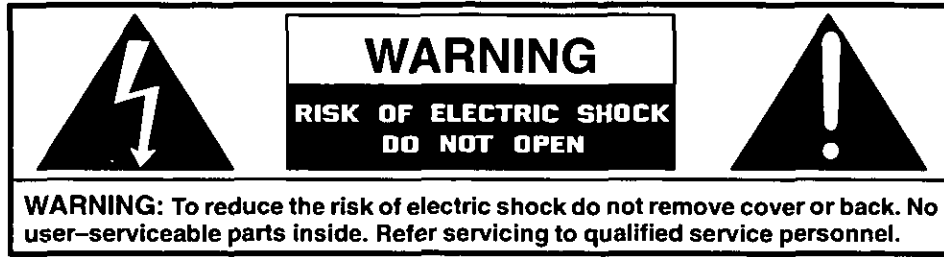# Panasonic®

Color Television

Operating Instructions

CT-31SF14

Read these instructions completely before operating.

Contents subject to change without notice or obligation.

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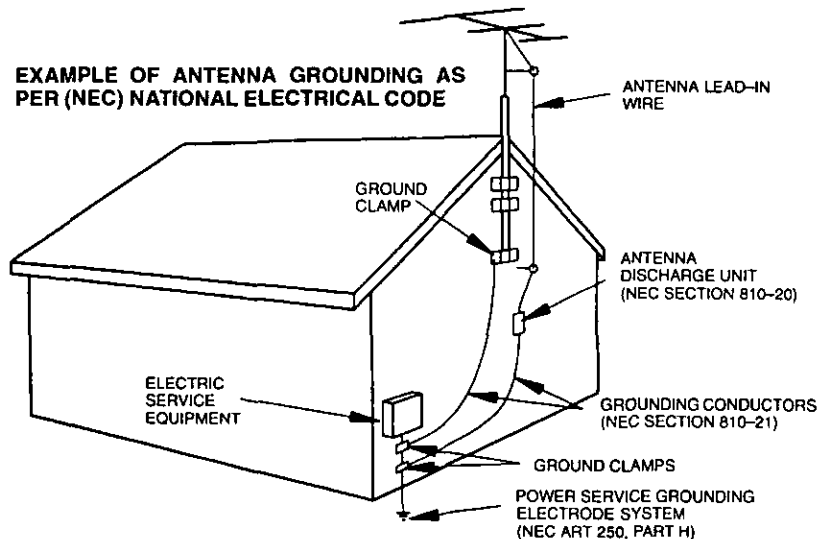
The exclamation point within a triangle is intended to tell the user that important operating and servicing instructions are in the papers with the appliance.

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.

EXAMPLE OF ANTENNA GROUNDING AS PER (NEC) NATIONAL ELECTRICAL CODE

ANTENNA LEAD-IN WIRE

GROUND CLAMP

ANTENNA DISCHARGE UNIT (NEC SECTION 810-20)

ELECTRIC SERVICE EQUIPMENT

GROUNDING CONDUCTORS (NEC SECTION 810-21)

GROUND CLAMPS

POWER SERVICE GROUNDING ELECTRODE SYSTEM (NEC ART 250, PART H)

14. If an outside antenna is connected to the television equipment, be sure the antenna system is grounded so as to provide some protection against voltage surges and built up static charges. In the U.S. Section 810 of the National Electrical Code and in Canada Part 1 of the Canadian Electrical Code provides information with respect to proper grounding of the mast and supporting structure, grounding of the lead–in wire to an antenna discharge unit, size of grounding conductors, location of antenna–discharge unit, connection to grounding electrodes, and requirements for the grounding electrode. See Figure.

15. For added protection for this television receiver during a lightning storm, or when it is left unattended and unused for long periods of time, unplug it from the wall outlet and disconnect the antenna. This will prevent damage to the receiver due to lightning and power–line surges.

16. An outside antenna system should not be located in the vicinity of overhead power lines or other electric light or power circuits, or where it can fall into such power lines or circuits. When installing an outside antenna system extreme care should be taken to keep from touching such power lines or circuits as contact with them might be fatal.

17. Unplug this television receiver from the wall outlet, and refer servicing to qualified service personnel under the following conditions:
   a. When the power cord or plug is damaged or frayed.
   b. If liquid has been spilled into the television receiver.
   c. If the television receiver has been exposed to rain or water.
   d. If the television receiver does not operate normally by following the operating instructions. Adjust only those controls that are covered by the operating instructions as improper adjustment of other controls may result in damage and will often require extensive work by a qualified technician to restore the television receiver to normal operation.
   e. If the television receiver has been dropped or the cabinet has been damaged.
   f. When the television receiver exhibits a distinct change in performance – this indicates a need for service.

18. Do not attempt to service this television receiver yourself as opening or removing covers may expose you to dangerous voltage or other hazards. Refer all servicing to qualified service personnel.

19. When replacement parts are required, be sure the service technician has used replacement parts specified by the manufacturer that have the same characteristics as the original part. Unauthorized substitutions may result in fire, electric shock, or other hazards.

20. Upon completion of any service or repairs to this television receiver, ask the service technician to perform routine safety checks to determine that the television is in safe operating condition.

21. **WARNING: To prevent fire or shock hazard, do not expose this appliance to rain or moisture.**

22. **CAUTION:** TO PREVENT ELECTRIC SHOCK DO NOT USE THIS (POLARIZED) PLUG WITH A RECEPTACLE OR OTHER OUTLET UNLESS THE BLADES CAN BE FULLY INSERTED TO PREVENT BLADE EXPOSURE.

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

Important Information Regarding Use of Video Games, Computers, 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: The marking or retained image on the picture tube resulting from fixed image use is not an operating defect and as such is not covered by Warranty. This product is not designed to display fixed image patterns for extended periods of time.

Specifications

Power Source:	120V AC, 60Hz
Channel Capability:	181 channels (See chart)
	VHF 2~13, UHF 14~69, Cable 125 channels
Video Input Jacks (2):	1V p–p, 75 ohm, phono jack type
Audio Input Jacks (2):	500 mV rms 47K ohm
To Audio AMP Jacks:	0~2.0V rms 4.7K ohm
S–VHS Input Jack:	S–Video (Y–C) Connector
Stereo Sound	
Surround Sound	
Closed Caption Display	

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: _____

Table of Contents

Installation

Television Location

This Television is intended to be used with an optional stand or entertainment center. Consult your dealer for available options.

Locate for comfortable viewing. Avoid placing where sunlight or other bright light (including reflections) will fall on the screen.

Use of some types of fluorescent lighting may 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 equipment containing magents (motors, fans, external speakers, etc.) nearby.

Optional External Equipment Connections

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

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

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 BLADES CAN BE FULLY INSERTED TO PREVENT BLADE EXPOSURE.
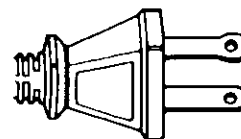
Polarized Plug

Remote Control Battery Installation

Batteries: Use two "AA" batteries.

1. Remove the battery compartment cover on back of the remote.
2. Install the batteries in the battery compartment. (Polarity (+) or (–) must be correct.)
3. Reattach the battery cover.

Helpful Hints:

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

Precaution on Battery Use

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

Observe the Following Precautions:

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

Press Down Here and Slide Cover Back

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.
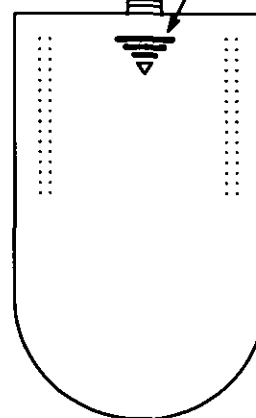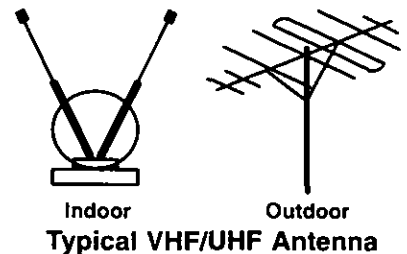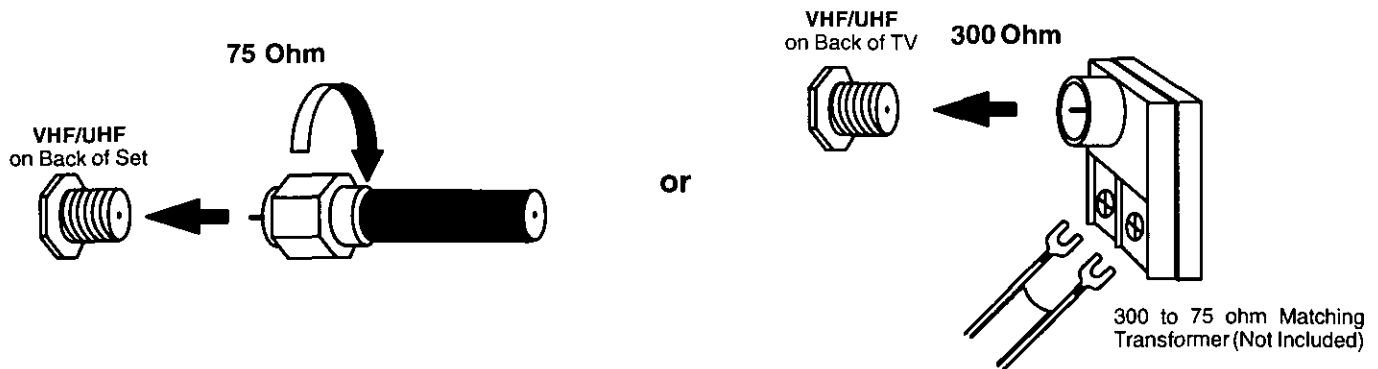

Installation (cont.)
Antenna/Cable Connections

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.)

Indoor   Outdoor
Typical VHF/UHF Antenna

Incoming Cable from Home Antenna

75 Ohm

VHF/UHF
on Back of Set

or

VHF/UHF
on Back of TV   **300 Ohm**

300 to 75 ohm Matching
Transformer (Not Included)

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
75 Ohm

VHF/UHF
on Back of TV
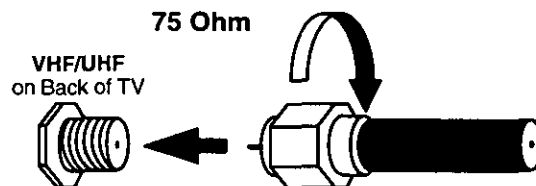
NOTE: Certain cable systems offset some channels to reduce interference or have Premium (scrambled) channels. A cable box is required for proper reception. Check with your local Cable company for compatibility requirements.

Other Video Equipment

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

Care and Cleaning

Picture Tube (Turn set off)
Use a mild soap solution or window cleaner and a clean cloth. DO NOT USE ABRASIVE CLEANERS. Avoid excessive moisture and wipe dry.

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

Optional Equipment Connection and Operation

To Audio AMP Connection (Stereo)

TERMINALS ON BACK OF TV
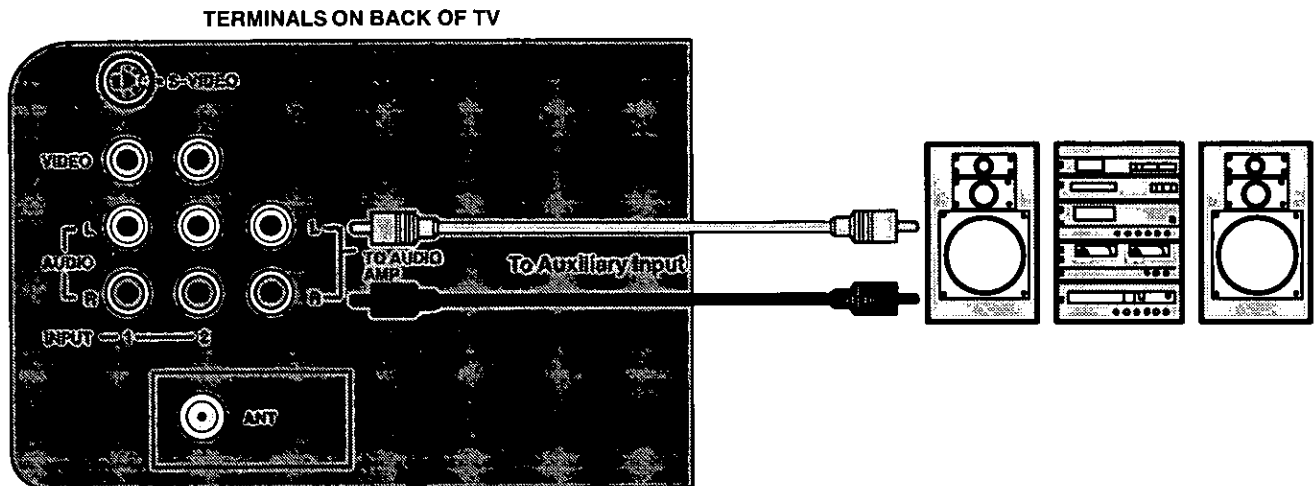
• To Audio AMP

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

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

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

1. Select TV SPEAKERS "ON " Mode. (Refer to the Audio Menu TV Speakers 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 TV.
5. Select TV SPEAKERS "OFF&VAO " Mode. (Refer to the Audio Menu TV Speakers section.)
6. Audio bass, treble, balance, volume and mute can now be controlled by the TV Remote Control.

NOTE: When Selecting TV SPEAKERS "OFF&FAO" Mode, the TV sound output is always at a constant level and cannot be changed (Refer to the Audio Menu TV Speakers section).

Video/Audio Connection

VCR or VIDEO DISC

TERMINALS ON BACK OF TV

TERMINALS ON BACK OF VCR
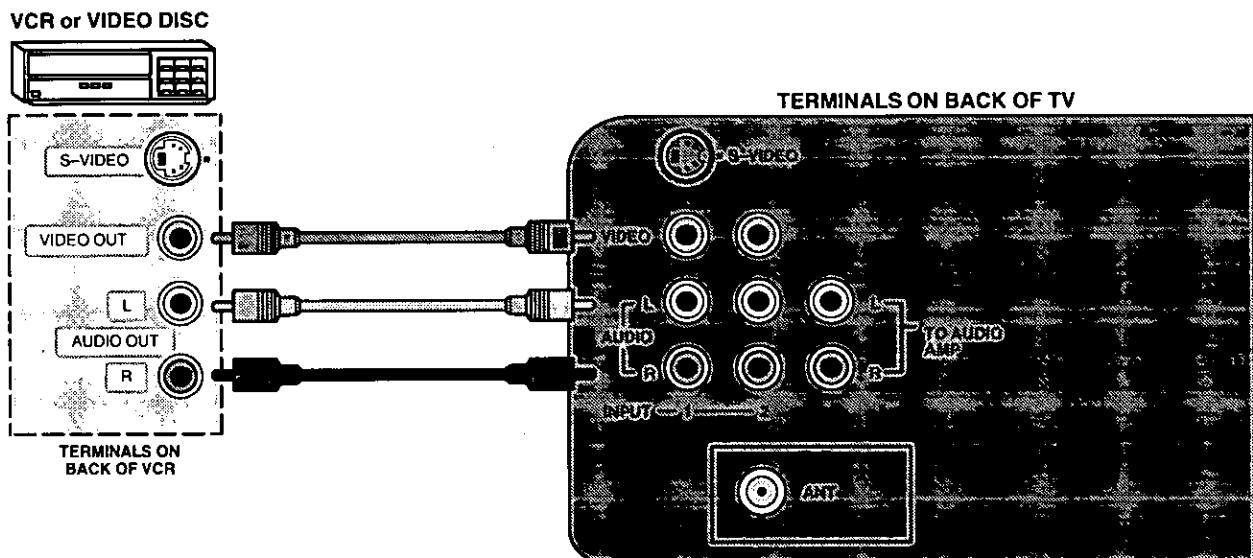
Operation

1. Connect optional equipment as shown to INPUT 1 or 2.
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

VCR or VIDEO DISC

TERMINALS ON BACK OF TV

VCR S-VIDEO (YC)
CONNECTOR OPTIONAL

S-VIDEO

VIDEO OUT

L

AUDIO OUT

R

TERMINALS ON
BACK OF VCR
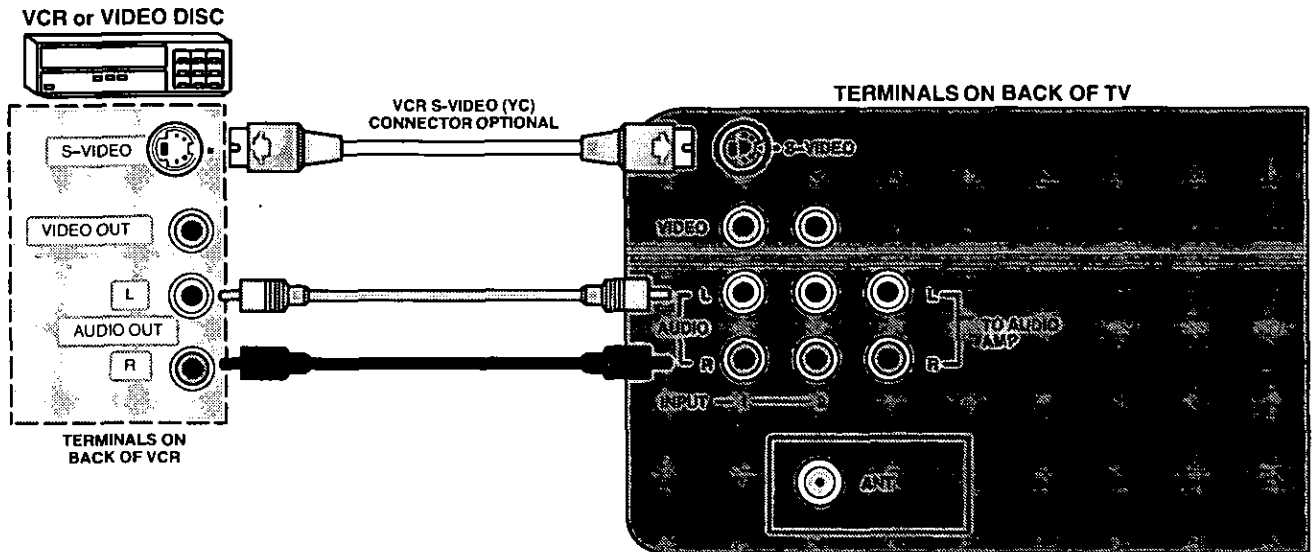
Operation

1. Connect S-Video (YC) connector to S-Video Terminals.
2. Make connections to L and R Input 1 Audio jacks.
3. Select Video1 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.

NOTE:

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

Cable Box Connection

TERMINALS ON BACK OF TV

CABLE
BOX

To Cable
Box Ant
Input

TERMINALS ON BACK OF CABLE BOX

ANT INPUT

From Cable
Box Ant
Output

Incoming Cable
From Antenna Or
Cable TV System

ANT OUTPUT

To ANT Terminal
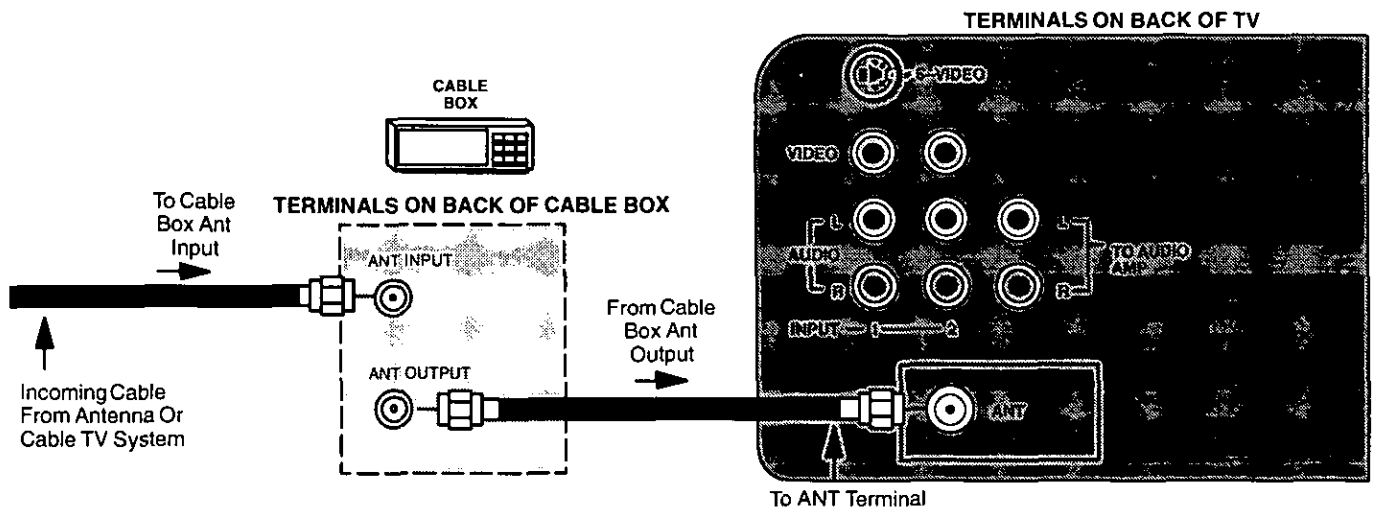
Location of Controls (TV)

Front Control Panel

POWER ◀ VOL ▶   ▼ CH ▲   ACTION   TV/VIDEO

① ② ③ ④ ⑤   Remote Control Sensor
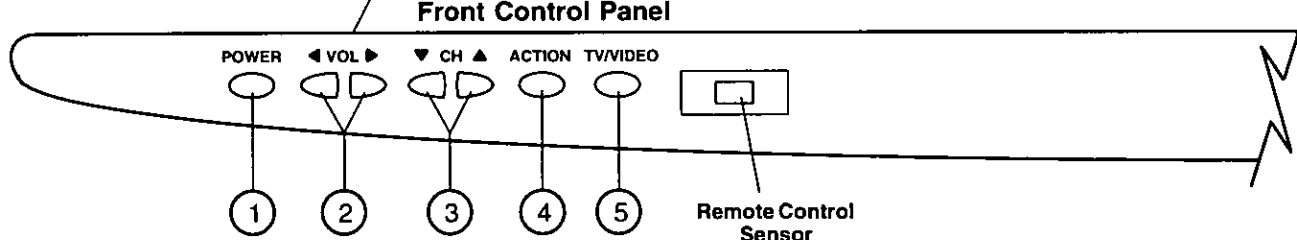
Quick Reference Control Operation

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

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

③ **Channel Buttons** – Press to select programmed channels or to highlight desired features when menus are displayed.

④ **Action Button** – Press to display Main Menu and enter or exit On-Screen feature and Adjustment Menus.

⑤ **TV/Video Button** – Press to select TV or one of two Video Inputs.

Location of Controls
(Remote Control)

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.

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

Action Button
Press to display Main Menu and enter or exit On Screen feature and Adjustment Menus.

R-Tune (Rapid Tune) Button
Press to switch to the previous channel.

Keypad "0 through 9" Buttons
Press desired channel number to randomly access any channel.

TV/Video Button
Press to select TV or one of two Video Inputs.

Mute Button
Press to mute sound. A second press resumes sound.

Ch 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.

VCR Function Buttons
Programmable to operate many brands of VCR's.

VCR/DSS Channel Buttons
Select VCR or DSS Up/Down channels.
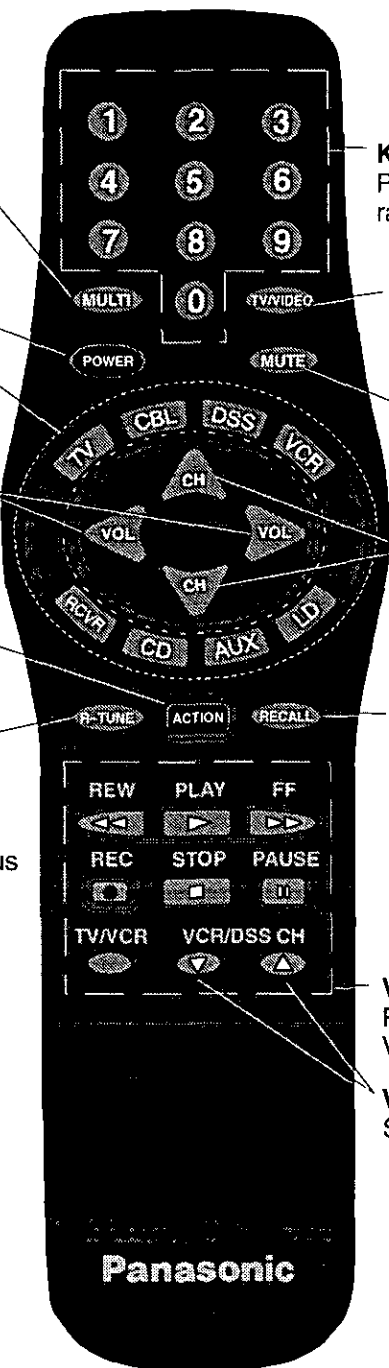
**Home Theater Remote Control
EUR511052**

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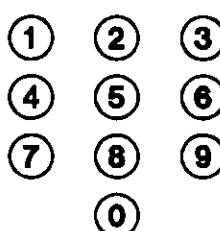
Note:
For more information on the Remote Control, please refer to the Remote Control Quick Reference Functional Key Chart.

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 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
① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⑩	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 /VIDEO 1 ⑧ VCR 2 /VIDEO 2
	CD PLAYER	Selects Track Number
	LD PLAYER	Selects Track Number
(MULTI)	ALL COMPONENTS	Programmable Button That Can Operate Up To Six (6) Remote Functions At Once
(TV/VIDEO)	TV	Selects the TV Input Mode
(POWER)	ALL COMPONENTS	Turns On and Off Selected Components
(MUTE)	TV, DSS, VCR, VCR 2 LDP CABLE RECEIVER/AMPLIFIER	Mutes TV Audio Mutes Audio Mutes Audio
(TV)	TV	TV Mode Selection for Remote Control
(CBL)	CABLE	Cable Mode Selection for Remote Control
(DSS)	DSS (DIGITAL SATELLITE SYSTEM)	DSS Mode Selection for Remote Control
(VCR)	VCR, VCR 2	VCR Mode Selection for Remote Control
(RCVR)	RECEIVER/AMPLIFIER	Receiver/Amplifier Mode Selection for Remote Control
(CD)	COMPACT DISC	CD Mode Selection for Remote Control
(AUX)	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
(LD)	LASER DISC PLAYER	LD Mode Selection for Remote Control
(CH)	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
(VOL) (VOL)	TV CABLE DSS RECEIVER/AMPLIFIER VCR, VCR 2 LDP	Volume Up/Down, Menu Navigation Volume Up/Down DSS Guides and Menu Navigation, Also Switches Between Normal Audio and SAP Volume Up/Down TV Volume Up/Down TV Volume Up/Down

Remote Control
## Quick Reference Functional Key Chart (cont.)

KEY	MODE	FUNCTION
(R-TUNE)	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
(ACTION)	TV DSS	Activates TV Menus Acts as Menu Button for DSS
(RECALL)	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
REW	DSS VCR, VCR 2 LDP TAPE CD DVD	DSS Guide Rewind Rewind Rewind Selects Previous Track Rewind
PLAY	DSS VCR, VCR 2 LDP TAPE CD DVD	Enter/Select Play Play Play (in Normal Direction) Play Play
FF	DSS VCR, VCR 2 LDP TAPE CD DVD	Exit/Clear Fast Forward Fast Forward Fast Forward Selects Next Track Fast Forward
REC	DSS VCR, VCR 2 TAPE CABLE	One Touch Record in DSS Mode Record Record VCR Record
STOP	DVD VCR, VCR 2 LDP TAPE CD CABLE	Stop Stop Stop Stop Stop VCR Stop
PAUSE	DVD VCR, VCR 2 LDP TAPE CD CABLE	Pause Pause Pause Pause Pause VCR Pause
TV/VCR	VCR, VCR 2 DSS CABLE	Selects TV/VCR Mode Selects TV/DSS Mode Selects TV/VCR Mode
VCR/ DSS CH	VCR, VCR 2 DSS	Channel Up/Down Channel Up/Down

– 12 –

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 Clock time
⑤ Sleep Timer status
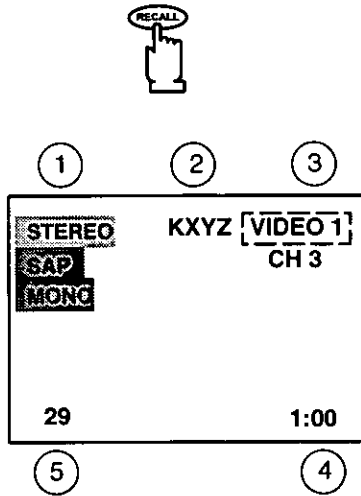
R-Tune Button

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

Note: When scanning channels with the CHANNEL UP/DOWN buttons, pressing the R-TUNE button will switch between the last two channels scanned.

PROGRAM CURRENTLY VIEWED   Press Button   PROGRAM PREVIOUSLY VIEWED

Press Button Again

Helpful Hints:

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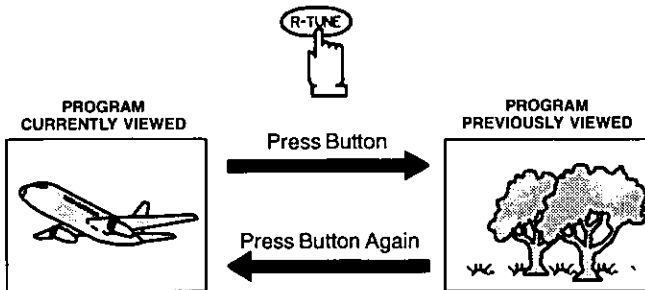
Multi Button

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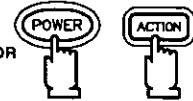
4. After three seconds, release the POWER and ACTION buttons.
5. Press the MULTI button. (Waiting more than 30 seconds without pressing another button will exit the programming mode.)
6. Press a maximum of six (6) function buttons on the Remote Control.

   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.

PRESS AT THE SAME TIME FOR THREE SECONDS   PRESS   PRESS

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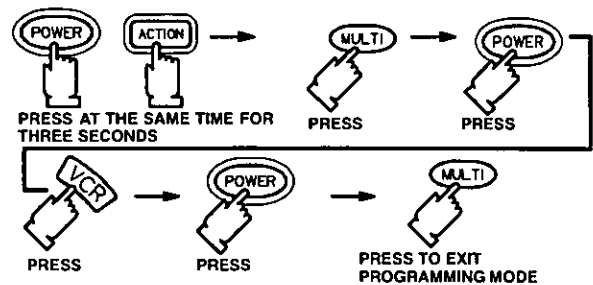
You can now turn the TV and VCR ON/OFF at the same time with one press of the MULTI button.

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.

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.
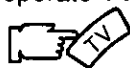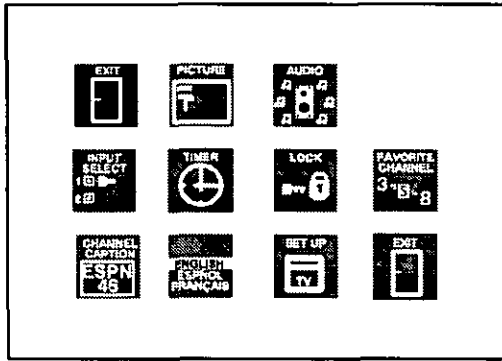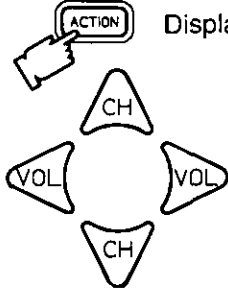
Main Menu

(Trilingual Animated Icons)

NOTES:

- The selected Icon will turn red and will be animated

- When Auto Power On feature is activated, Timer Icon will change to an Exit Icon

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

1. Press (ACTION).

2. Press 🔼 or 🔽 and ◀ or ▶ to highlight the Language ENGLISH/ESPAÑOL/FRANÇAIS Icon.

3. Press (ACTION) to display the Language select Menu.
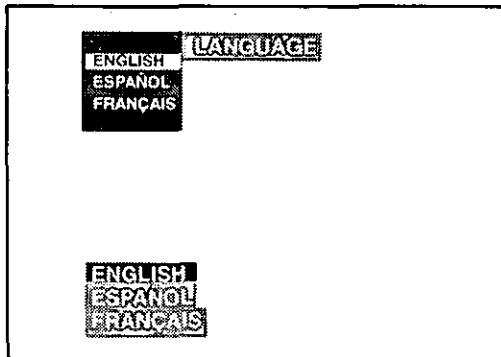
4. Press 🔼 or 🔽 to select ENGLISH, ESPAÑOL or FRANÇAIS for the Language Menu.

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 🔼 or 🔽 and ◀ or ▶ to highlight the Picture Icon.

3. Press (ACTION) to display the Picture Adjustment Menu.
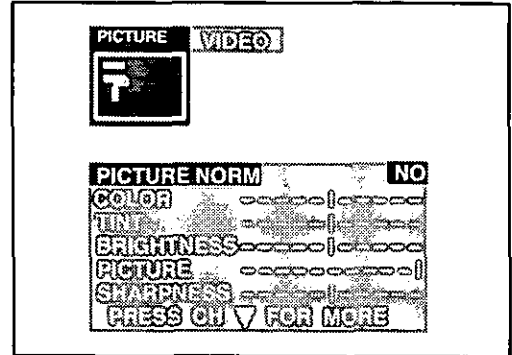
4. Press 🔼 or 🔽 to highlight PICTURE NORM.

5. Press ◀ or ▶ 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 🔼 or 🔽 and ◀ or ▶ to highlight the Picture Icon.

3. Press (ACTION) to display the Picture Adjustment Menu.
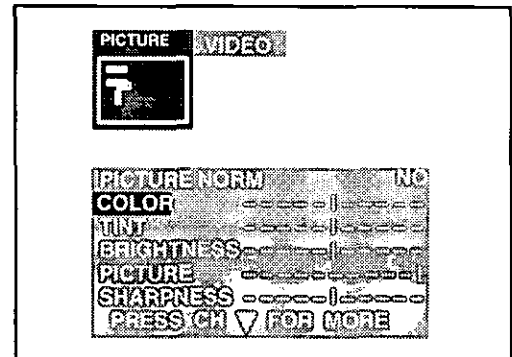
4. Press 🔼 or 🔽 to select the desired Picture Adjustment (Color, Tint, Brightness, Picture, or Sharpness).

5. Press ◀ or ▶ 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 (ACTION).
2. Press △ or ▽ and ◁ or ▷ to highlight the Picture Icon.
3. Press (ACTION) to display the Picture Adjustment Menu.
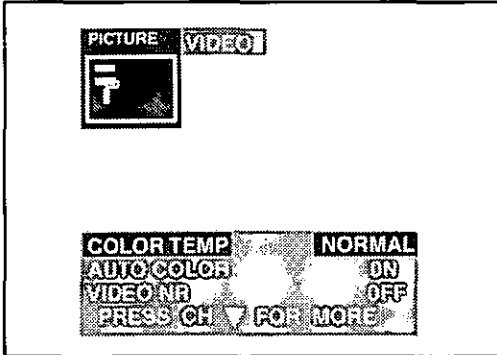
4. Press △ or ▽ to highlight COLOR TEMP.
5. Press ◁ or ▷ to select NORMAL, WARM, or COOL.
   - NORMAL (no tint)
   - WARM (reddish tint)
   - COOL (bluish tint)
6. Press (ACTION) twice to exit menus.

Auto Color

To automatically optimize color adjustment to compensate for signal variations.

1. Press (ACTION).
2. Press △ or ▽ and ◁ or ▷ to highlight the Picture Icon.
3. Press (ACTION) to display the Picture Adjustment Menu.
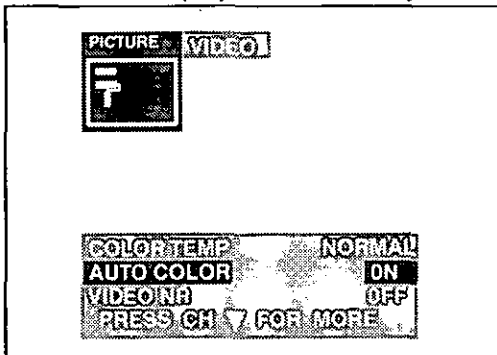
4. Press △ or ▽ to highlight AUTO COLOR.
5. Press ◁ or ▷ to select ON or OFF.
6. Press (ACTION) twice to exit menus.

Video NR (Noise Reduction)

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

1. Press (ACTION).
2. Press △ or ▽ and ◁ or ▷ to highlight the Picture Icon.
3. Press (ACTION) to display the Picture Adjustment Menu.
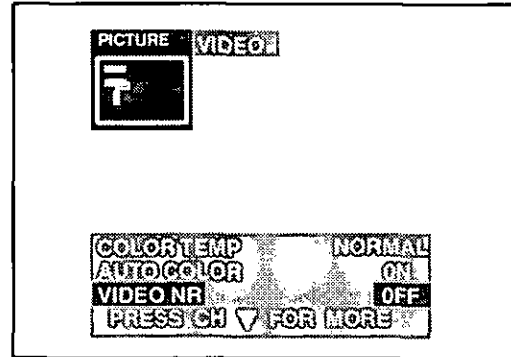
4. Press △ or ▽ to highlight VIDEO NR (Noise Reduction).
5. Press ◁ or ▷ to select ON or OFF.
6. Press (ACTION) twice to exit menus.

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

Audio Adjustments

Audio Norm

This feature is used to reset BASS, TREBLE, and BALANCE back to a factory preset level.

NOTE: Bass and Treble are automatically set when AI Sound is ON.

1. Press (ACTION).

2. Press △ or ▽ and ◁ or ▷ to highlight the Audio Icon.

3. Press (ACTION) to display the Audio Adjustment Menu.
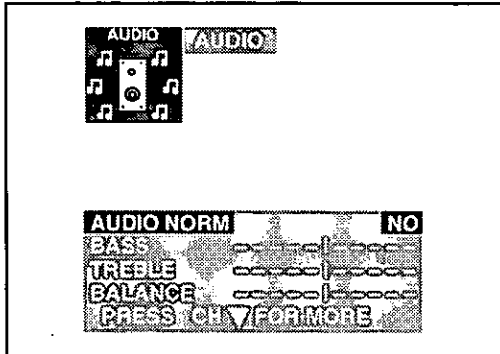
4. Press △ or ▽ to highlight AUDIO NORM.

5. Press ◁ or ▷ to select SET to normalize Bass, Treble, and Balance.

6. Press (ACTION) twice to exit menus.

Bass, Treble, and Balance

Before setting Bass or Treble select the desired mode of AI Sound (ON or OFF). Bass and Treble Adjustments may require readjustment when changing between AI Sound ON or OFF.

1. Press (ACTION).

2. Press △ or ▽ and ◁ or ▷ to highlight the Audio Icon.

3. Press (ACTION) to display the Audio Adjustment Menu.
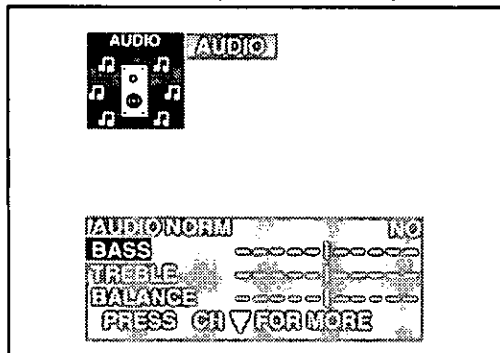
4. Press △ or ▽ to highlight BASS, TREBLE, or BALANCE.

5. Press ◁ or ▷ to adjust for desired audio response.

6. Press (ACTION) twice to exit menus.

Mode (Stereo/SAP/Mono)

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

1. Press (ACTION).

2. Press △ or ▽ and ◁ or ▷ to highlight the Audio Icon.

3. Press (ACTION) to display the Audio Adjustment Menu.
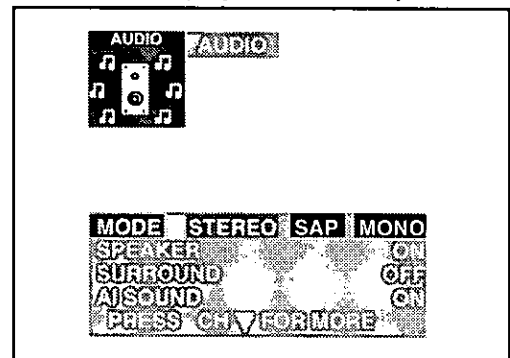
4. Press △ or ▽ to highlight MODE.

5. Press ◁ or ▷ to select STEREO, SAP (Second Audio Programming), or MONO. The selected mode will be highlighted.

6. Press (ACTION) twice to exit menus.

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 △ or ▽ and ◁ or ▷ to highlight the Audio Icon.

3. Press (ACTION) to display the Audio Adjustment Menu.
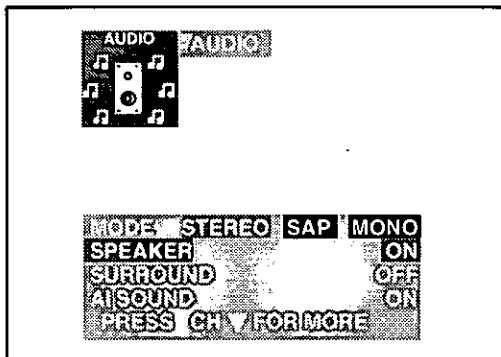
4. Press △ or ▽ to highlight SPEAKER.

5. Press ◁ or ▷ 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 △ or ▽ and ◁ or ▷ to highlight the Audio Icon.

3. Press (ACTION) to display the Audio Adjustment Menu.
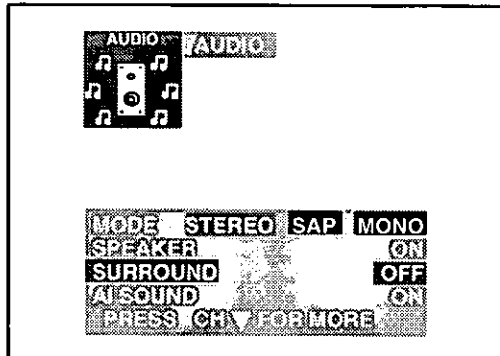
4. Press △ or ▽ to highlight SURROUND.

5. Press ◁ or ▷ 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 △ or ▽ and ◁ or ▷ to highlight the Audio Icon.

3. Press (ACTION) to display the Audio Adjustment Menu.
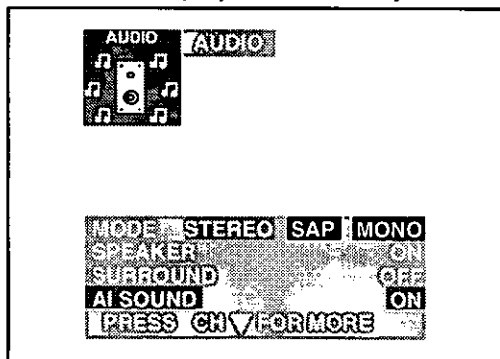
4. Press △ or ▽ to highlight AI SOUND.

5. Press ◁ or ▷ 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 two Video Inputs for the Main Picture (used with optional accessory Video equipment).

1. Press (ACTION).
2. Press ⌃ or ⌄ and ◁ or ▷ to highlight the Input Select Icon.
3. Press (ACTION) to display the Input Select Menu.
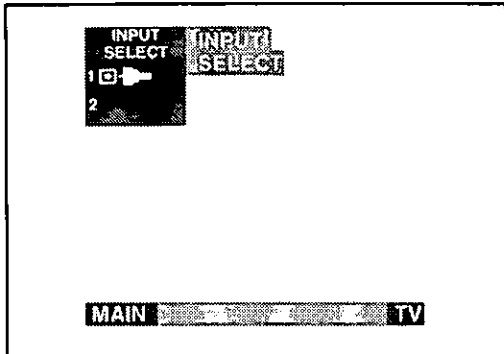
4. Press ◁ or ▷ to select TV, VIDEO 1, or VIDEO 2.
5. Press (ACTION) twice to exit menus.

Timer Features

Sleep Timer

To automatically turn TV OFF in 30, 60, or 90 minutes as desired.

Notes:

• Display will flash 3, 2, and 1 to indicate the last three remaining minutes prior to turn OFF.
• **This feature will be disabled when Auto Power On is activated.**
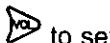
1. Press (ACTION).
2. Press ⌃ or ⌄ and ◁ or ▷ to highlight the Timer Icon.
3. Press (ACTION) to display the Timer Control Menu.
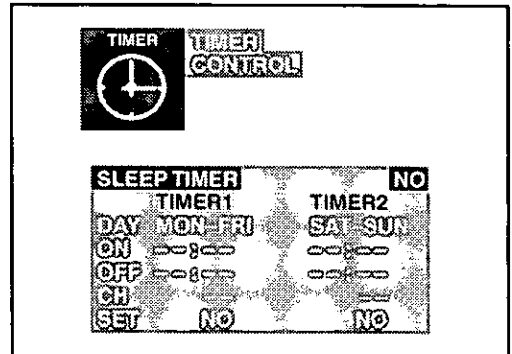
4. Press ▷ to select NO, 30, 60, or 90 (minutes) for Sleep Timer to be activated.
5. Press (ACTION) twice to exit menus.

   Note: To deactivate Sleep Timer, 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.        │
└─────────────────────────────────────────┘
```
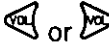
Dual Program Timer
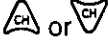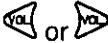
Turn the TV on to a desired channel and then turn the TV OFF at a predetermined time.

Notes:
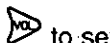
*   The clock and day must be set for this feature to operate. (Refer to Set Up Menu to Set Time and Day.)
*   **This feature will be disabled when Auto Power On is activated.**
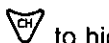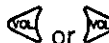
1. Press (ACTION).

2. Press △ or ▽ and ◁ or ▷ to highlight the Timer Icon.

3. Press (ACTION) to display the Timer Control Menu.
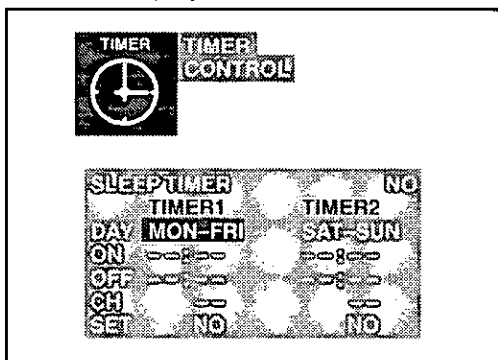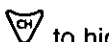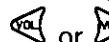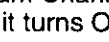
4. Press △ or ▽ to highlight the TIMER 1 or TIMER 2 setting.
    *   Day or days in which the Timer is activated
    *   ON (time) – hours and minutes
    *   OFF (time) – hours and minutes
    *   CH – desired channel to be tuned to when the ON Timer activates
    *   SET – NO (Timer feature will not 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.
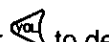   The options for setting day are: (MON~FRI), (SAT~SUN), (DAILY), (SUN), (MON), (TUE), (WED), (THR), (FRI), (SAT), (EVR SUN), (EVR MON), (EVR TUE), (EVR WED), (EVR THR), (EVR FRI), (EVR SAT).

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 channel position.

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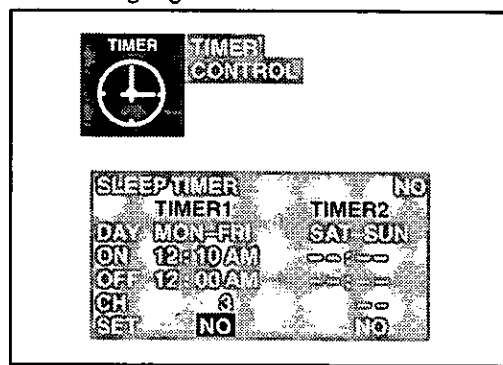
14. Press ▷ to activate or ◁ to deactivate Timer 1.
    *   YES=Feature is activated
    *   NO=Feature is not activated

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

16. Press (ACTION) twice to exit menus.

```
┌─────────────────────────────────────────┐
│ Helpful Hints:                           │
├─────────────────────────────────────────┤
│ • The Program Timer overrides the Sleep  │
│   Timer.                                 │
│ • Program Timer can only access channels │
│   in Program Channel Memory.             │
│ • "Set Time First" will appear on screen │
│   when trying to set Timer Day Option    │
│   without the clock being set.           │
│ • If the Program Timer "ON" functions    │
│   while the set is operating the set     │
│   will automatically tune to the channel │
│   designated in the Program Timer.       │
└─────────────────────────────────────────┘
```

Lockout Features

Lockout Mode

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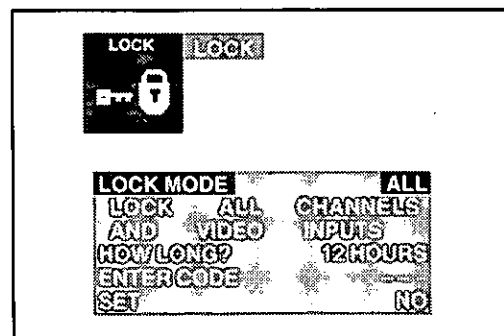
1. Press (ACTION).

2. Press △ or ▽ and ◁ or ▷ to highlight the Lock Icon.

3. Press (ACTION) to display the Lock Menu.

   Note: When the Lockout Menu is displayed, the Lock Mode option will be highlighted.

4. Press ◁ or ▷ to select GAME, CH (CHANNEL), or ALL.
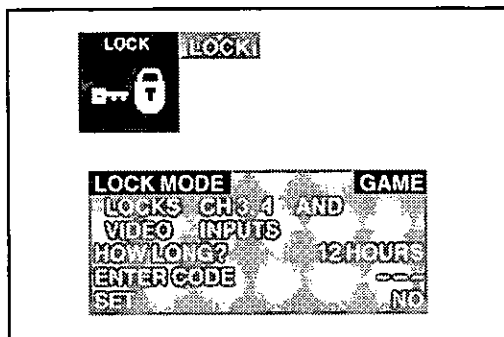
Game Lockout Menu
(Channels 3 and 4 plus Video Inputs)
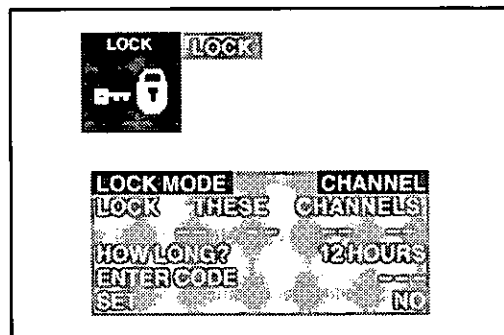
Channels Lockout Menu
(up to 4 Channels)

All Lockout Menu
(All Channels plus Video Inputs)

Note: When the LOCK MODE CHANNEL is selected, perform Steps A through D.
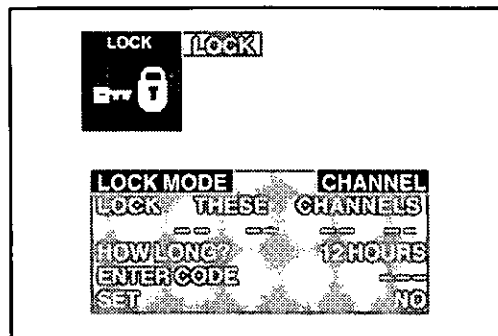
Step A

Press ▽ to highlight "LOCK THESE CHANNELS".

Step B

Then use the Remote Control Keypad or ◁ or ▷ to select a channel you desire to lockout.

Step C

Press ▽ to select next Channel position.

Step D

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

5. Press ▽ to highlight "HOW MANY HOURS".

6. Press ◁ or ▷ to select 12, 24, or 48 (hours lockout time).

7. Press ▽ to highlight "ENTER CODE" then enter a 3-digit code by using the Remote Control Keypad. **IMPORTANT NOTE: Use a code you can easily remember.**

8. Press ▷ to activate Lock feature. CHANNELS LOCKED will display On Screen.
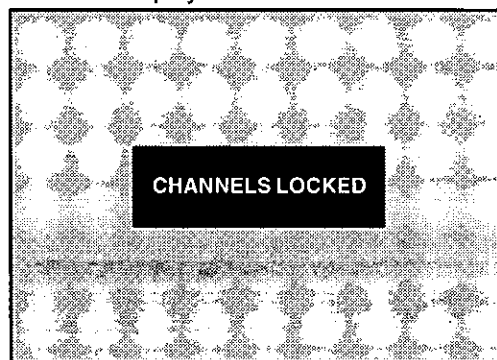
Lock Feature Activated

Unlock

1. Press (ACTION).

2. Press △ or ▽ and ◁ or ▷ to highlight the Lock Icon.

3. Press (ACTION) to display the Lock Menu.

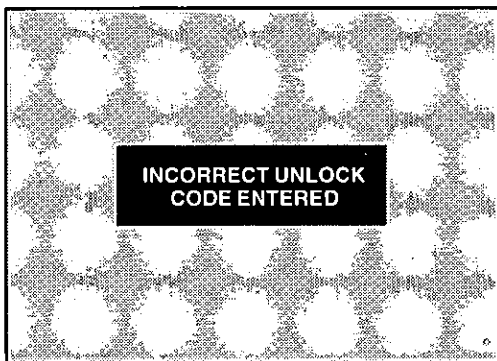4. Enter same 3-digit code as in Step 7 from Lockout Mode section. Channel Unlocked display will appear.

Unlock (cont.)
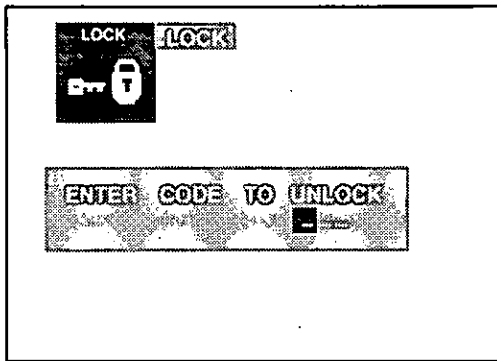


ENTER SAME 3 DIGIT CODE
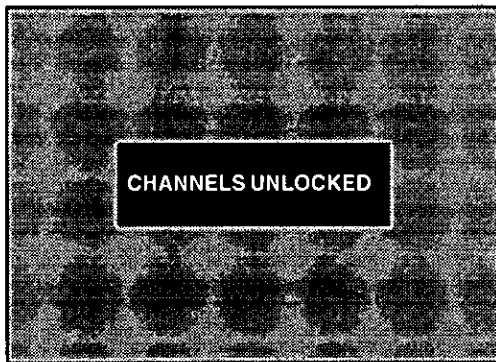
IF 3 DIGIT CODE IS THE SAME

IF 3 DIGIT CODE IS NOT THE SAME

Favorite Channel Features

Channel Scan

This feature is use to select which Channels will be accessed when using ⌃ or ⌄, ALL or FAV (Favorite) Channels.

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

1. Press (ACTION).
2. Press ⌃ or ⌄ and ◁ or ▷ to highlight the Favorite Channel Icon.
3. Press (ACTION) to display the Favorite Channel Menu.
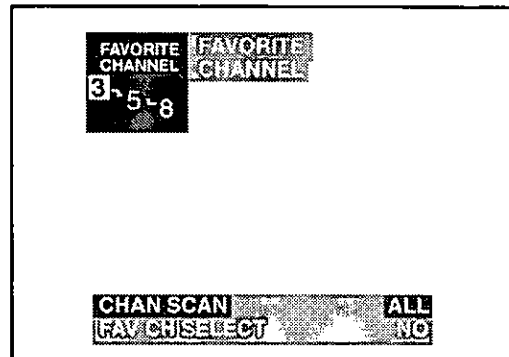
4. Press ⌃ or ⌄ to highlight CHAN SCAN.
5. Press ◁ or ▷ to select ALL or FAV (Favorite).
   - ALL – The CH UP/DOWN buttons will access all channels in Channel Memory
   - FAV – The CH UP/DOWN buttons will only access channels in Favorite Channel Select Memory
6. Press (ACTION) twice to exit menus.

Favorite Channel Select

Program up to 15 of the user's favorite channels. User can use the ⌃ or ⌄ on the Remote Control to scan channels without going through channels you do not normally view.

1. Press (ACTION).
2. Press ⌃ or ⌄ and ◁ or ▷ to highlight the Favorite Channel Icon.
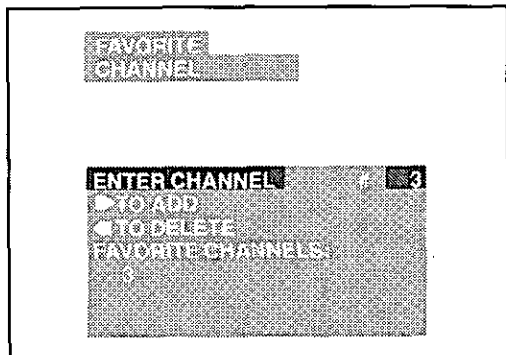3. Press (ACTION) to display the Favorite Channel Menu.
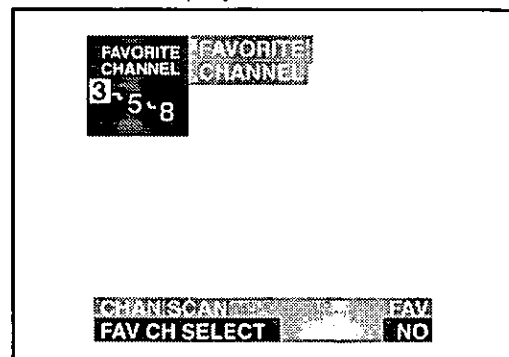
Favorite Channel Select (cont.)

4. Press △ or ▽ to highlight CHAN SCAN. Then, press ◁ or ▷ to select FAV.

5. Press △ or ▽ to highlight FAV CH SELECT.

6. Press ◁ or ▷ to display the Favorite Channel Select Menu.

7. Enter the channel number to be added or deleted from Favorite Channel Memory (using the Remote Keypad 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 (ACTION) twice to exit menus.

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. Captions are easily assigned to the channel numbers the viewer selects by following the steps outlined below. The channel number will then display, along with preset captions when changing channels or pressing (RECALL).

1. Press (ACTION).

2. Press △ or ▽ and ◁ or ▷ to highlight the Channel Caption Icon.

3. Press (ACTION) to display the Channel Caption Menu.
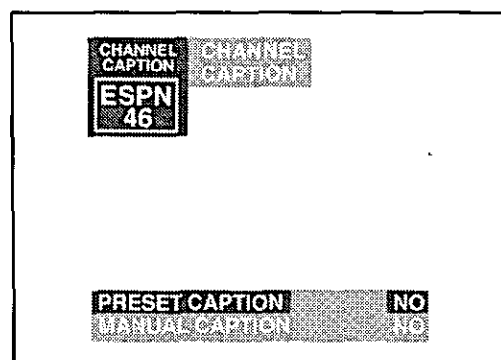
4. Press △ or ▽ to highlight PRESET CAPTION.

5. Press ◁ or ▷ to display the Preset Caption Menu.
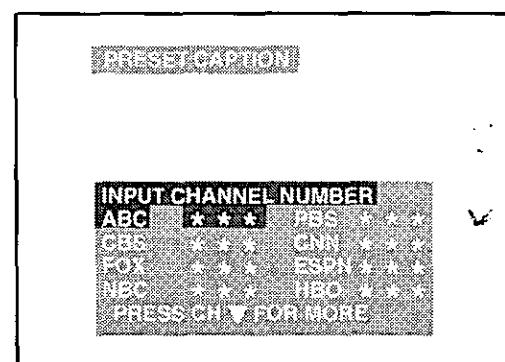
6. Press △ or ▽ to highlight the desired Preset Channel Caption.

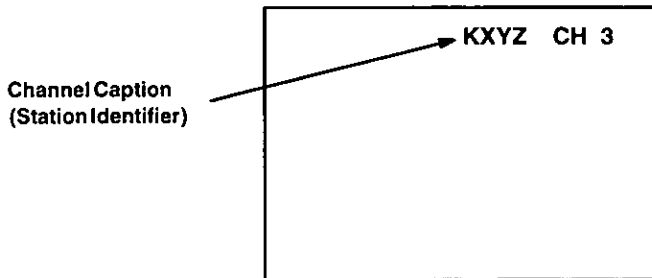7. Use the Remote Control keypad to assign the channel number to the Channel Caption (Refer to the local TV guide).

   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.

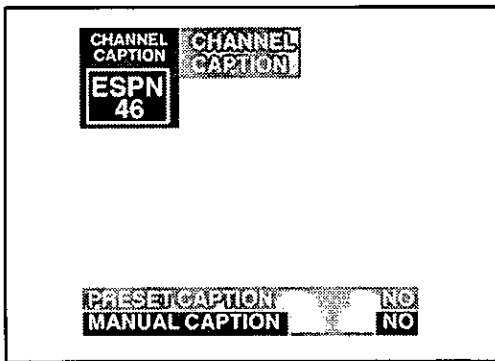9. Press (ACTION) three times to exit menus.

Channel Caption Features (cont.)
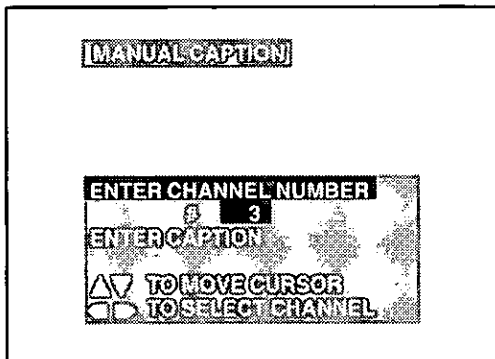
Manual Caption

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 (RECALL).

Channel Caption (Station Identifier) ──────→ KXYZ   CH 3

1. Press (ACTION).

2. Press △ or ▽ and ◁ or ▷ to highlight the Channel Caption Icon.

3. Press (ACTION) to display the Channel Caption Menu.

CHANNEL CAPTION — **CHANNEL CAPTION**

ESPN 46

PRESET CAPTION   NO
MANUAL CAPTION   NO

4. Press △ or ▽ to highlight MANUAL CAPTION.

5. Press ◁ or ▷ to display the MANUAL CAPTION menu.

MANUAL CAPTION

ENTER CHANNEL NUMBER
     ⬚ 3
ENTER CAPTION
△▽ TO MOVE CURSOR
◁▷ TO SELECT CHANNEL

6. Use the Remote Control Keypad or ◁ or ▷ to select the channel number where the channel caption (STATION IDENTIFIER) is to be added.

7. Press ▽ to highlight ENTER CAPTION.

MANUAL CAPTION

ENTER CHANNEL NUMBER
     ⬚ 3
ENTER CAPTION
■
△▽ TO MOVE CURSOR
◁▷ TO SELECT CHARACTER
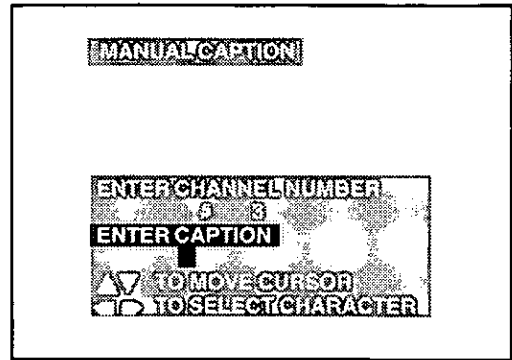
8. Press the ◁ or ▷ to select the first character in channel caption (STATION IDENTIFIER).

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).

   Note: To delete channel caption from channel number, all four characters position must be blank.

10. Press △ or ▽ repeatedly to highlight ENTER CHANNEL NUMBER. Then repeat steps 6 through 10 to continue adding channel caption (STATION IDENTIFIERS).

11. Press (ACTION) three times to exit menus.

Set-Up Features

Clock (Auto)

This feature automatically adjusts the TV clock to the current 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).

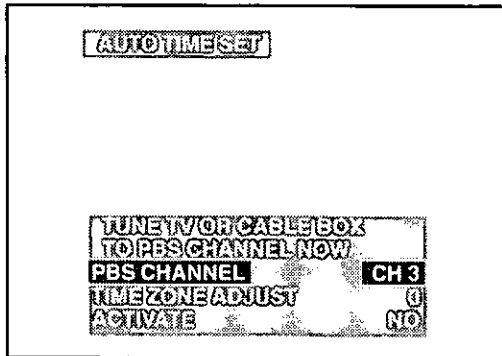Follow these procedures to automatically set the TV clock.

1. Press (ACTION).

2. Press △ or ▽ and ◁ or ▷ to highlight the Set Up Icon.

3. Press (ACTION) to display the Set Up Menu.
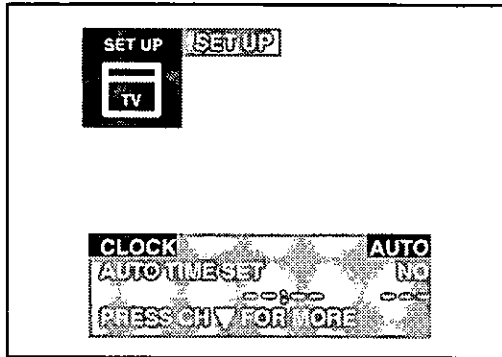
4. Press △ or ▽ to highlight CLOCK.

5. Press ◁ or ▷ to select AUTO (if necessary).

6. Press ▽ to highlight AUTO TIME SET.
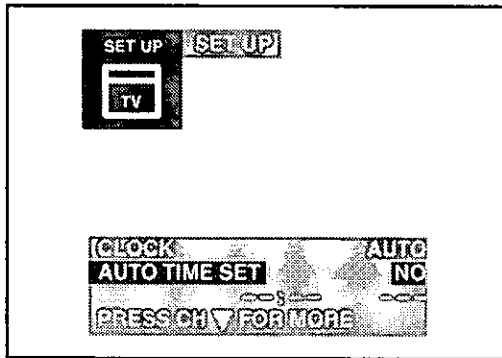
7. Press ◁ or ▷ to display the AUTO TIME SET Menu.

8. Press △ to highlight PBS CHANNEL.

9. Tune TV or Cable Box to PBS channel, using the Remote Control Keypad or ◁ or ▷ to enter PBS channel number.
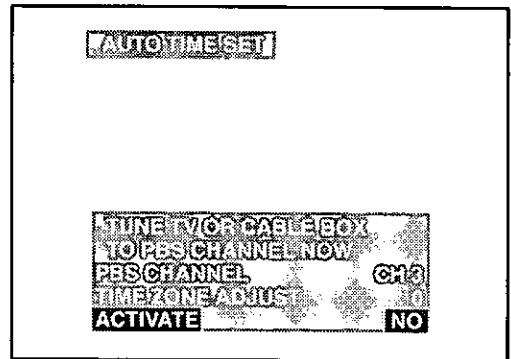
10. Press ▽ to highlight TIME ZONE ADJUST.

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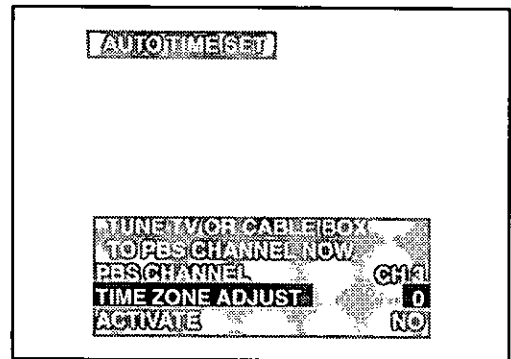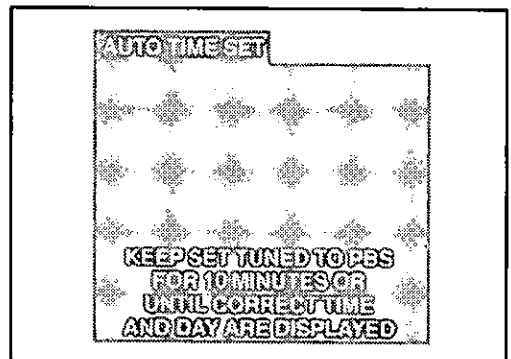

11. Press ◁ for minus one-hour offset or ▷ for plus one-hour offset (if necessary).
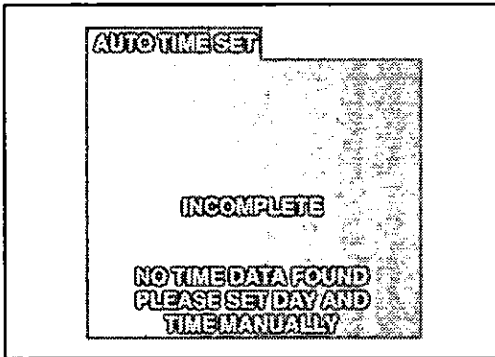
12. Press ▽ to highlight ACTIVATE.
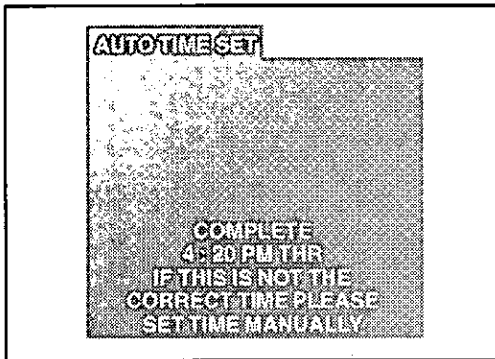

13. Press ◁ or ▷ to display the AUTO TIME SET submenu.

WAITING FOR CORRECT TIME AND DAY

Set-Up Features (cont.)
Clock Auto (cont.)

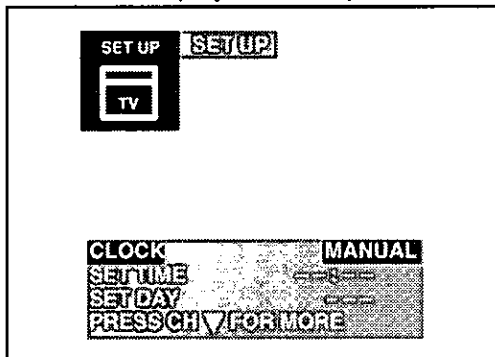
INCOMPLETE READ MENU

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 △ or ▽ and ◁ or ▷ to highlight the Set Up Icon.
3. Press (ACTION) to display the Set Up Menu.

4. Press △ or ▽ to highlight CLOCK.
5. Press ◁ or ▷ to select MANUAL.
6. Press ▽ to highlight SET TIME.
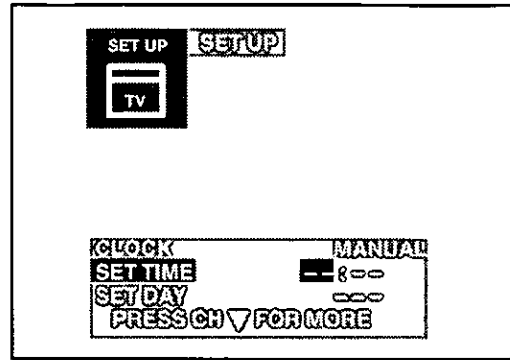
7. Press ◁ or ▷ to Set Hours (set AM/PM accordingly).
8. Press ▽ to highlight minutes position.
9. Press ◁ or ▷ to set minutes.
10. Press (ACTION) twice to exit menus.

Set Day

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

1. Press (ACTION).
2. Press △ or ▽ and ◁ or ▷ to highlight the Set Up Icon.
3. Press (ACTION) to display the Set Up Menu.
4. Press △ or ▽ to highlight CLOCK.
5. Press ◁ or ▷ to select MANUAL.
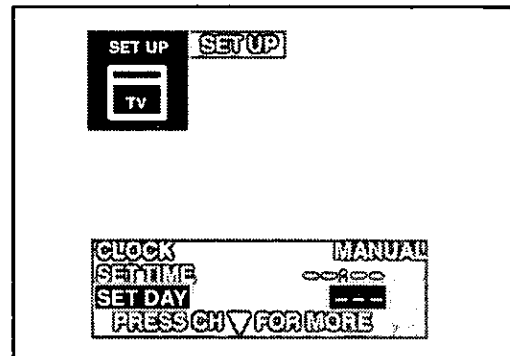
6. Press ▽ to highlight SET DAY.
7. Press ◁ or ▷ to select proper day of the week.
8. Press (ACTION) twice to exit menus.

Set-Up Features (cont.)

Mode (TV or Cable)

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 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 cable box to receive these specific channels.

1. Press ⒶⒸⓉⒾⓄⓃ.
2. Press Ⓐ or ⓥ and ⓠ or ⓟ to highlight the Set Up Icon.
3. Press ⒶⒸⓉⒾⓄⓃ to display the Set Up Menu.
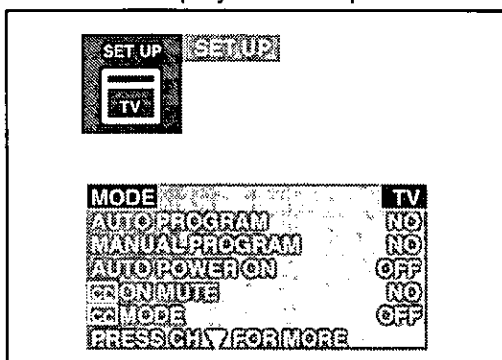
4. Press Ⓐ or ⓥ to highlight MODE.
5. Press ⓠ or ⓟ to select TV or CABLE.
6. Press ⒶⒸⓉⒾⓄⓃ twice to exit menus.

Auto Program

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

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

1. Press ⒶⒸⓉⒾⓄⓃ.
2. Press Ⓐ or ⓥ and ⓠ or ⓟ to highlight the Set Up Icon.
3. Press ⒶⒸⓉⒾⓄⓃ to display the Set Up Menu.
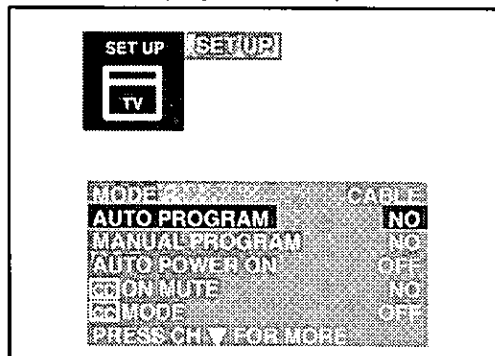
4. Press Ⓐ or ⓥ to highlight AUTO PROGRAM.
5. Press ⓠ or ⓟ to start Auto Programming Scan. Channels will automatically advance until all channels have been scanned.

   Note: Channel numbers with video signal present will turn blue. This indicates that channel is included in the Channel Scan Memory.

6. Press ⒶⒸⓉⒾⓄⓃ 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.)

Set-Up Features (cont.)

Manual Program

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

1. Press (ACTION).
2. Press ⌂ or ▽ and ◁ or ▷ to highlight the Set Up Icon.
3. Press (ACTION) to display the Set Up Menu.
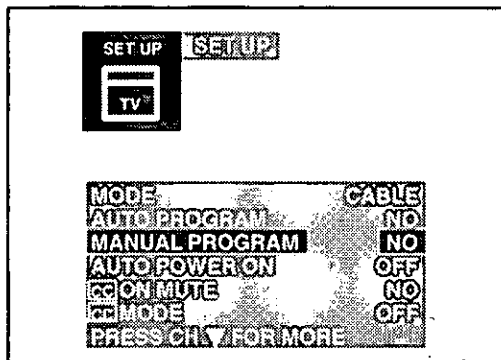
4. Press ⌂ or ▽ to highlight MANUAL PROGRAM.
5. Press ◁ or ▷ to display the Manual Program Menu.
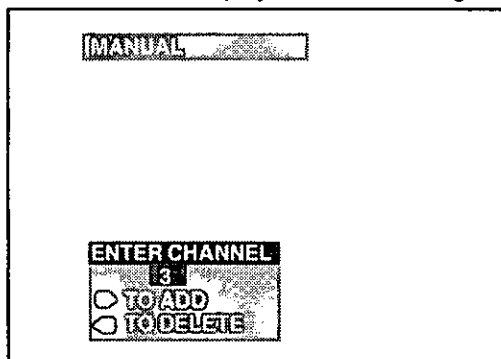
6. Use the Numeric Keypad (0 through 9 buttons) or ⌂ or ▽ to select channels.
7. Press ▷ to add channel(s) to memory (blue). Press ◁ to delete channel(s) from memory (yellow).
8. Repeat Steps 6 and 7 to continue adding or deleting channels.
9. Press (ACTION) twice to exit menus.

Auto Power On

This feature allows the user to power up the TV at the same time as the cable box (or other components). The TV must be plugged into the Cable Box switched outlet.

Note: When this feature is activated (on), Timer features will be disabled and will reset.

1. Press (ACTION).
2. Press ⌂ or ▽ and ◁ or ▷ to highlight the Set-Up Icon.

3. Press (ACTION) to display the Set-Up Menu.
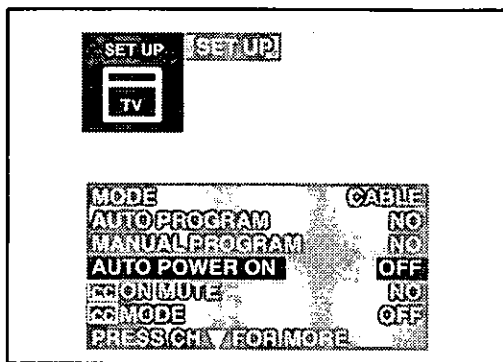
4. Press ▽ to highlight AUTO POWER ON.
5. Press ◁ or ▷ to select SET or OFF.
6. Press (ACTION) twice to exit menus.

CC On Mute

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

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

1. Press (ACTION).
2. Press ⌂ or ▽ and ◁ or ▷ to highlight the Set Up Icon.
3. Press (ACTION) to display the Set Up Menu.
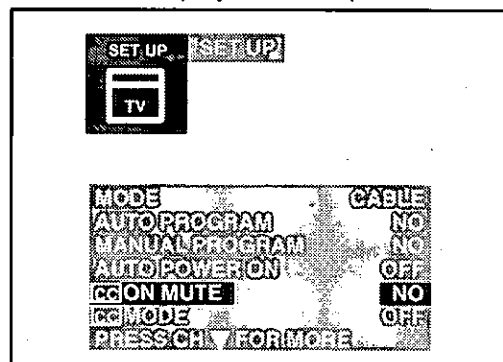
4. Press ⌂ or ▽ to highlight CC ON MUTE.
5. Press ◁ or ▷ to select NO (OFF), C1, C2, C3, or C4.

Note: Recommended menu Set Up for Closed Caption when using Mute Button.
• CC ON MUTE: C1
• CC MODE: OFF

6. Press (ACTION) twice to exit menus.
7. Press (MUTE) when the program being viewed is broadcast with Closed Caption to activate. Press (MUTE) again to deactivate.

Set-Up Features (cont.)

[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.

1. Press ⒜ⒸⓉⒾⓄⓃ.

2. Press △ or ▽ and ◁ or ▷ to highlight the Set Up Icon.

3. Press ⒜ⒸⓉⒾⓄⓃ button to display the Set Up Menu.
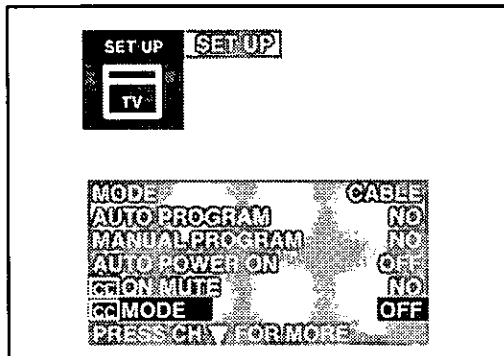
4. Press △ or ▽ to highlight [CC] MODE.

5. Press ◁ or ▷ to select OFF, C1, C2, T1, T2, C3, C4, T3, or T4.

   • CAPTION OFF – Select when Closed Caption is not desired.

   • CAPTION C1 – For video related information that can be displayed (up to four (4) lines of script 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, T3, T4 – Other modes which display information and blank out a large portion of the picture on the television screen.

   • CAPTION C3, C4 – Other modes used for video related information.

6. Press ⒜ⒸⓉⒾⓄⓃ twice to exit menus.

Programming the Home Theater Remote

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

Code Known

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

[1] Determine the brand of the component.

[2] Identify the code(s) associated with the brand from the infrared code index (see following pages). Record all possible codes.

[3] Confirm that the component is plugged in and operating properly, then turn it OFF.

[4] **Press and hold the (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 Keypad "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 [5]), the component will turn on.**

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.

[6]
**Code From
Index Sheet**

| 1 | 5 | 9 |

EUR511052

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

Note: If an incorrect code is entered, or when the operation is not completed within 30 seconds, the settings will not change.
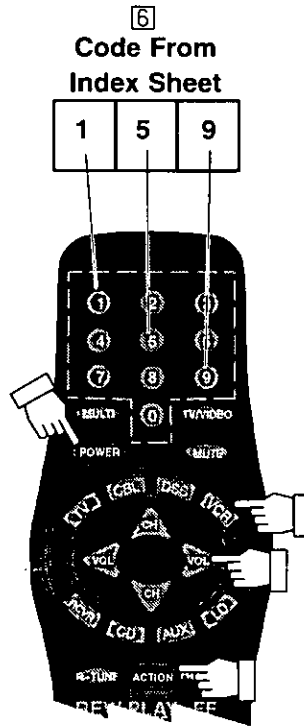
Infrared Remote Codes for Specific Components

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

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

VCR Infrared Codes Index

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

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

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

VCR

Second VCR
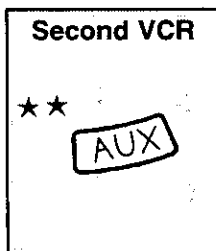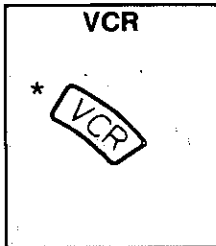
| Code Index for VCRs			
VCR Brand	**Code(s)**	**VCR Brand**	**Code(s)**
Admiral	200	Pentax	000, 011, 300
Aiwa	137, 160	Philco	081, 125, 130, 136, 137, 150
Akai	014, 015, 016, 142		
Audio Dynamic	011, 240	Philips	125, 130, 150
Bell & Howell	005, 013	Pioneer	125
Broksonic	081, 136	Proscan	000, 001, 002, 125, 130, 150, 300, 310
Canon	125, 135		
Citizen	006	Quasar	100, 101, 125, 130
Craig	005, 006, 141	Radio Shack	005, 009, 130, 137, 170, 210, 241
Curtis Mathes	130, 137, 300		
Daewoo	001, 130, 250	RCA	000, 001, 002, 125, 130, 150, 170, 300, 310
DBX	010, 011, 240		
Dimensia	300		
Emerson	003, 051, 080, 081, 135, 136, 243, 250	Realistic	005, 009, 130, 137, 210, 241
Fisher	005, 007, 008, 009	Samsung	002, 004, 220
Funai	081, 136, 137	Sansui	081, 136, 240
GE	130, 170, 300	Sanyo	005, 009
Goldstar	006	Scott	001, 002, 004, 009, 081, 136, 230, 241, 330, 340
Go Video	220		
Hitachi	000, 125, 300,		
Instant Replay	125, 130,	Sears	000, 005, 006, 007, 008,
Jensen	240		
JVC	010, 011, 190, 240	Shaintom	050
Kenwood	006, 010, 011, 240	Sharp	200, 210
LXI	000, 005, 006, 007, 008, 009, 137	Signature 2000	137, 200
		Singer	050
Magnavox	025, 130, 150	Sony	140, 141, 142
Marantz	010, 011, 240	SV2000	137
Marta	006	Sylvania	125, 130, 137, 150
Memorex	009, 130	Symphonic	137
MGA	230, 241, 242, 243, 330, 340	Tashiro	006
		Tatung	010, 011, 240
Minolta	000, 300	Teac	010, 011, 137, 240
Mitsubishi	230, 241, 242, 243, 330, 340	Technics	100, 101, 125, 130
		Teknika	130, 137
Multitech	004, 137, 330	Toshiba	001, 310
NEC	010, 011, 190, 240	Vector Research	011
Olympic	125, 130	Wards	006, 009, 200, 210, 290
Optimus	006, 200, 100, 140		
Orion	081, 136	Yamaha	005, 010, 011, 240
Panasonic	100, 101, 125, 130	Zenith	290
Penney	000, 005, 010, 011, 130, 240, 300		

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.

Cable

☆ CBL
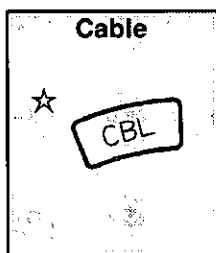
Codes for Cable Box			
Brand of Cable–TV Box	**Code(s)**	**Brand of Cable–TV Box**	**Code(s)**
ABC	530	Philips	006, 007, 540, 541, 542
Archer	531, 544	Pioneer	001, 260
Cableview	005, 544	Pulsar	005, 544
Citizen	005, 522	Puser	544
Curtis	130, 131	RCA	170, 220
Diamond	530, 531, 544	Realistic	544
Eagle	541	Regal	130, 350, 720, 730, 731, 900
Eastern	560		
Gcbrand	005, 544	Regency	560
Gemini	522	Rembrandt	005, 544, 702
General Instrument	122, 360, 520, 521, 522, 530, 531, 532, 533	Samsung	005
		Scientific Atlanta	122, 130, 131
Hamlin	130, 350, 720, 730, 731, 900	SImark	001, 005
		Sprucer	005, 121
Hitachi	003, 530	Stargate	005, 544
Jerrold	122, 360, 520, 521, 522, 530, 531, 532, 533	Teleview	001, 005
		Texscan	810
		Tocom	700, 701
Macom	003, 004, 005	Toshiba	004
Memorex	542	Unika	531, 544
Movietime	005, 544	Universal	522, 544
Oak	002, 702, 710	Videoway	006
Panasonic	120, 121, 132	Viewstar	541, 542
Paragon	281	Zenith	000, 280, 281
		Zenith/Drake Satellite	000

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

CD Player

☆☆ CD
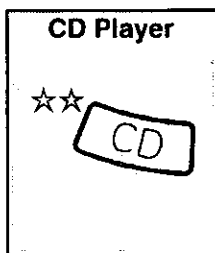
| Codes for CD Players			
Brand of CD Players	**Code(s)**	**Brand of CD Players**	**Code(s)**
Admiral	110	Optimus	030, 057, 059, 061
Aiwa	162, 164		
Carver	150, 151	Panasonic	100, 101, 130
Denon	200	Philips	150, 151
Emerson	172	Pioneer	030
Fisher	005	Quasar	100, 101, 130
Garrard	057	RCA	160, 170, 171, 500
Harman/Kardon	059, 060		
Hitachi	007	Sansui	032, 050, 320
Jensen	163	Sanyo	005
JVC	190, 191, 270	Scott	032, 050, 320
Kardon	058	Sharp	200, 201
Kenwood	000, 001, 050, 270	Sherwood	059
LXI	165	Sony	140
Magnavox	150, 161	Soundesigh	220
Marantz	151	Teac	051, 055, 057
McIntosh	060	Technics	100, 101, 130
Nakamichi	032	Victor	190, 191, 270
Onkyo	053, 054	Yamaha	002, 003, 004

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.

Cassette Players

✳ [AUX]
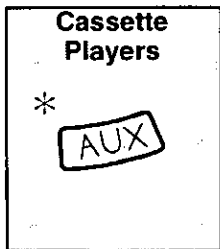
Code Index for Cassette Players

Brand of Cassette Players	Code(s)	Brand of Cassette Players	Code(s)
Aiwa	760, 761, 762	Philips	751
Denon	800	Pioneer	630
Fisher	603	RCA	763, 770, 771
Jensen	657	Sansui	631, 653
JVC	780, 781	Sharp	800
Kenwood	600, 650	Sony	740
Marantz	751	Teac	653, 654
Nakamichi	631	Technics	700, 701, 730
Onkyo	651, 652, 656	Yamaha	601, 602
Panasonic	700, 701, 730		

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.

Receivers Amplifiers

✳✳ [RCVR]
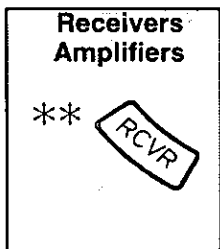
Code Index for Receivers and Amplifiers

Brand of Receiver / Amplifier	Code(s)	Brand of Receiver / Amplifier	Code(s)
Admiral	110	Panasonic	100, 101, 130
Aiwa	160, 161	Philips	150
Denon	200, 201, 202	Pioneer	030, 032
Fisher	004	Quasar	100, 101, 130
Garrard	055	RCA	003, 130, 162, 170, 171
Harman	150, 057		
Jensen	164	Sansui	003, 053, 320
JVC	190, 191	Sharp	200, 203
Kenwood	000, 050	Sony	140
Magnavox	162	Soundesign	220
Marantz	151	Teac	053, 054, 055
McIntosh	058	Technics	100, 101, 130
Nakamichi	031	Victor	190, 191
Onkyo	151, 156	Yamaha	001, 002
Optimus	003, 162, 170, 171		

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.

Laser Disc Player

◊
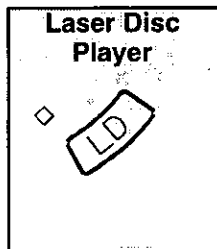
Codes for Laser Disc			
Brand of Laser Disc	Code(s)	Brand of Laser Disc	Code(s)
Denon	370	Quasar	100, 101, 135, 380
Hitachi	000	RCA	370
Kenwood	002, 003	Samsung	160
Marantz	370	Sanyo	370
Mitsubishi	370	Sharp	200
NEC	370	Sony	140, 141, 142, 143
Panasonic	100, 101, 135, 380	Teac	370
Philips	150	Toshiba	370
Pioneer	370	Yamaha	001
Proscan	370		

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.

DSS

◊◊
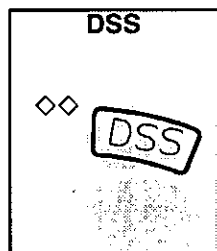
Codes for DSS (Digital Satellite System)	
Brand of Satellite	Code(s)
GE	170
Panasonic	100
RCA	170
Sony	390
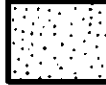
Note: After entering the proper infrared code, press the Remote **AUX** Selection Mode button (★). Then refer to the Remote Control Key Functions section, for Remote DVD function key listing.

Digital Videodisc

★
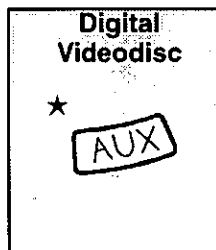
Codes for DVD (Digital Videodisc)	
Brand of DVD	Code(s)
Panasonic	102

Troubleshooting Chart

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

Symptoms		Check
Picture	**Sound**	
SNOWY PICTURE	NOISY SOUND	– ANTENNA LOCATION AND/OR CONNECTION
MULTIPLE IMAGE	NORMAL SOUND	– ANTENNA DIRECTION AND/OR LOCATION – ANTENNA LEAD-IN WIRE
INTERFERENCE	NOISY SOUND	– ELECTRICAL APPLIANCES, LIGHTS, CARS AND TRUCKS – DIATHERMY AND OTHER MEDICAL EQUIPMENT
NORMAL PICTURE	NO SOUND	– VOLUME CONTROL SETTING – MUTE CONTROL (IF APPLICABLE) – TV SPEAKER SWITCH (IF APPLICABLE) IN OFF OR EXT POSITION – TRY ANOTHER CHANNEL
NO VIDEO	NOISY SOUND	– TV/ANT-CABLE TUNING SYSTEM SET TO PROPER SETTING – ANTENNA INPUT MODE INCORRECT
NO PICTURE	NO SOUND	– 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	– COLOR CONTROL SETTINGS – TRY ANOTHER CHANNEL
BLACK PICTURE	NO SOUND	– RECEIVER IN VIDEO MODE WITH NO SIGNAL
NO VIDEO	NOISY SOUND	– CHANNEL LOCKOUT FEATURE ACTIVATED
BLACK BOX IN PICTURE	SOUND	– CC (CLOSED CAPTION) IN TEXT MODE – PUT IN CAPTION OFF MODE TO ELIMINATE BLACK BOX

NOTES

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