

Panasonic[®]

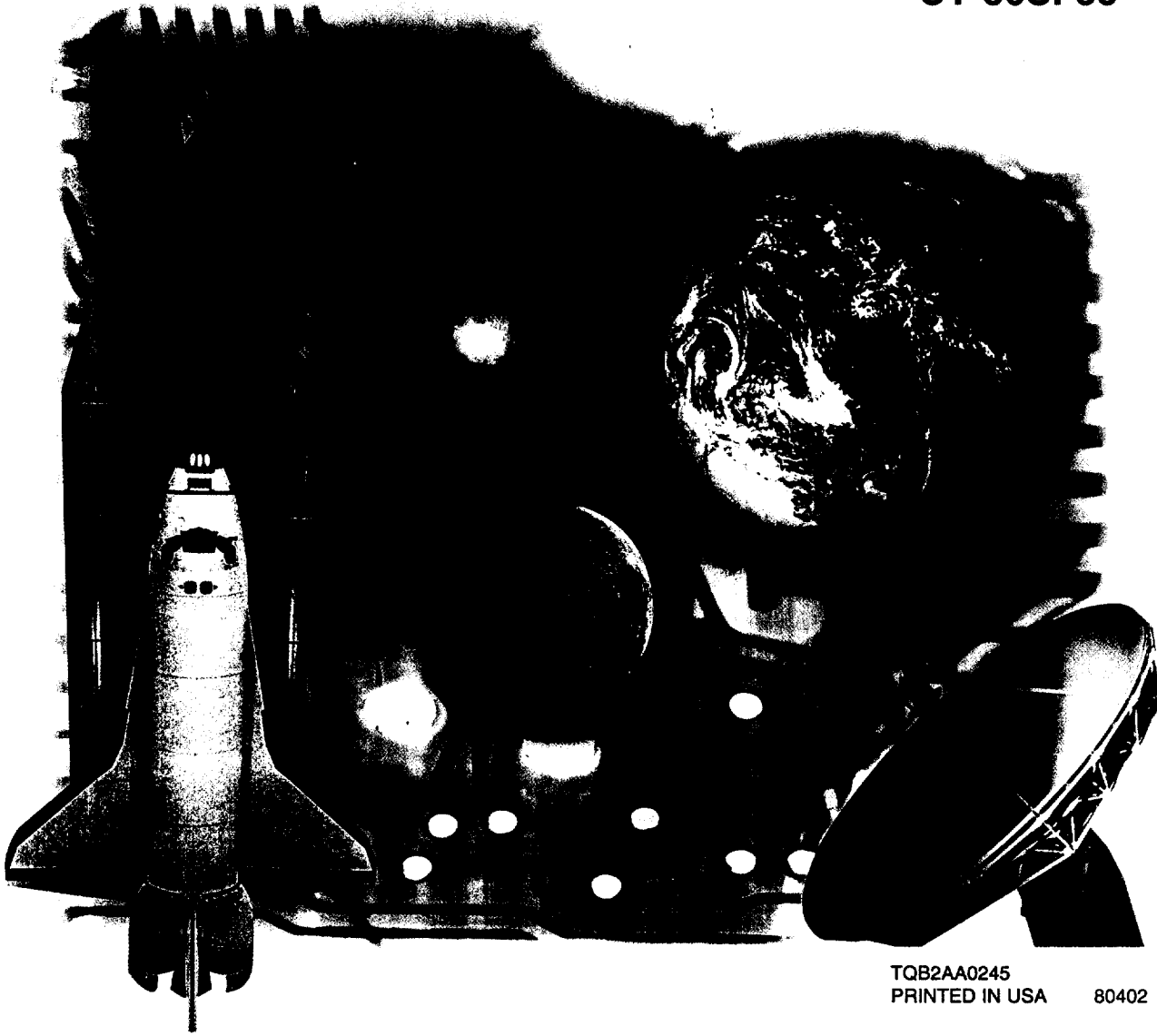
SuperFlat™ System Monitor-Receiver Operating Instructions

CT-27SF35
CT-32SF35



CT-F2993
CT-F3393

CT-F2993V
CT-F3393V

CT-F2993X
CT-F3393X
CT-36SF35



TQB2AA0245
PRINTED IN USA 80402

	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.

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

Table of Contents

Congratulations	2
Customer Record	2
Care and Cleaning	2
Specifications	2
Installation	3
Television Location.....	3
Optional Cable Connections.....	3
AC Power Supply Cord	3
Cable / Antenna.....	3
Cable Connection.....	3
Antenna Connection.....	3
Optional Equipment Connections.....	4
To Audio AMP (Amplifier).....	4
Program Out Connection.....	4
Dolby Center Channel Input Connection.....	5
Cable Converter Box Connection.....	6
Picture In Picture (PIP) Operation	7
With / Without a VCR and Cable Box.....	7
With a VCR - No Cable Box	8
Roller Guide Menu	9
Navigation Button	9
Remote Control	9
Roller Guide Feature Chart	10
Special Features	13
Languages.....	13
Dolby Center Sound	13
Sleep Timer	14
Program Timer	14
Picture Adjustments	15
Favorite Channels and Video Labeling	15
Locking Channels and Games (Video Input).....	16
Unlocking Channels Lock and Game Lock	17
Troubleshooting Chart.....	18

Read these instructions completely before operating TV.

Contents are subject to change without notice or obligation.



Copyright 1998 by Matsushita Electric Corporation of America. All rights reserved.
Unauthorized copying and distribution is a violation of law.

CONGRATULATIONS
Congratulations

Your new SUPERFLAT™ TV features state-of-the-art picture quality, an innovative dome sound system, and compact, elegant styling that is designed to give you many years of enjoyment. It was thoroughly tested and tuned at the factory for best performance.

Customer Record

The model and serial number of this product are located on the back of the TV. You should note the model and serial number in the space provided and retain as a permanent record of your purchase. This will aid in identification in the event of theft or loss. Product registration is available at www.prodreg.com/panasonic.

Model Number	
Serial Number	

Care and Cleaning

Screen (Turn TV Off)

- Use a mild soap solution or window cleaner with a soft clean cloth. DO NOT USE ABRASIVE CLEANERS.
- Avoid excessive moisture and wipe dry.

Cabinet and Remote Control

- For cabinets and Remote Control, use a soft cloth dampened with water or a mild detergent solution. Avoid excessive moisture and wipe dry.
- Do not use benzene, thinner or other petroleum based products.

Specifications

Power Source CT-27SF35 CT-32SF35 CT-36SF35	120V AC, 60Hz
Channel Capability - 181	VHF-12; UHF-56; Cable-124
2 Video Input Jacks	1Vp-p, 75 Ohm, Phono Jack Type
2 Audio Input Jacks	500mV RMS 47K Ohm
Audio Amp Jacks	0-2.0V RMS 4.7K Ohm
S-Video Input Jack	S-Video (Y-C) Connector

Specifications are subject to change without notice or obligation.

Installation

Television Location

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

- Avoid excessive sunlight or bright lights, including reflections.
- Keep away from excessive heat or moisture. Inadequate ventilation may cause internal component failure.
- Fluorescent lighting may reduce Remote Control transmitting range.
- Keep away from magnetic equipment, including motors, fans, or external speakers.

Optional Cable Connections

Shielded audio and video cables should be used between components. For best results:

- Use 75-ohm coaxial shielded cables.
- Check type of output and input connectors on your components.
- Determine required cable lengths.

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 A PLUG WITH A RECEPTACLE OR OTHER OUTLET UNLESS THE BLADE CAN BE FULLY INSERTED TO PREVENT BLADE EXPOSURE. FOR SOME MODELS THAT ARE NON-POLARIZED, THE USE OF AN AC ADAPTOR CONNECTOR MAY BE NECESSARY.



Polarized plug

Cable / Antenna 1 and 2

For proper reception, either a cable or antenna connection is required.

Cable Connection

Connect the cable supplied by your local cable company.

Note: A cable converter box may be required for proper reception. Check with your local Cable company for compatibility requirements.

Incoming Cable from Cable Company

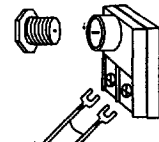


75 Ohm VHF/UHF on back of TV

Antenna 1 and 2 Connections

- For proper reception of VHF/UHF channels, an external antenna is required. For best reception an outdoor antenna is recommended.
- Antenna 1 and Antenna 2 must be set to TV in the SET UP menu.

Incoming Cable from Home Antenna

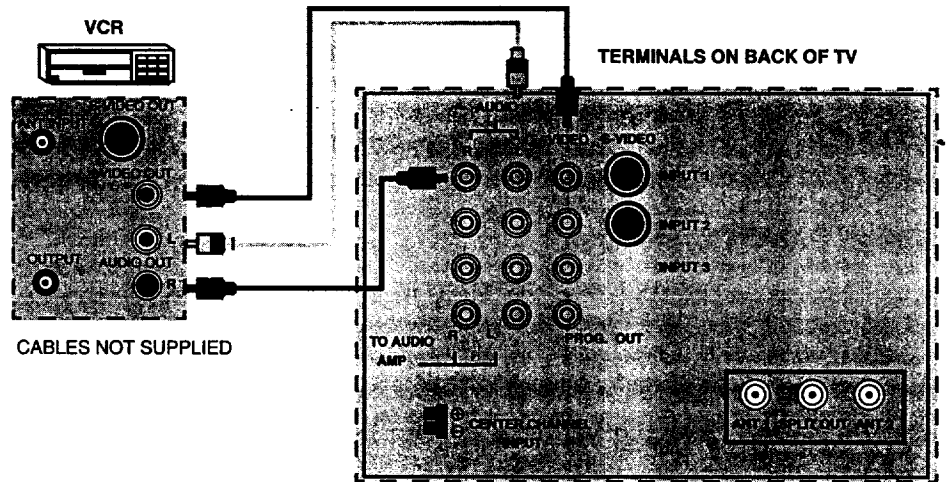


Cable Preset

Cable Mode is preset at the factory. Antenna users must change to Antenna 1 and Antenna 2 in the Set Up Menu.

Optional Equipment Connections

VCR's, video disc players, video game consoles, and DSS equipment can also be connected to the video inputs. See the optional equipment manual for details.



Procedure

1. Connect equipment as shown to rear Audio/Video input jacks.
2. Select the Video mode by pressing **TV/VIDEO** button.
3. Operate optional equipment as instructed in equipment manual.

Note: The S-VIDEO connection is optional and overrides other VIDEO connection. Use INPUT 1, AUDIO R and L with S-VIDEO connection.

TO AUDIO AMP (Amplifier)

Connect to an external audio amplifier input for listening through a stereo system.

Note: TO AUDIO AMP terminals cannot be connected directly to external speakers.

Audio Adjustments

1. Select **SPEAKERS ON** located in the AUDIO menu on screen.
2. Set amplifier volume to minimum.
3. Adjust TV volume to desired level.
4. Adjust amplifier volume to match the TV.
5. Select **SPEAKERS OFF&VAO** from AUDIO menu.
6. Volume, mute, bass, treble and balance are now controlled from the TV.

PROG. OUT Connection (Program Out Connection)

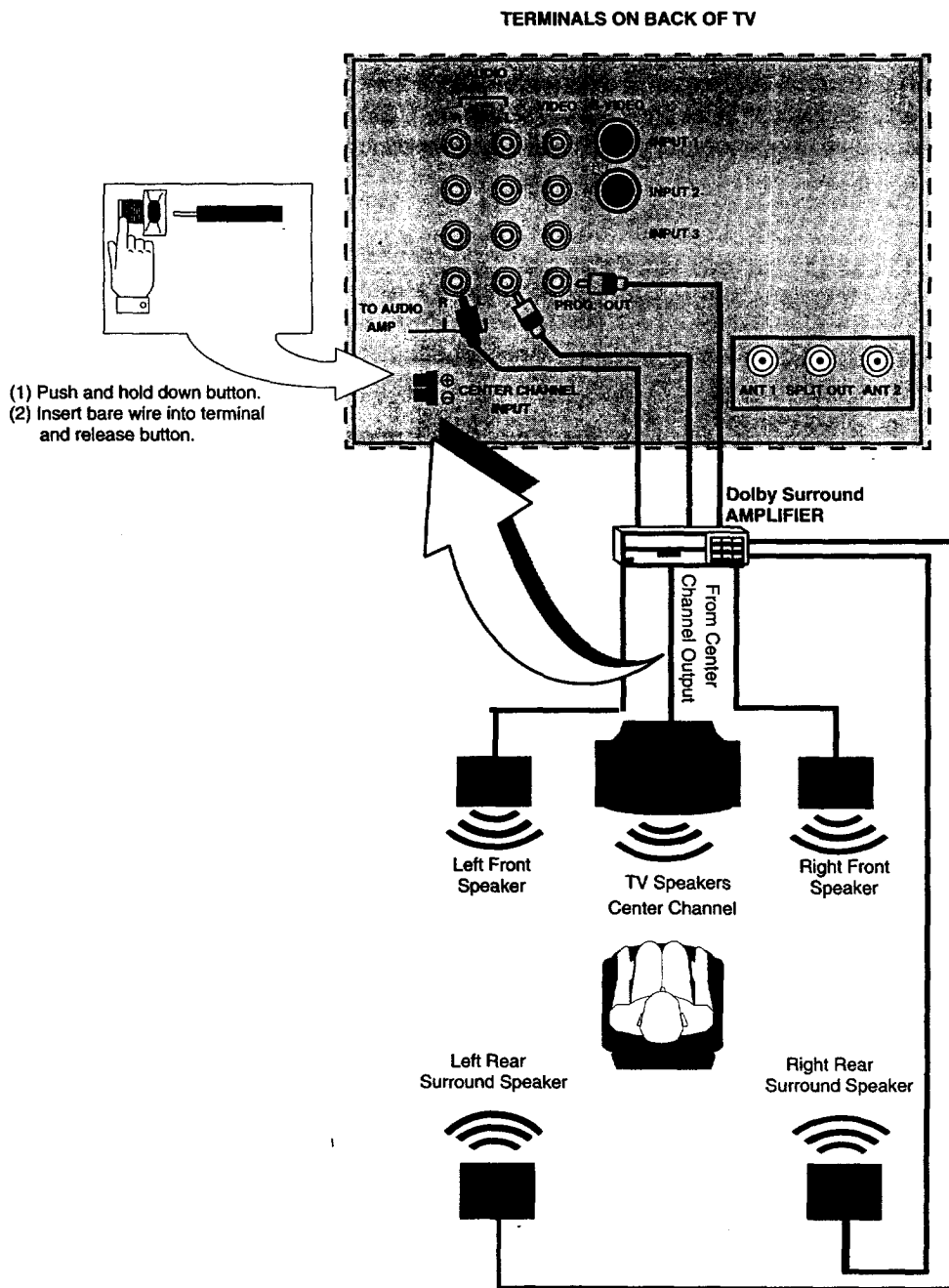
For viewing the TV audio and video with optional video equipment, connect to PROG. OUT terminals on the back of the TV.

Procedure

1. Connect optional video equipment to PROG. OUT (R/L Audio and Video) terminals.
2. PROG. OUT terminal display is the same as the on-screen display.
3. See optional equipment manual for further instructions for recording or monitoring.

DOLBY CENTER CHANNEL INPUT

Your TV can be configured to use the TV speakers as center channel speakers in Dolby® surround sound transmission. Connect a Dolby surround amplifier to CENTER CHANNEL INPUT on the back of the TV as shown. DOLBY CENTER MODE & FIXED AUDIO OUT must be selected in the AUDIO Roller Guide menu under SPEAKERS.



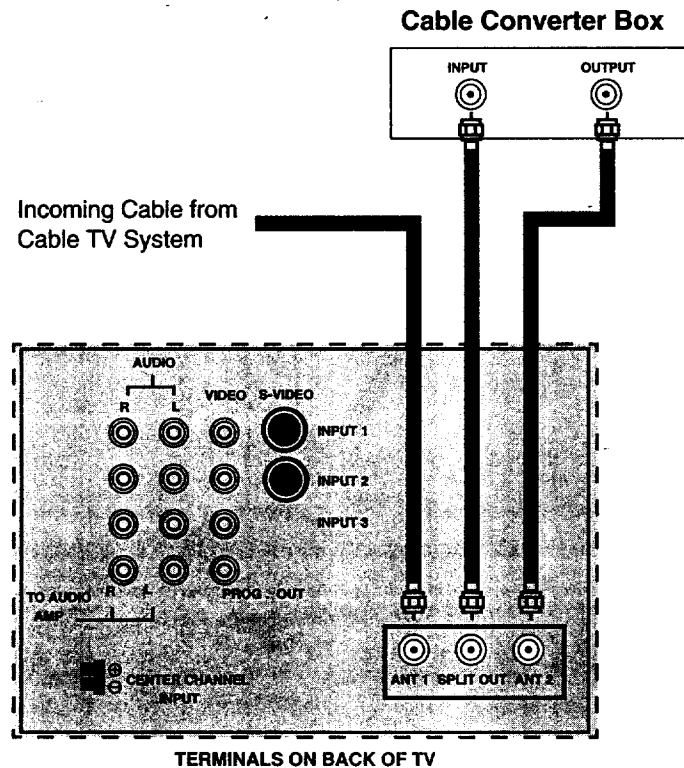
**"Dolby" and "Pro-logic" are the trademarks of Dolby Laboratories Licensing Corporation.

INSTALLATION

Recommended Cable Converter Box Connection

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

1. ANT 1 mode (accessed by the SET UP Roller Guide Icon in the Prog. Chan sub menu) will allow you to view all non scrambled channels without the use of the cable converter box.
2. When a scrambled channel is desired, use ANT 2 mode (accessed by the SET UP Roller Guide Icon in the Prog. Chan sub menu). Select channel on TV as instructed by cable company and operate cable converter box.



Picture In Picture (PIP) Operation

With / Without a VCR and Cable Box

This television includes a two tuner Picture In Picture (PIP) feature. This allows watching two (2) live broadcasts at the same time without or with an external video source (VCR).

Without a VCR (External Video Source)

Procedure

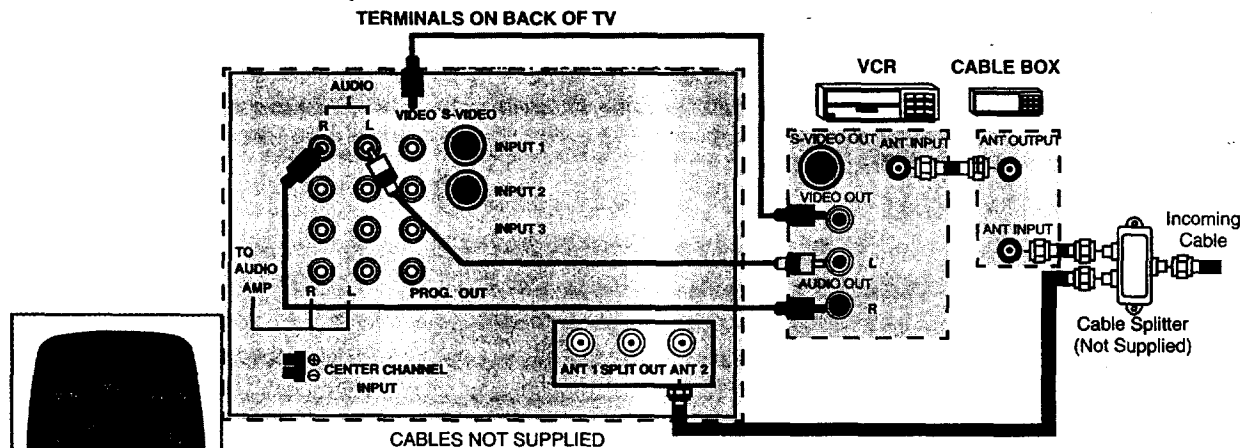
- Connect incoming cable to antenna (ANT) input on back of TV.
- Press the **PIP** button on the Remote Control to display the PIP frame.

Note: The audio is for the Main Picture, only.

- Choose channels for the *PIP* frame by pressing the Remote Control **PIP CHANNEL** up/down buttons.
- Choose channels for the *Main Picture* by pressing the Remote Control **CH** up/down buttons or by using the numeric keypad.

With A VCR (External Video Source) And Cable Box

Connect your television to a VCR and Cable Box, as shown.



Note: The Remote Control must be programmed with supplied codes to operate the VCR and Cable Box. See Programming the Remote Control in the Remote Control Quick Reference Guide.

Procedure

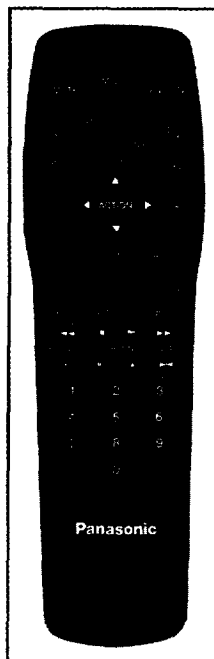
Press the **PIP** button on the Remote Control to display the PIP frame.

Note: The audio is from the Main Picture only.

To view scrambled channels through your Cable Box in the PIP frame:

- Press the **TV/VIDEO** button on the Remote Control to select the same video input which your cable box is connected to.
- Verify the **CABLE BOX** and **VCR** are **ON** and the **VCR** tuned to channel 3.
- Choose channels for the *PIP* frame by pressing the **CBL** button on the Remote Control and using the numeric keypad or **CH** up/down buttons.
- Choose channels for the *Main Picture* by pressing the **TV** button on the Remote Control and using the numeric keypad or **CH** up/down buttons.

Note: The **SWAP** button switches the *PIP* and *Main Picture* source. Press the **RECALL** button for *PIP* and *Main Picture* source status, on screen.



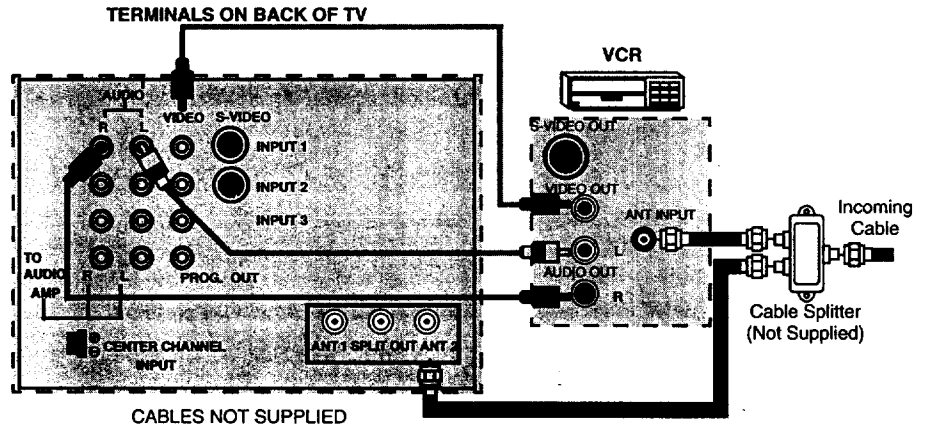
PICTURE IN PICTURE (PIP) OPERATION (CONT.)

Picture In Picture (PIP) Operation (Cont.)

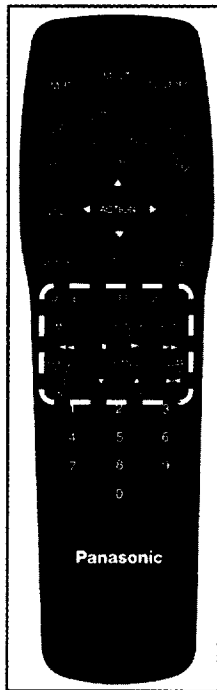
With a VCR - No Cable Box

This television includes a two tuner Picture In Picture (PIP) feature. This allows watching two (2) live broadcasts at the same time without or with an external video source (VCR).

Connect your television to a VCR, as shown.



Note: The Remote Control must be programmed with the supplied codes to operate the VCR. See Programming the Remote Control in the Remote Control Quick Reference Guide.




Procedure

Press the **PIP** button on the Remote Control to display the PIP frame on screen.

Note: The audio is from the Main Picture only.

To view an external video source in the PIP frame:

- Press the **TV/VIDEO** button on the Remote Control to select the same video input which your VCR is connected to.
- Verify the VCR is on.
- Choose channels for the *Main Picture* by pressing the **TV** button on the Remote Control and using the numeric keypad or **CH** up/down button.
- Choose channels for the PIP frame by pressing the **TV** button on the Remote Control and using the **PIP Channel** up/down buttons



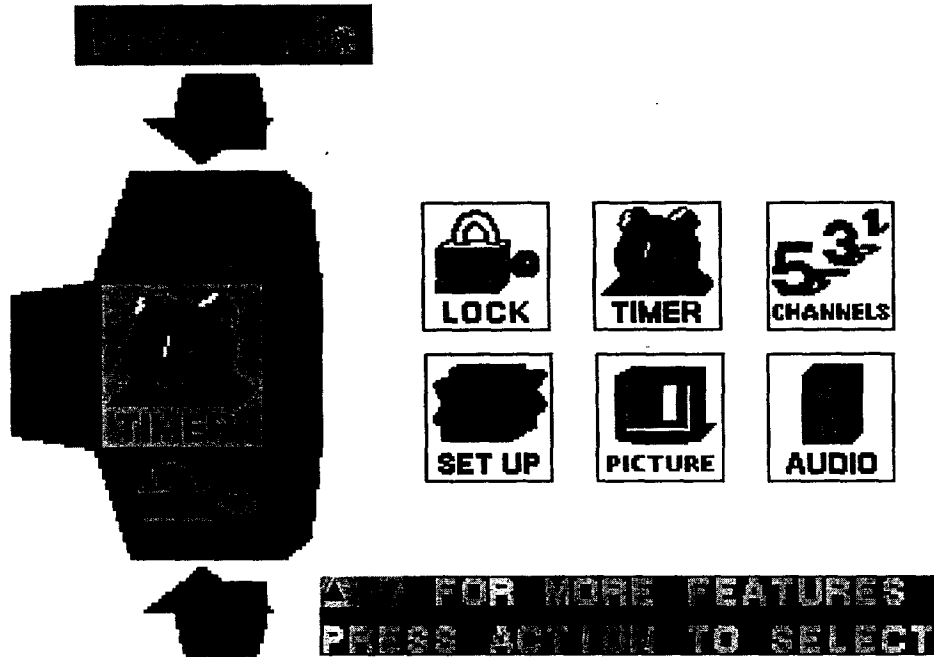
SWAP and RECALL Buttons

The **SWAP** button switches the PIP and Main Picture source. Press the **RECALL** button for PIP and Main Picture source status, on screen.

Roller Guide Menu

Press the **ACTION** button in the middle of the large blue button on the Remote Control to display the Roller Guide menu. Press the **CH** (channel) up/down to rotate the Roller Guide. Press the Left **VOL** (volume) button to exit the Roller Guide menu.

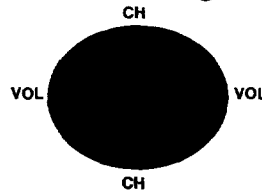
Note: Be careful to press the ACTION button in the middle of the button. If you do not press in the middle of the button, the channel or volume keys may be activated.



Navigation Buttons

Press the **ACTION** button to select main menu items. Press the up/down **CH** (channel) buttons to highlight sub menus. Press the Right **VOL** button to select and adjust features. Press the **ACTION** button to return to sub menus.




Remote Action / Navigation Button






Remote Control

The **Remote Control Quick Reference Guide** is located within the package provided with this TV.



Roller Guide Menu Chart

MENU	DESCRIPTION
	<p>SET UP</p>
<p>LANGUAGES</p>	<p>Select English, Spanish, or French menu.</p>
<p>PROG. CHAN (Program Channels)</p>	<ul style="list-style-type: none"> <input type="checkbox"/> MODE - Select Cable or TV. See Installation section in Manual. <input type="checkbox"/> ANTENNA - Select ANT 1 or ANT 2. <input type="checkbox"/> AUTO PROGRAM - Automatically program channels with a signal into memory. <input type="checkbox"/> MANUAL PROGRAM - Manually add or delete channels from memory.
<p> (Closed Captioned)</p>	<ul style="list-style-type: none"> <input type="checkbox"/> CC ON MUTE - Select C1, 2, 3, or 4 for Closed Captioning display. Select OFF to display closed captioning when MUTE button is pressed. <input type="checkbox"/> CC MODE - Select T1, T2, T3, or T4 for transmitted information, if available, in large black box.
<p>AUTO POWER</p>	<p>AUTO POWER - Select SET to power up the TV at the same time as the Cable Box or other components or select NO.</p>
	<p>AUDIO</p>
<p>AUDIO ADJ. (Adjustments)</p>	<ul style="list-style-type: none"> <input type="checkbox"/> MODE - Select STEREO, SAP (Second Audio Program) or MONO. (Use MONO when stereo signal is weak.) <input type="checkbox"/> BASS - Increase or decrease the bass response. <input type="checkbox"/> TREBLE - Increase or decrease the treble response. <input type="checkbox"/> BALANCE - Emphasize the left/right speaker volume. <input type="checkbox"/> NORMAL - Reset BASS, TREBLE and BALANCE to factory default.
<p>OTHER ADJ. (Adjustments)</p>	<p>AI SOUND - Automatically adjust volume to maintain a comfortable listening level.</p>
<p>SURROUND</p>	<p>SPATIALIZER - Three dimensional surround sound with two speakers.</p>

Roller Guide Menu Chart (Cont.)

MENU	DESCRIPTION
	<p>AUDIO</p>
<p>SPEAKERS</p>	<ul style="list-style-type: none"> <input type="checkbox"/> ON - TV speakers operate normally. <input type="checkbox"/> OFF&VAO (Variable Audio Output) - TV speakers off - audio adjustable by TV. <input type="checkbox"/> OFF&FAO (Fixed Audio Output)- TV SPEAKERS off — audio adjustable only by the external amplifier. <input type="checkbox"/> DOLBY CENTER MODE & FIXED AUDIO OUT - Provide center speakers for Dolby sound transmission available on video or laser disc. (See Installation section in manual.)
	<p>TIMER</p>
<p>CLOCK SET</p>	<ul style="list-style-type: none"> <input type="checkbox"/> When set, TIME will display on screen after pressing POWER button, RECALL button, or changing channels. Must be set to user Sleep and Timer features below.
<p>SLEEP</p>	<ul style="list-style-type: none"> <input type="checkbox"/> Set timer to turn off TV in 30, 60, or 90 minutes. Select NO to turn timer off.
<p>TIMER 1 TIMER 2</p>	<ul style="list-style-type: none"> <input type="checkbox"/> Set two timers to automatically turn TV on and off at selected times on a selected channels.
	<p>PICTURE</p>
<p>VIDEO ADJ. (Adjustments)</p>	<ul style="list-style-type: none"> <input type="checkbox"/> COLOR - Adjust desired color intensity. <input type="checkbox"/> TINT - Adjust natural flesh tones. <input type="checkbox"/> BRIGHTNESS - Adjust dark areas for crisp detail. <input type="checkbox"/> PICTURE - Adjust white areas of picture. <input type="checkbox"/> SHARPNESS - Adjust clarity of outline detail. <input type="checkbox"/> NORMAL- Reset all picture adjustments to factory default settings.
<p>OTHER ADJ. (Adjustments)</p>	<ul style="list-style-type: none"> <input type="checkbox"/> COLOR TEMP - Adjust white balance to COOL (blue), WARM (red) or NORMAL. <input type="checkbox"/> AUTO COLOR - Optimize color to compensate for signal variations. <input type="checkbox"/> AI PICTURE - Maintain high contrast in the whole picture. <input type="checkbox"/> 3D Y/C COMB - Filter to separate color from black and white in the picture.

Roller Guide Menu Chart (Cont.)

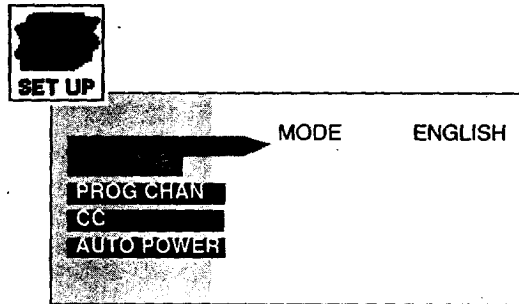
MENU	DESCRIPTION
	<p>CHANNELS</p>
<p>FAVORITES</p>	<p><input type="checkbox"/> CHANNEL SCAN - Select FAV (15 favorites) or ALL channels to scan channels using the up/down VOL buttons.</p>
<p>CAPTION</p>	<p><input type="checkbox"/> PRESET CAPTION - Enter channel numbers for preset captions. <input type="checkbox"/> MANUAL CAPTION - Enter channel numbers and captions manually. <input type="checkbox"/> INPUT LABEL - Label video connections for on screen display of optional connections.</p>
	<p>LOCK</p>
<p>CHANNEL</p>	<p><input type="checkbox"/> Select channels to lock for 12, 24, or 48 hours with a secret code.</p>
<p>GAME GUARD</p>	<p><input type="checkbox"/> Lock video games, cable box, and VCR's from being viewed for 12, 24, or 48 hours with a secret code.</p>
<p>ALL</p>	<p><input type="checkbox"/> Lock all channels and video inputs for 12, 24, or 48 hours with a secret code.</p>

Special Features

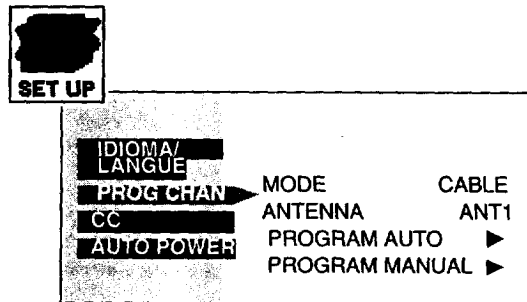
Set Up

Language

In SET UP Menu, select IDIOMA/LANGUE to change menu language to ENGLISH, ESPANOL, or FRANÇAIS.



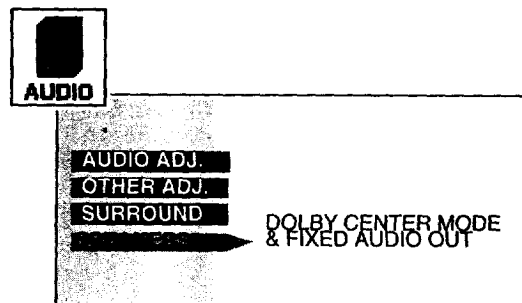
In SET UP menu, select PROG CHAN to select TV or ANTENNA MODE depending on the signal source. Select Antenna 1 or 2 depending on the input on back of TV. Choose PROGRAM AUTO to automatically program all channels with a signal or choose PROGRAM MANUAL to manually enter channels.



Audio

Dolby Center Mode & Fixed Audio Out

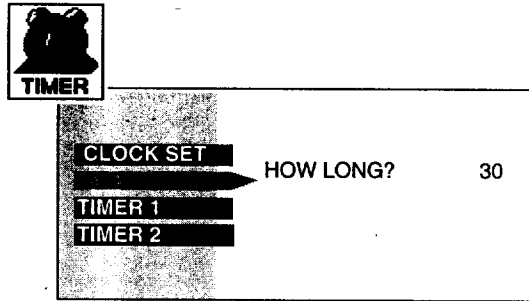
In AUDIO menu under SPEAKERS, select DOLBY CENTER MODE & FIXED AUDIO OUT to operate TV speakers as center speakers for Dolby sound transmission. (See Installation section in the manual.)



Timer

Sleep

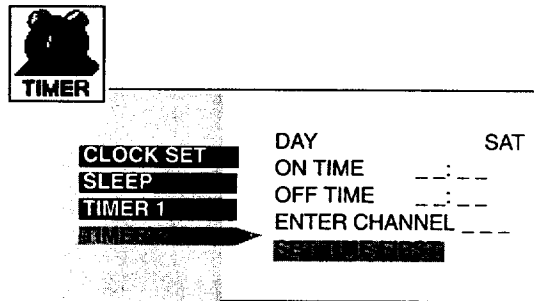
In **TIMER** menu, select **SLEEP** to turn TV off in 30, 60, or 90 minutes. Select **NO** to turn off timer.



Note: SLEEP and TIMER features are unavailable when AUTO POWER is on.

Timer 1 and Timer 2

In **TIMER** menu select two timers, **TIMER 1** and **TIMER 2**, to turn the TV on and off at selected times, on selected channels, and on selected days.



Note: TIME must be entered in the TIMER menu to operate SLEEP and TIMER features.

Turn Off After 90 Minutes

The TV automatically turns OFF after 90 minutes when turned on by the **TIMER**. If the OFF time is selected or if a key is pressed, the automatic OFF after 90 minutes will be cancelled.

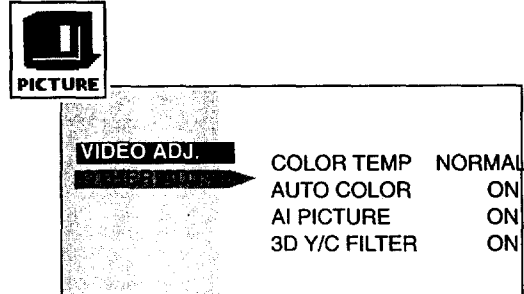
TIMER Activation

The **TIMER** is active when the TV is OFF or ON. The TV will switch to the selected channel at the selected time set in the **TIMER**.

Picture

Other Adjustments

Use these picture adjustments to digitally improve the picture quality. In PICTURE menu under OTHER ADJ., select COLOR TEMP (temperature) to increase or decrease warm (red) and cool (blue) colors to suit personal preferences. Select AUTO COLOR to maintain consistent color and tint. Select AI PICTURE to optimize contrast. Select 3D Y/C FILTER to minimize noise or cross color in the picture.

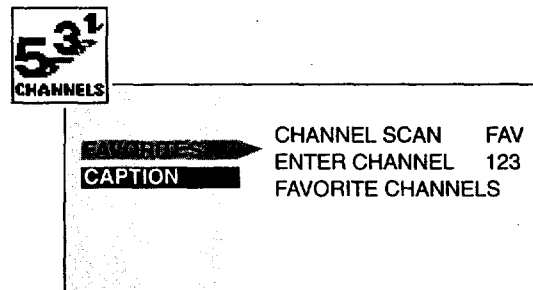


Note: If the picture does not look natural, turn 3D Y/C OFF.

Channels

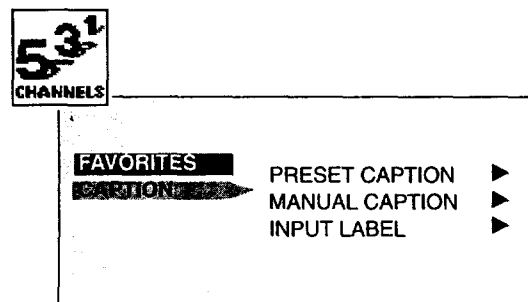
Favorites

In CHANNELS menu under FAVORITES, select CHANNEL SCAN FAV to enter 15 favorite channels or select CHANNEL SCAN ALL to scan all channels when using the up/down VOL buttons.



Input Label (Video Connections)

In CHANNELS menu under CAPTION, select PRESET CAPTION to enter channel numbers for popular TV stations. Select MANUAL CAPTION to enter numbers and captions manually. Select INPUT LABEL to label video input connections for on-screen display. Press right VOL to access sub menus.

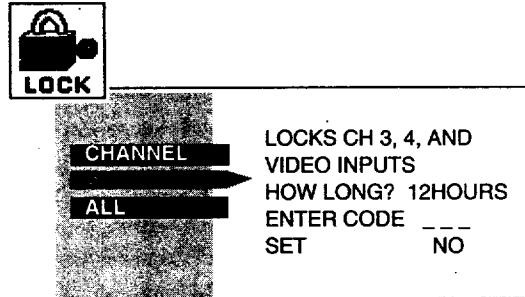


LOCK

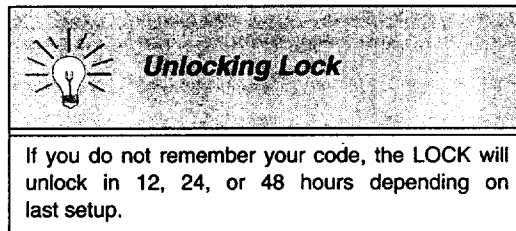
Game Guard - Channel - All

In Lock menu, select GAME GUARD to lock Channel 3, Channel 4, and video inputs for 12, 24, or 48 hours by entering a three-digit secret code using the numeric keypad. Select CHANNEL to lock all channels or select ALL to lock both channels and video input.

Unlock GAME GUARD by re-entering the same three-digit secret code.



Note: Understand how to unlock CHANNELS, GAME GUARD, and ALL before locking. Use a code that is easy to remember or record it in a safe place.



If you do not remember your code, the LOCK will unlock in 12, 24, or 48 hours depending on last setup.

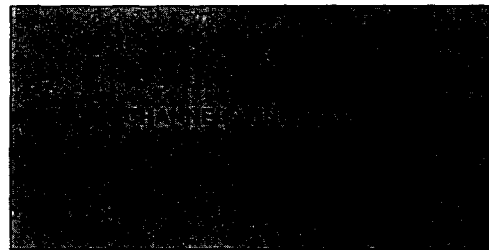
Unlocking Channel, Game Guard, and All



Enter the same three-digit code.



If the three-digit code is not the same as entered previously.










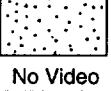









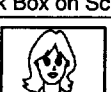


If the same three-digit code is used.

TROUBLESHOOTING CHART

Troubleshooting Chart

Before calling for service, determine the symptoms and follow suggested solutions.

AUDIO	VIDEO	Solutions
 Noisy Audio	 Snowy Video	Adjust Antenna Location and Connection
 Noisy Audio	 Multiple Image	Adjust Antenna Location and Connection Check Antenna Lead-in Wire
 Noisy Audio	 Interference	Move TV from Electrical Appliances, Lights, Vehicles, and Medical Equipment
 No Audio	 Normal Video	Increase Volume Check Mute Check TV SPEAKERS on/off Change Channel
 Noisy Audio	 No Video	Set TV or Cable Mode Properly Check Antenna Cables
 No Audio	 No Video/No PIP	Check Power Cord is Plugged into Active Outlet Adjust Brightness and Audio Controls Change Channel Check Cable Connections Program the Remote Control Again Check Second Video Source Operation
 Normal Audio	 No Color	Adjust Color Settings Change Channel
 Wrong Audio	 Normal Video	Check Audio Is Set To Stereo Or Mono, Not SAP
 Normal Audio	 Black Box on Screen	Change CC (Closed Captioning) from Text Mode
 Normal Audio	 Normal Video	Replace Remote Control Batteries
Intermittent Remote Control Operation		