MODE: OFF
- Press twice to exit menus.

- Press when the program being viewed is broadcast with Closed Caption to activate. Press again to deactivate.

CC Mode

This TV 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.

- Press .
- Press or and or to highlight the Set Up Icon.
- Press button to display the Set Up Menu.



- Press or to highlight: **CC MODE**.
- Press or to select OFF, C1, C2, T1, T2, C3, C4, T3, or T4.
 - CAPTION OFF – Set: when Closed Caption is not to be used.
 - CAPTION C1 – For video related information that can be displayed (up to four (4) lines of script strategically placed on the screen to prevent obstruction of relevant parts of the picture). Script can be in any language.
 - CAPTION C2 – Mode used for video related information.
 - TEXT T1 – Blanks out a large portion of 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.
- Press twice to exit menus.

Programming the Remote Control Using Access Codes

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

Code Known

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

- 1 Determine the brand of the component.
- 2 Identify the code(s) associated with the brand from the infrared code index (see following pages). Record all possible codes.
- 3 Confirm that the component is plugged in and operating properly, then turn it OFF.
- 4 Press and hold the **(ACTION)** button, then the **(POWER)** button so that both are pressed at the same time for at least 5 seconds. Then let go of the buttons.
- 5 Press the appropriate Mode button for the component.
- 6 Enter the 3-digit code, by using the Remote Control Keyboard "0" through "9" buttons.

Now the remote is set for the entered code.

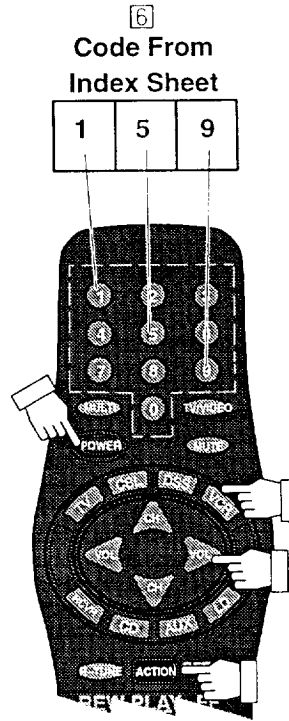
- 7 Press the **(POWER)** button to test the remote. If the correct code is setup for the component (in step 6), the component will turn on.

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

Code Unknown

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

- 1 Confirm that the component is plugged in and operating properly, then turn it OFF.
- 2 Press and hold the **(ACTION)** button, then the **(POWER)** button so that both are pressed at the same time for at least 5 seconds. Then let go of the buttons.
- 3 Press the appropriate Mode button for the device.
- 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.



TNQ2AE007-1

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.

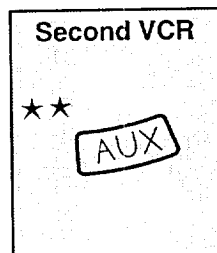
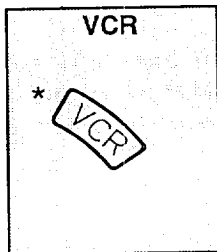
CABLE Cable TV Converter Box	<input type="text"/>	VCR Video Cassette Recorder	<input type="text"/>	CD Compact Disc Player	<input type="text"/>
DSS Digital Satellite System	<input type="text"/>	RCVR Receiver or Amplifier	<input type="text"/>	LD Laser Disc Player	<input type="text"/>
Other Component	<input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

VCR Infrared Codes Index

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

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

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



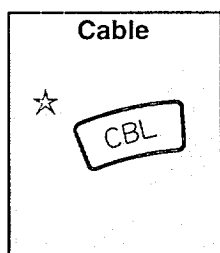
Code Index for VCRs			
VCR Brand	Code(s)	VCR Brand	Code(s)
Adventura	000	MTC	000, 240
Aiko	278	Multitech	000, 072
Aiwa	000	NEC	038, 041, 067
Akai	041, 061	Nikko	037
American High	035	Noblex	240
Asha	240	Olympus	035
Audiovox	037	Optimus	037, 048, 104
Beaumarck	240	Panasonic	035, 162, 225, 454
Bell & Howell	104	Penney	035, 037, 038, 042
Broksonic	121, 184		240
Calix	037	Pentax	042
Canon	035	Philco	035
Carver	081	Philips	035, 081
CCE	072, 278	Pilot	037
Citizen	037, 278	Pioneer	067
Coit	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
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, 240
Fisher	047, 104	Ricoh	034
Fuji	033, 035	Runco	039
Funai	000	Samsung	045, 240
Garrard	000	Sanky	039, 048
GE	035, 060	Sansui	041, 067
Goldstar	037, 038	Sanyo	046, 047, 104, 240
Gradiente	000	Scott	043, 045, 121, 184
Harley Davidson	000	Sears	035, 037, 042, 046, 047, 104
Harman/kardon	038	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
Maria	037	Vector	045
Matsushita	035	Vector Research	038
MEI	035	Video Concepts	045, 061
Memorex	000, 035, 037, 039, 046, 047, 048, 104	Videosonic	240
	240	Wards	000, 035, 042, 047, 048, 072, 240
MGA	043, 061	XR-1000	000, 035, 072
MGN Technology	240	Yamaha	038
Minolta	042	Zenith	033, 034, 039
Mitsubishi	043, 061, 067		
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.

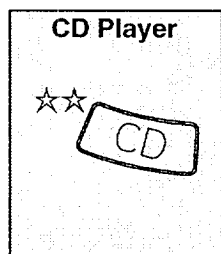
Note: The Universal Remote Control memory is limited; therefore, some models of Cable Converter Boxes and CD Players may not operate. The Universal Remote Control is not designed to control all features that are available in all models.

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

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



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

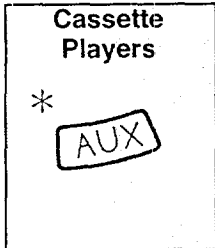
Cassette Players, Receivers, and Amplifiers

Infrared Codes Index

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

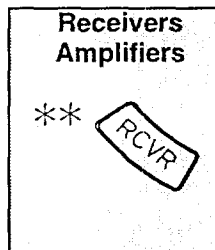
Note: The Universal Remote Control memory is limited; therefore, some models of Cassette Players, Receivers, and Amplifiers may not operate. The Universal Remote Control is not designed to control all features that are available in all models.

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



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

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



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

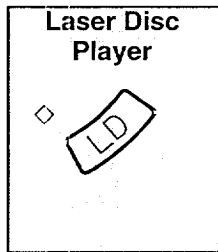
Laser Disc, DSS (Digital Satellite System), and DVD (Digital Videodisc)

Infrared Codes Index

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

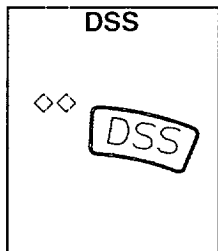
Note: The Universal Remote Control memory is limited; therefore, some models of Laser Disc, DSS Digital Satellite System, and DVD (Digital Videodisc) may not operate. The Universal Remote Control is not designed to control all features that are available in all models.

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



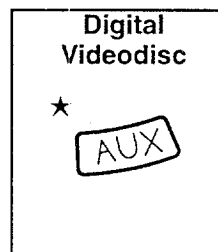
Codes for Laser Disc	
Brand of Laser Disc	Code(s)
Mitsubishi	059
NAD	059
Panasonic	204
Pioneer	059
Quasar	204
Sony	201

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



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

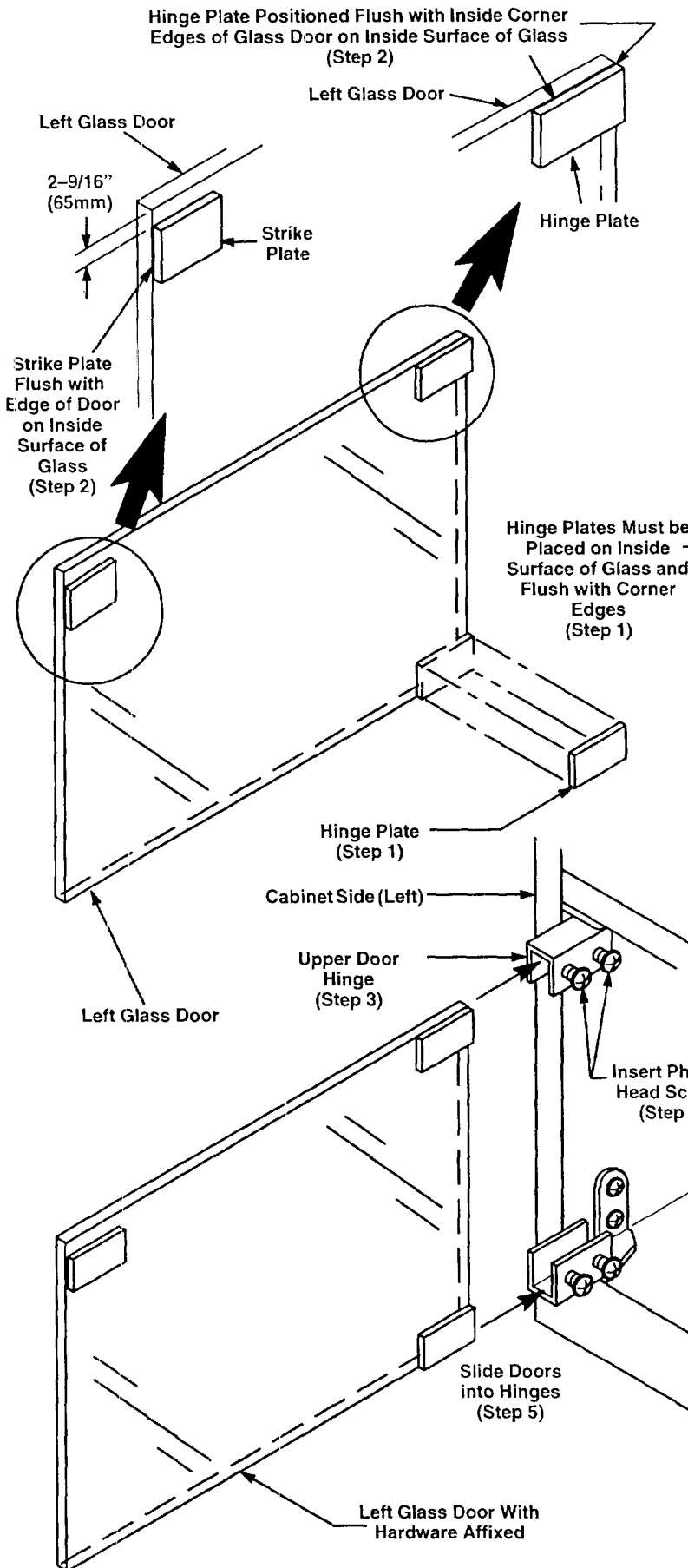
Note: After entering the proper infrared code, press the Remote **AUX** Selection Mode button (★). Then refer to the Remote Control Key Functions section, for Remote DVD function key listing.



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

Cabinet Glass Door Installation Instructions For PT-51G46 Models

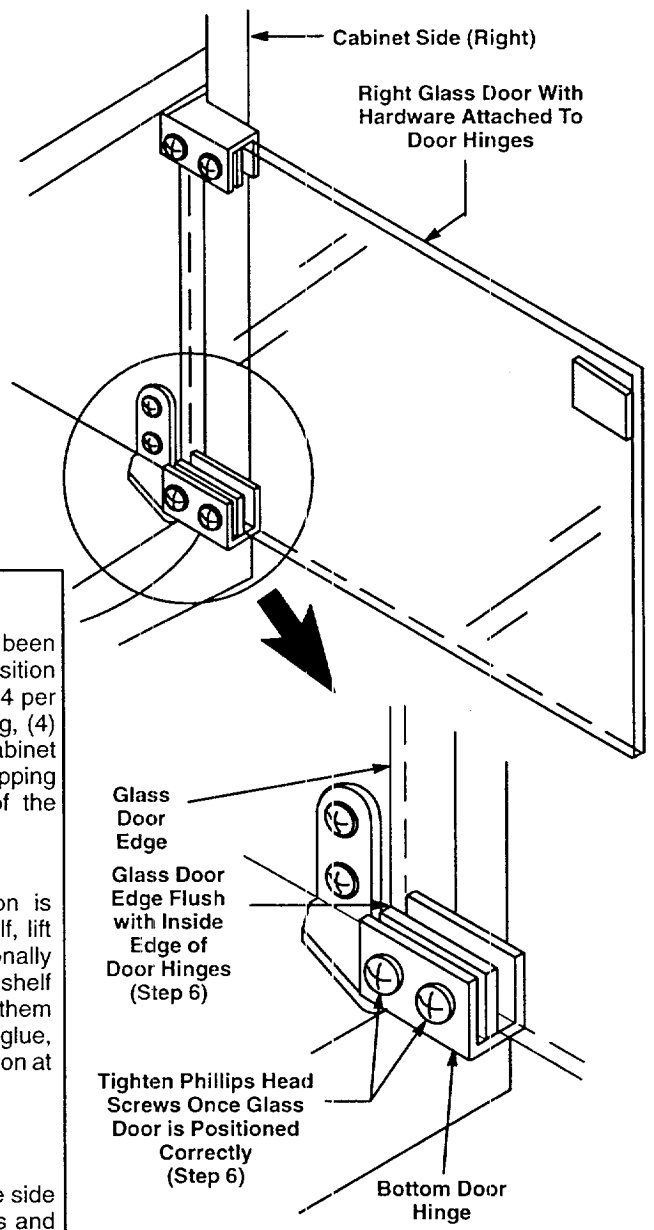
GLASS DOORS ARE MOUNTED WITH FOUR (4) SCREWS ON CABINET LOWER BACK BOARD.



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 locate 2-9/16" (65mm) from 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.

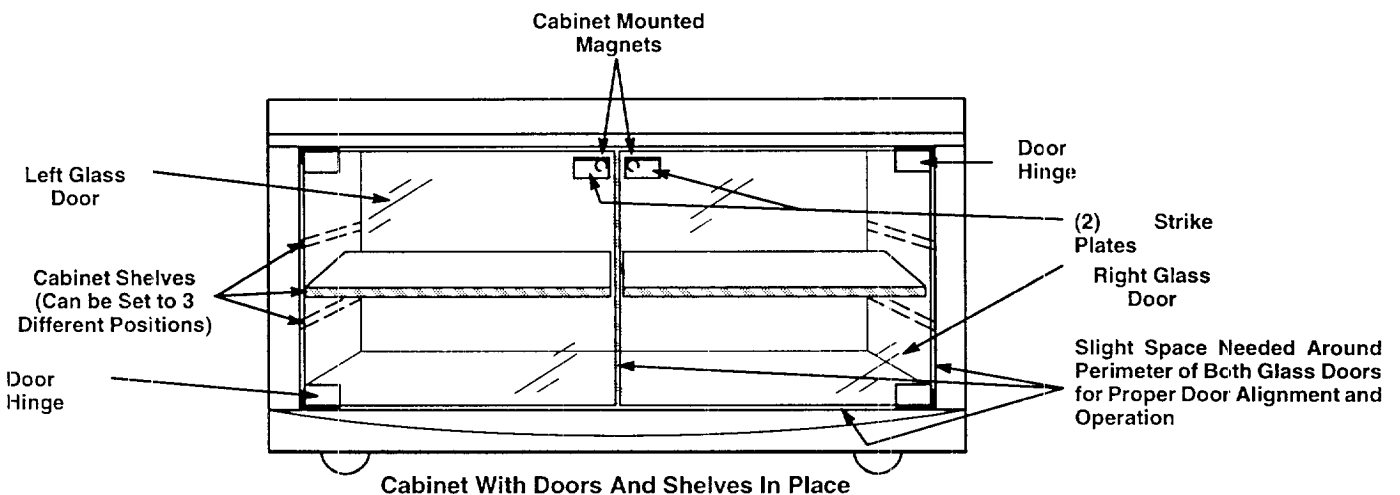
6. Hold glass door in place with the back edge of glass flush with inside back edge of upper & lower door hinges and against top of the upper hinge, then tighten (4) hinge screws per glass door.
7. Repeat Steps 6 & 7 for the other glass door.
8. Once both glass doors are attached, close them slowly to 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.



Shelves Mounting Instructions

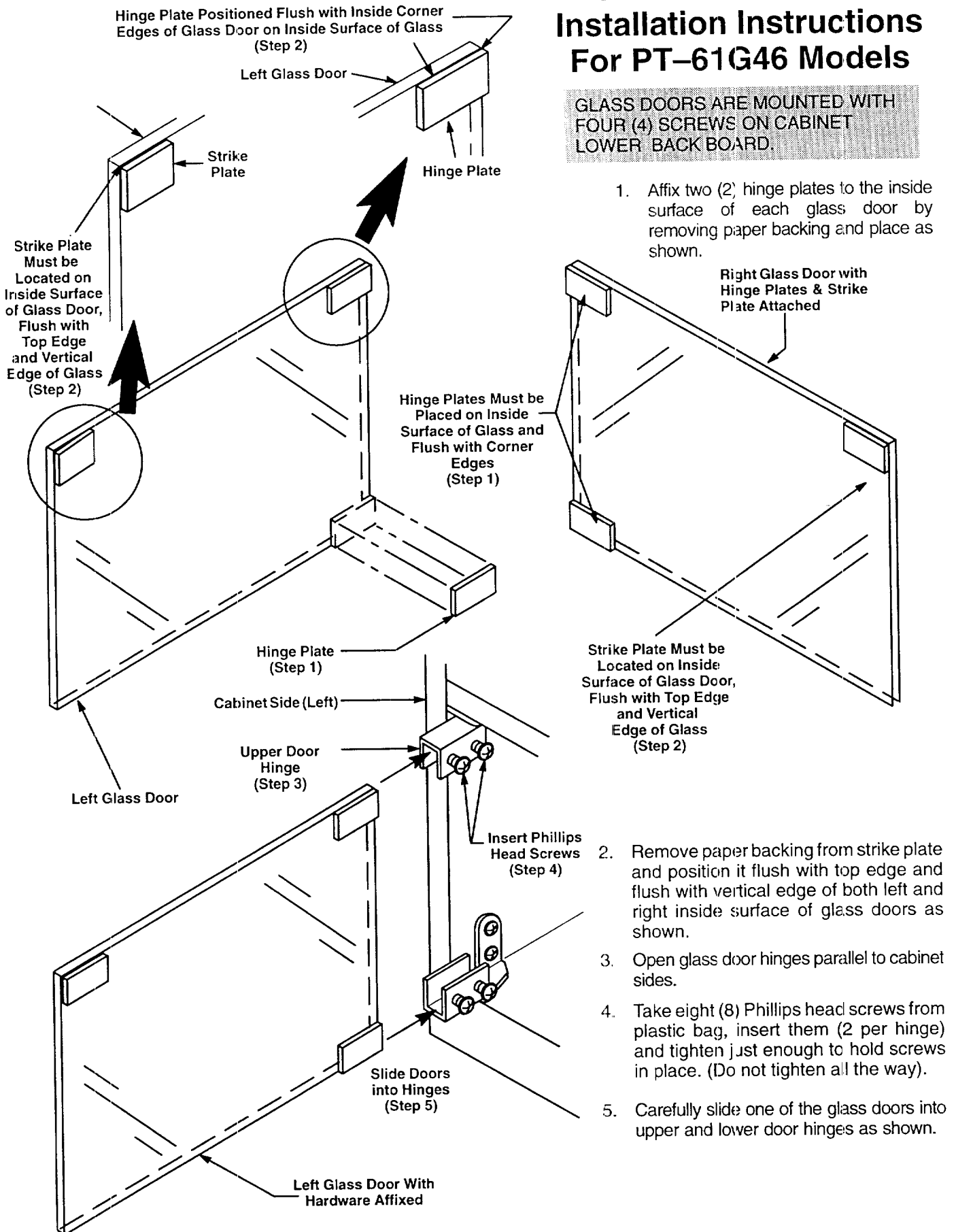
The diagram shows a shelf being mounted into a cabinet. A 'Shelf' is shown with a 'Notch in Shelf' that fits into a 'Hole in Cabinet Side'. A 'Metal Shelf Hanger' is used to support the shelf. The instructions describe how to remove shipping blocks and how to adjust the shelf position.

1. The two cabinet shelves have been mounted in the middle shelf position 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 Glass Door Installation Instructions For PT-61G46 Models

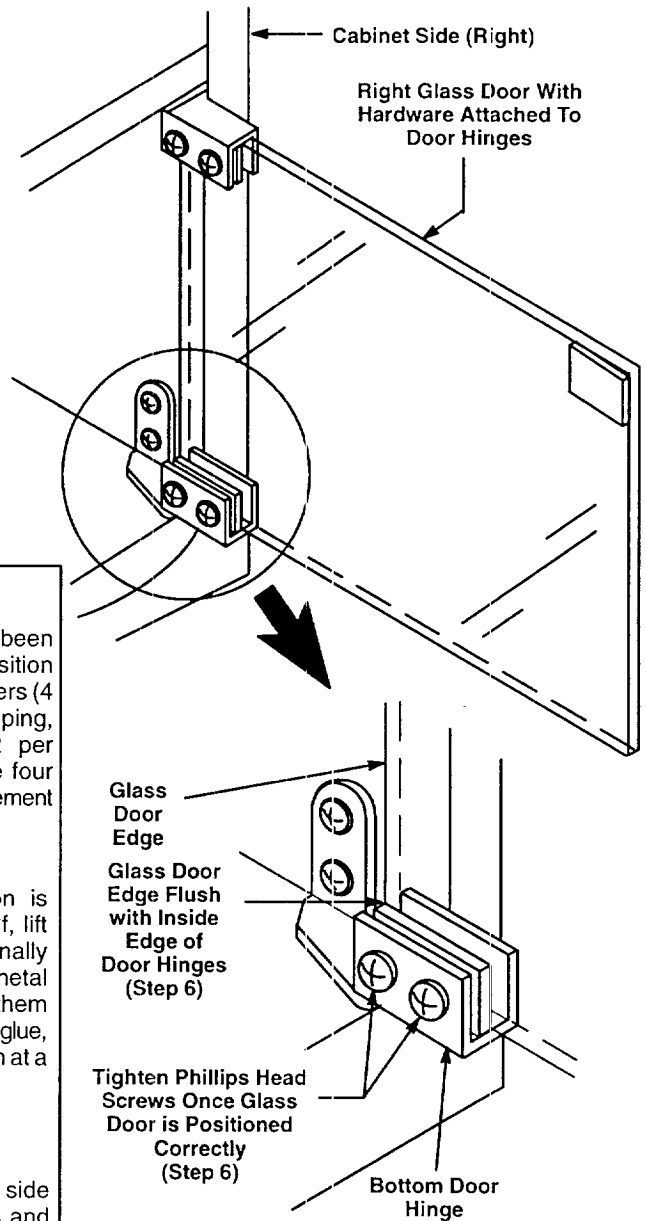
GLASS DOORS ARE MOUNTED WITH FOUR (4) SCREWS ON CABINET LOWER BACK BOARD.



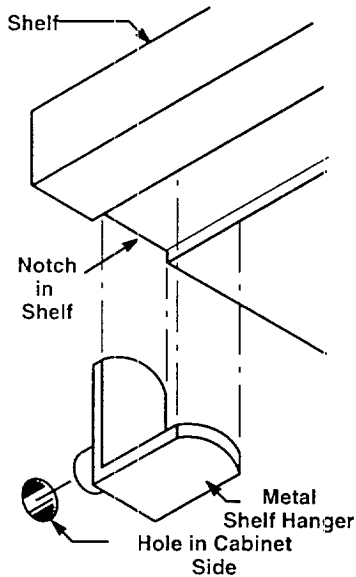
1. Affix two (2) hinge plates to the inside surface of each glass door by removing paper backing and place as shown.

2. Remove paper backing from strike plate and position it flush with top edge and flush with vertical edge of both left and right inside surface of glass doors as shown.
3. Open glass door hinges parallel to cabinet sides.
4. Take eight (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 and lower door hinges as shown.

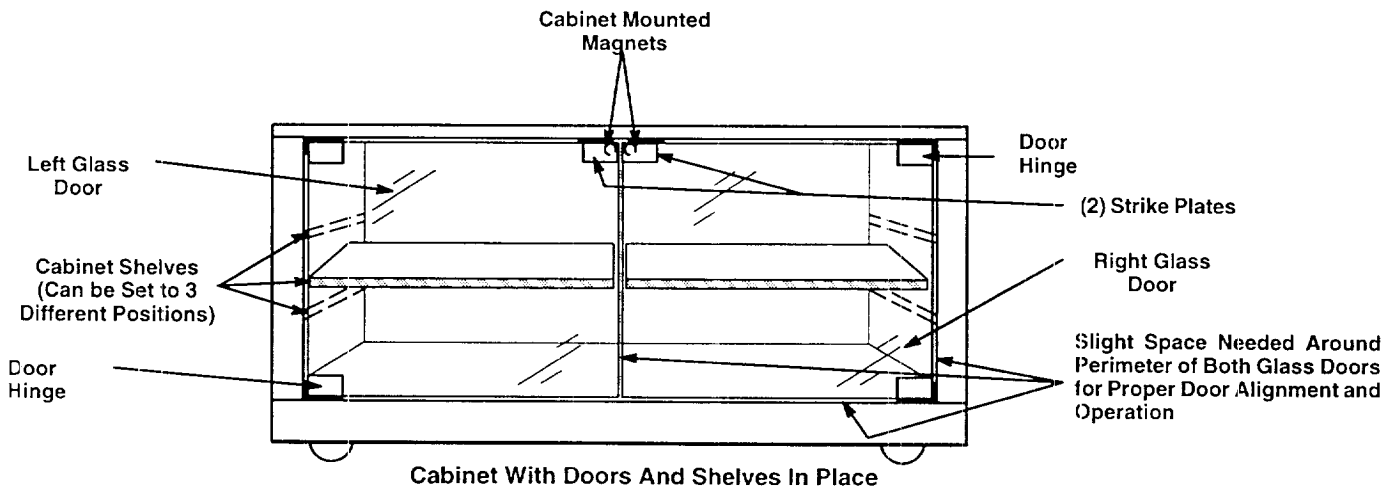
6. Hold glass door in place with the back edge of glass flush with inside back edge of upper and lower door hinges and against top of the upper hinge, then tighten four (4) hinge screws per glass door.
7. Repeat Steps 6 and 7 for the other glass door.
8. Once both glass doors are attached, close them slowly to ensure doors are aligned properly and the two (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.



Shelves Mounting Instructions























1. The two cabinet shelves have been mounted in the middle shelf position with eight (8) metal shelf hangers (4 per cabinet shelf) and for shipping, four (4) shipping blocks (2 per cabinet shelf). Remove these four (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 four (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.



Troubleshooting Chart

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

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

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