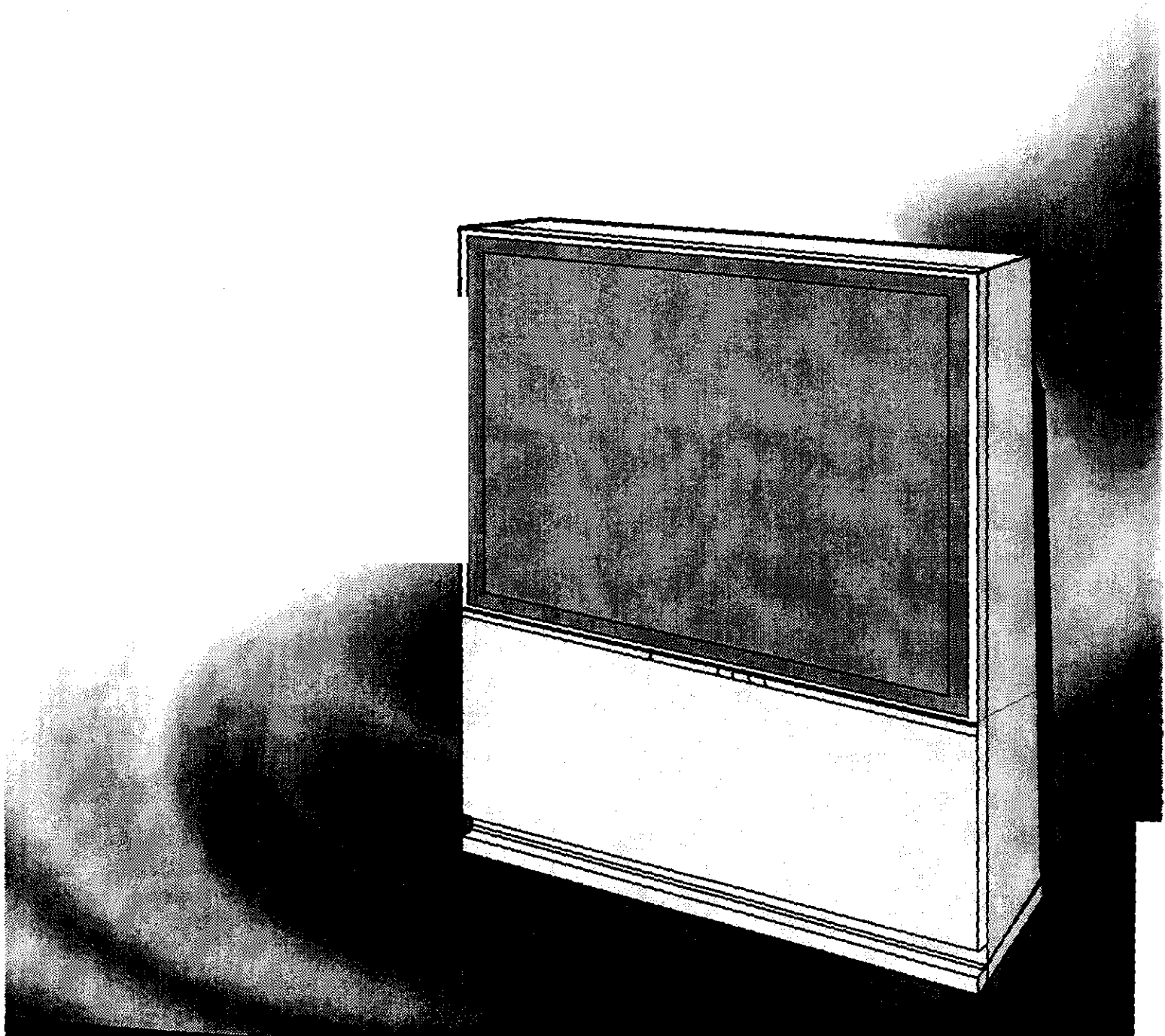


Projection Television

Instructions for use



Let's make things better.

PHILIPS MAGNAVOX

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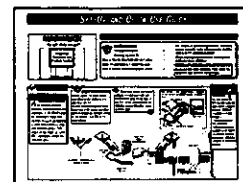
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SET-UP AND QUICK USE GUIDE

Use the simple Set-Up Guide (supplied with your TV information packet) for details on:

- Antenna Hook-ups
- First Time Set-Up (Automatic Settings)
- Basic TV and Remote Control Operation
- On-Screen Menu Use



NOTE: This owner's manual is used with several different television models. Not all features (and drawings) discussed in this manual will necessarily match those found with your television set. This is normal and does not require you contacting your dealer or requesting service.

Because of continuous product improvements, the information mentioned in the documents accompanying your product are subject to change without notice.



First Time Set Up - automatically sets the TV for local channels and the correct picture signal (antenna or cable). It even helps you make the necessary connections for the Picture-In-Picture (PIP) feature. See your Set-up and Quick Use Guide for details.

Infrared Remote Control - operates your TV set and a variety of wireless remote control VCRs and Cable TV Converters.

Standard TV broadcast (VHF/UHF) or Cable TV (CATV) channel capability.

Closed Captioning - allows the viewer to read TV program dialogue or voice conversations as on-screen text.

Automatic Programming of channels - for quick and easy selection of favorite stations available in your area.

Picture-In-Picture (PIP) - can show a TV program and the direct video output from an accessory (VCR, etc.) onto the TV screen at the same time.

Stereo TV - with a built-in audio amplifier and a twin speaker system, reception of TV programs in both broadcast stereo sound or (SAP) bilingual broadcast are available.

On-Screen Features - display helpful information for the setting of TV controls (such as help messages, operating tips and glossary).

Parental Controls - for "censoring" or blocking out channels to keep children from watching undesirable programming.

Audio/Video Jacks - for direct connections with VCRs (and other accessories) for quality TV picture and sound playback.

Surround Sound - external audio speaker connections.

Sleep-Timer - automatically turns the TV OFF at preset time intervals.

Smart Button - for the control of TV Sound and Picture levels. Use the Smart Button on the remote to quickly adjust Smart Sound (to set TV Volume levels during program changes or commercial breaks); Smart Picture (for programmed video level adjustments on a variety of program sources); and Smart Surf (for quick one button channel selection of up to 10 of your favorite channels).

As you unpack your TV please note that the following items have been included with your set:

- Owner's Manual
 - Safety Tip Information
 - Factory Service Center Locations
- Warranty Registration Card
- Remote Control Transmitter
- Batteries for Remote Control Use

Please take a few minutes to complete your registration card. The serial number for the TV is on the back of the set.

Refer to the back of this manual for instructions on the cleaning and care of the TV.

End-of-Life disposal

Your new projection television and its packaging contain materials that can be recycled and reused. Specialized companies can recycle your product to increase the amount of reusable materials and minimize the amounts which need to be properly disposed.

Your product also uses batteries which should not be thrown away when depleted, but should be handed in and disposed of as small chemical waste.

Please find out about the local regulations on how to dispose of your old television, batteries, and packaging materials whenever you replace existing equipment.

PICTURE MENU CONTROL ADJUSTMENTS

COLOR, BRIGHTNESS, SHARPNESS, TINT, PICTURE

To adjust your TV color and picture controls, select a TV channel and follow the steps shown below:

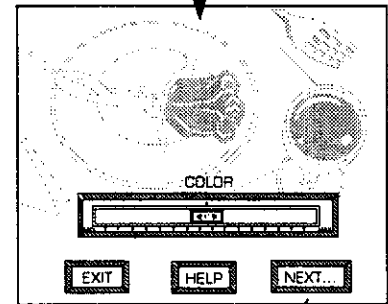
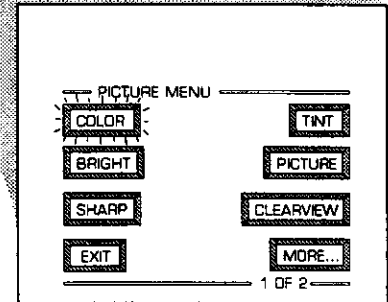
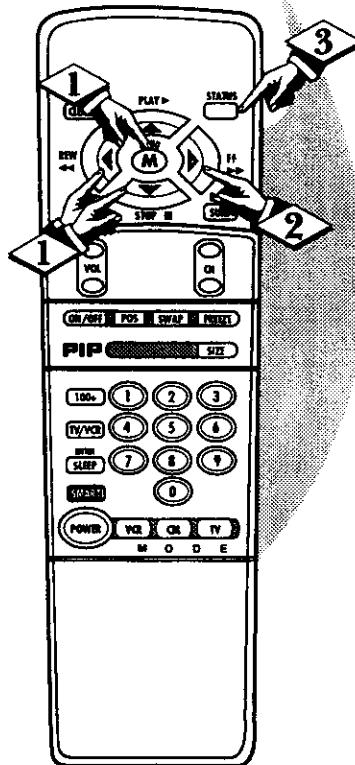
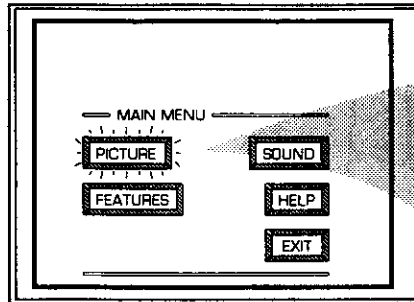
BEGIN

- 1 Select **BRIGHTNESS, PICTURE, COLOR, TINT, or SHARPNESS** picture control.

With the PICTURE MENU on screen, move the RED highlight with the MENU (M) buttons. Then press the MENU (M) button.

- 2 Press the (+) or (-) buttons to adjust the selected control.

- 3 Press the STATUS button to clear the screen.



Select and then press MENU (M) button to view an explanation of the selected feature.

Select and then press MENU (M) button to view additional controls grouped under same feature heading. For Example: Tint, Brightness, Picture, etc.

SMART HELP



Remember. When the bar scale is centered, control settings are at normal mid-range levels.

BRIGHTNESS Press (-) or (+) until dark parts of the picture show good detail.

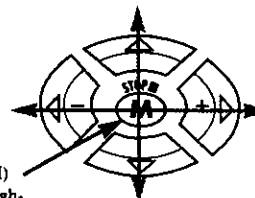
PICTURE Press (-) or (+) until whitest parts of the picture are as bright as you prefer.

COLOR Press (-) or (+) to add or eliminate color.

TINT Press (-) or (+) to obtain natural skin tones. (Also see Flesh Correction on page 9 for more information).

SHARPNESS Press (-) or (+) to improve detail in the picture.

HOW TO SELECT FEATURES (WITH BUTTONS ON THE REMOTE)



Press MENU (M) to select RED highlighted feature.

Press MENU (M) ▲ ▼ to move Up and Down within

Press MENU (M) ◀▶ to move from Side-to-Side within the Menu.

CLEARVIEW

Clearview is a sharpness feature which smoothes out background snow (or picture noise) without losing picture image detail or crispness.

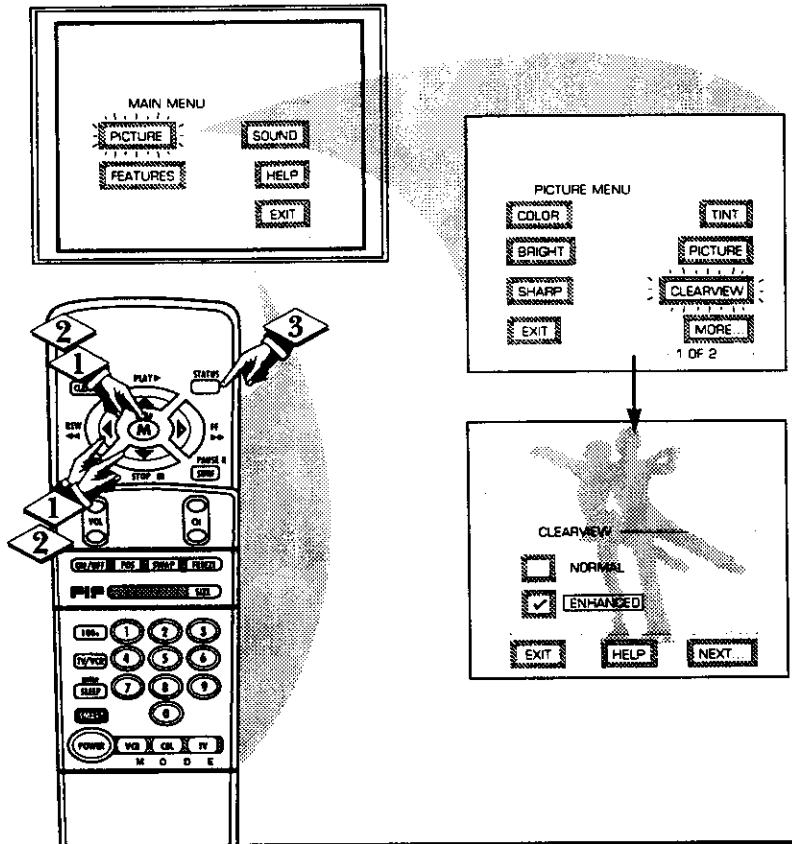
BEGIN

- 1 Select CLEARVIEW control.

With the PICTURE MENU on screen, move the RED highlight with the MENU (◀▶) buttons. Then press the MENU (M) button.

- 2 Press the MENU ▲▼ buttons to move the RED highlight. Press the MENU button to select (✓) the ENHANCED mode.

- 3 Press the STATUS button to clear the screen.



FLESH CORRECTION

Use the Flesh Correction control to keep skin tone hues (or facial tint) from varying from TV channel to TV channel.

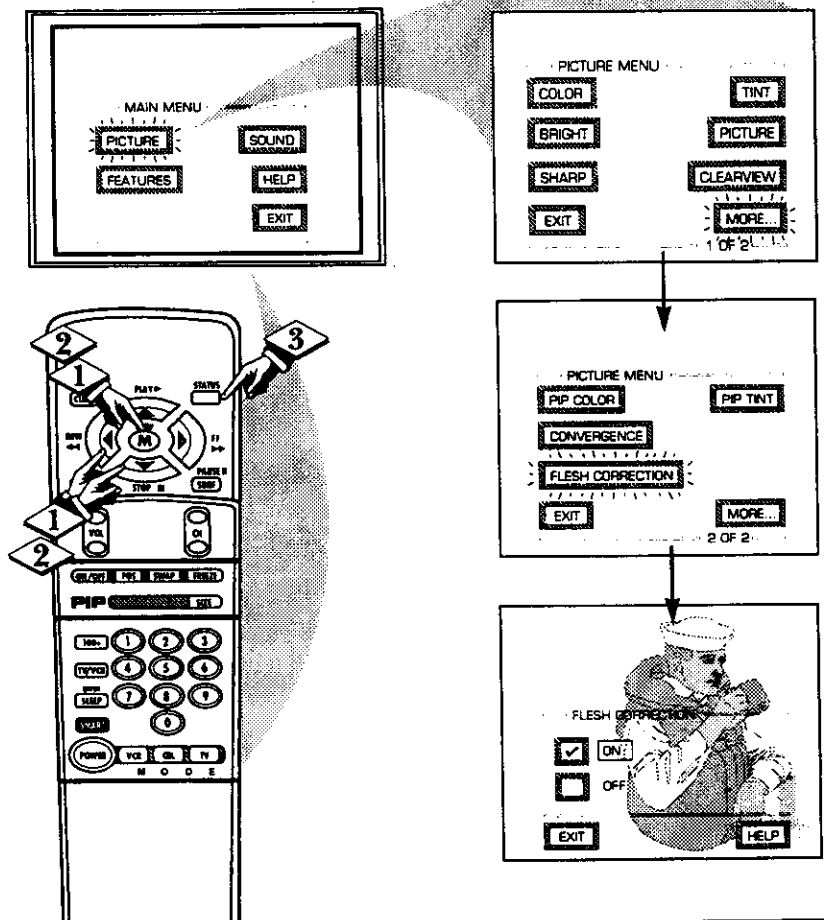
BEGIN

- 1 Select FLESH CORRECTION control.

With PICTURE MENU (2 of 2) on screen, move the RED highlight with the MENU (◀▶) buttons. Then press the MENU (M) button.

- 2 Press the MENU ▲▼ buttons to move the RED highlight. Press the MENU button to turn (✓) the FLESH CORRECTION control ON.

- 3 Press the STATUS button to clear the screen.



REDBLUE CONVERGENCE

Convergence is the correct lining up of the red and blue light paths on the TV screen.
NOTE: If no color fringing (see Smart Help) shows, then no Convergence adjustments are necessary for your TV.

BEGIN

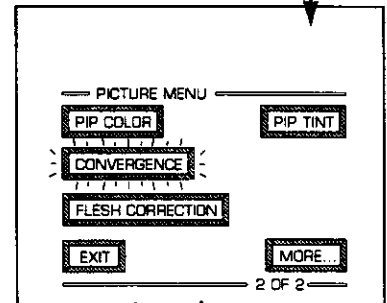
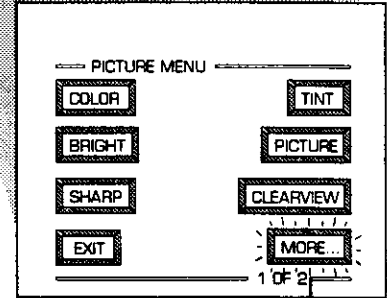
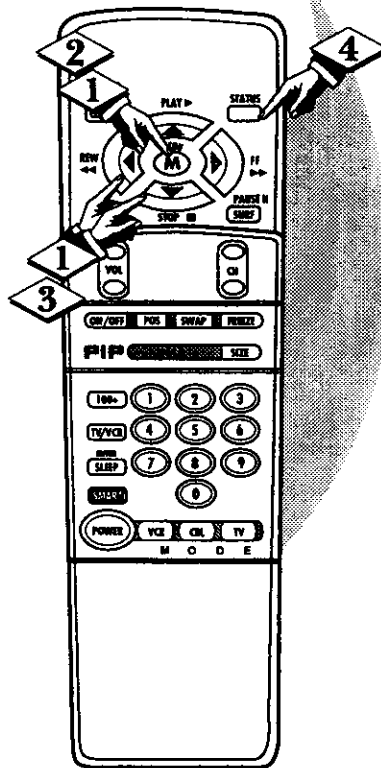
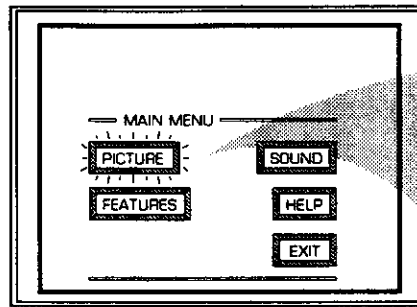
- 1 Select **CONVERGENCE** control.
 With **PICTURE MENU (2 of 2)** on screen, move the **RED** highlight with the **MENU** (◀▶) buttons. Then press the **MENU (M)** button.
- 2 If there is **RED** or **BLUE** color fringing on the White cross, press the **MENU** button to continue.
- 3 Press the **MENU** (◀▶) buttons to move the red or blue cross directly over the white cross on the TV screen.
 The red or blue cross is properly adjusted when it is completely merged with the white cross. (No color appears around the edge of the white cross).
- 4 Press the **STATUS** button to clear the screen when convergence adjustments are complete.



SMART HELP



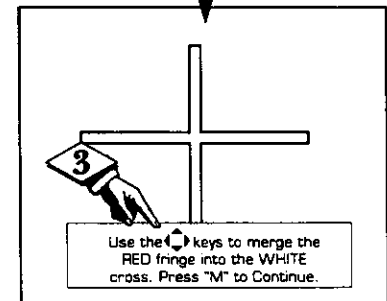
Remember. Convergence has been set at the factory for best viewing, but if one or more of the (red or blue) colors appear around the edges of objects (color fringing) follow the steps given in this section.



If there is **RED** or **BLUE** fringe on the **WHITE** cross, use this adjustment to improve the picture.



Press "**M**" to Continue
 - or -
 Press "**▶**" to Return



PICTURE SOURCE

The picture for the TV can come through either the ANTENNA plug or the AUDIO/VIDEO Input jacks (on the rear of the TV). The Picture Source control simply tells the TV which one of these picture sources it is to show on the TV screen.

BEGIN

- 1 Select PICTURE SOURCE SELECT control.

With the FEATURES MENU on screen, move the RED highlight with the MENU (M) buttons. Then press the MENU (M) button.

- 2 Press the MENU ▲▼ buttons to move the RED highlight. Press the MENU button to turn the desired PICTURE SOURCE control ON (✓).

ANTENNA- for a picture signal coming from the ANTENNA plug on the TV.

VCR/AUX- for a picture signal coming from the Video Input jack on the rear of the TV.

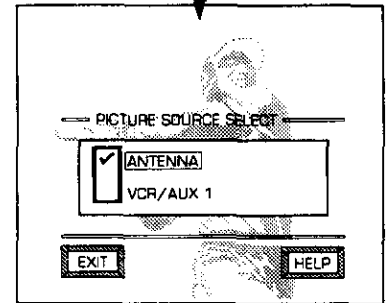
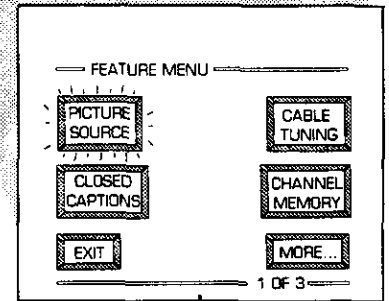
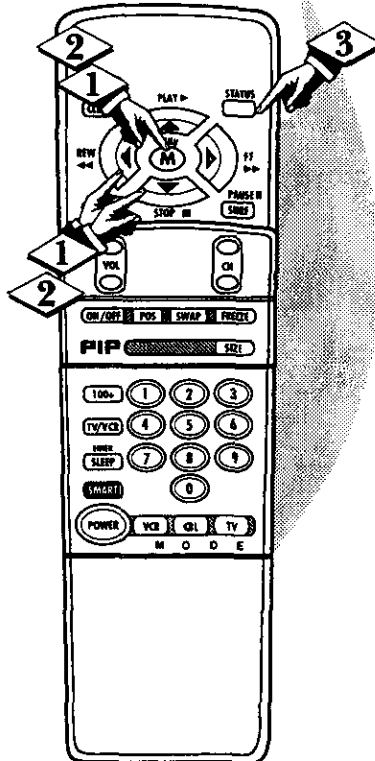
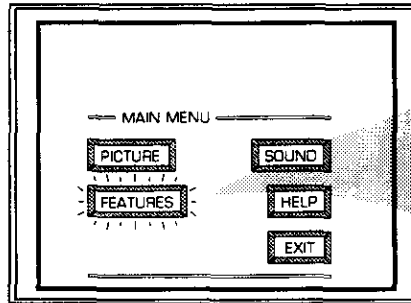
- 3 Press the STATUS button to clear the screen.



SMART HELP



Remember. The VCR/AUX TV screen will be blank unless a signal source is connected to the Video Input jack on the rear of the TV. (See page 26 for details).



FEATURE MENU CONTROLS (CONTINUED)

CLOSED CAPTION

Closed Captioning (CC) allows you to read the voice content of television programs on the TV screen. Designed to help the hearing impaired this feature uses on-screen "text boxes" to show dialogue and conversations while the TV program is in progress.

BEGIN

- 1 Select **CLOSED CAPTIONING** control.

With the **FEATURES MENU** on screen, move the **RED** highlight with the **MENU** (◀▶) buttons. Then press the **MENU (M)** button.

- 2 Press the **MENU** ▲▼ buttons to move the **RED** highlight. Press the **MENU** button to select (✓) the desired Closed Caption mode - For Example: "ALWAYS ON" and "CAPTION 1".

CAPTION 1, 2, 3, 4:

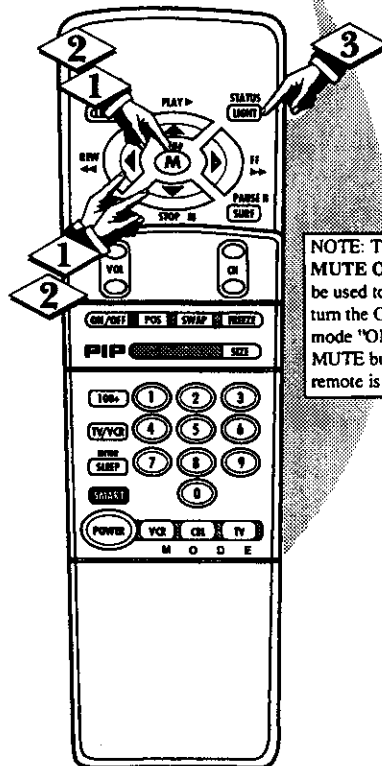
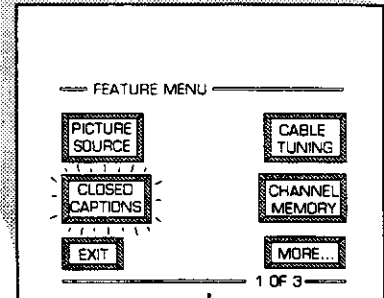
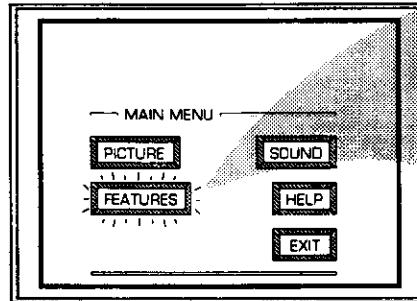
dialogue (and descriptions) for the action on the captioned TV program shows on-screen. (See Important Note on this page.)

TEXT 1, 2, 3, 4:

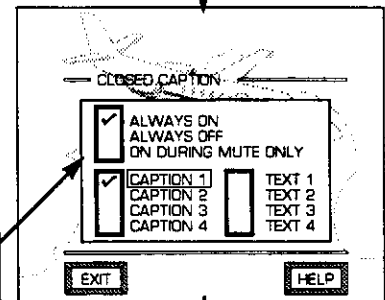
often used for channel guide, schedules, or bulletin board information for CC programs.

- 3 After making your Caption mode selection, press the **STATUS** button to clear the TV screen. The selected Closed Caption mode will be active. To cancel, set the Closed Captioned feature to **OFF** when finished viewing. **STOP**

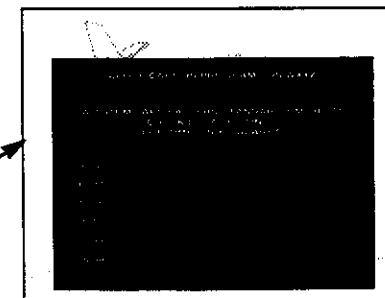
NOTE: Not all TV programs and product commercials are made for broadcast with Closed Caption (CC) information included. Neither are all Closed Caption modes (CAPTION 1-4; or TEXT 1-4) necessarily being used by a broadcast station during the transmission of a closed caption program. Usually "CAPTION 1" is the most used mode to view captioned material. Refer to your area's TV program listings for the stations and times of Closed Caption shows.



NOTE: The ON DURING MUTE ONLY control can be used to set the TV to turn the Closed Caption mode "ON" whenever the MUTE button on the remote is pressed.



CAPTION 1 mode Example Screen Display



FULL SCREEN TEXT will block TV screen from viewing

Closed Caption information will usually appear in black and white (although some broadcasters or networks may occasionally use color to highlight or draw attention to certain areas.)

This symbol will appear on channels that contain Closed Captioning material whenever the status display is shown.



SMART HELP



Remember. Broadcast stations will often use spelling abbreviations, symbols, dropouts and other grammatical shortcuts in order to keep pace with the on-screen action. These type factors vary upon the source of the captioned text material and do not indicate a need for service on the part of the TV.

CABLE TUNING

NOTE: If you went through *First Time Setup* (in your *Quick Use Guide*), this task has already been completed for you. You need to make sure the TV is set to pick up either *Cable TV* or *Antenna* signals. In other words, the TV needs to know if you connected a *Cable TV* signal or a normal antenna to its **ANTENNA** plug.

BEGIN

1 Select CABLE CHANNEL TUNING control.

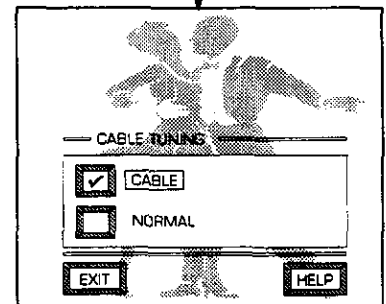
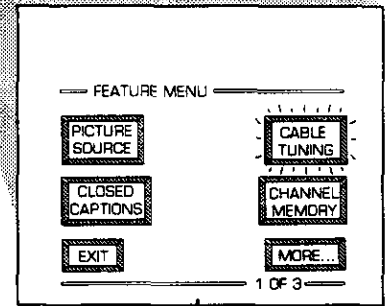
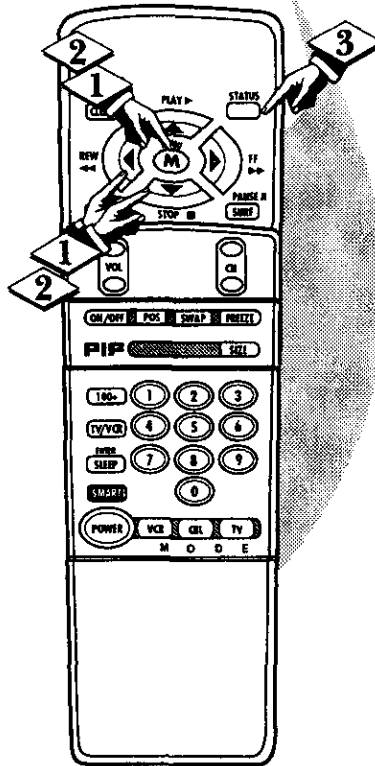
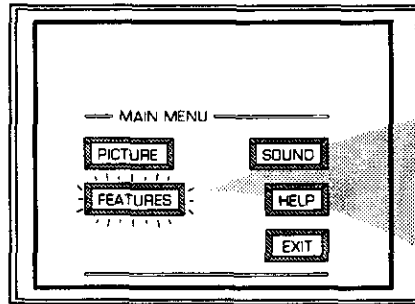
With the **FEATURES** MENU on screen, move the **RED** highlight with the **MENU** (◀▶) buttons. Then press the **MENU** (M) button.

2 Press the **MENU** ▲▼ buttons to move the **RED** highlight. Press the **MENU** button to select (✓) the desired mode - For Example: **CABLE**.

CABLE- If you **DO** have **Cable TV** connected to the TV. Channels 1-125 are available.

NORMAL- If you have an **Antenna** connected to the TV. Channels 2-69 are available.

3 Press the **STATUS** button to clear the screen.



FEATURE MENU CONTROLS (CONTINUED)

CHANNEL MEMORY AUTO-PROGRAMMING

NOTE: If you went through First Time Setup (in your Quick Use Guide), this task has already been completed for you.

Your TV can automatically set itself for local area (or Cable TV) channels. This makes it easy for you to select only the TV stations in your area when the CHANNEL ▲▼ buttons are pressed.

BEGIN

- 1 Select CHANNEL MEMORY (START AUTO-PROGRAMMING) control.

With the FEATURES MENU on screen, move the RED highlight with the MENU (◀▶) buttons. Then press the MENU (M) button.

- 2 Press the MENU button to turn AUTO-PROGRAMMING ON.

The TV shows which channel numbers are "SAVED" (✓) as they are added into memory.

"Auto-programming CHANNEL MEMORY is finished" shows when the TV is through adding channels.

- 3 Press the STATUS or Menu (M) button to clear the screen.



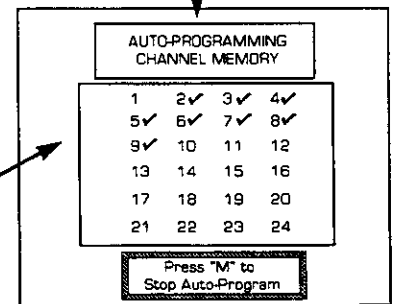
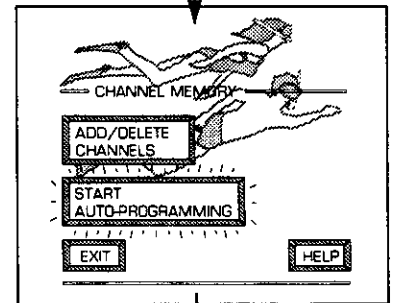
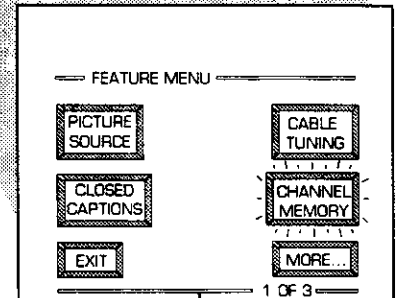
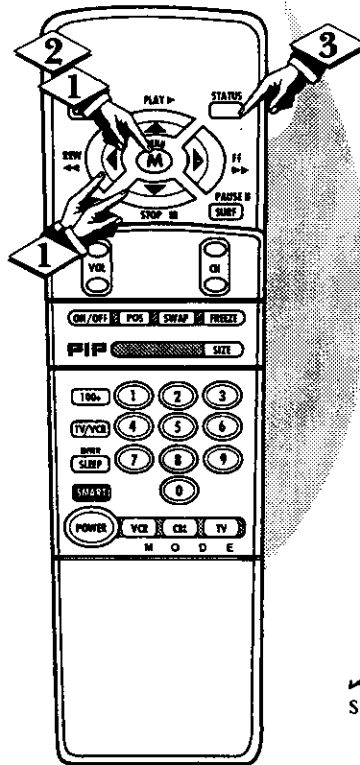
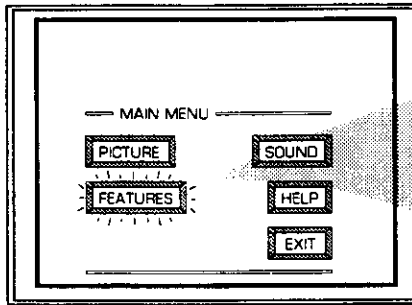
SMART HELP



Try it out. Press the CHANNEL ▲▼ buttons and see which channels you can select.

Remember. An Antenna or Cable TV signal must first be connected to your TV so that channels can be saved.

If you want to delete any unwanted channels from the TV's memory, see "ADD/DELETE CHANNELS" on page 14.



✓ Channel Numbers are Saved in Memory

ADD/DELETE CHANNELS

Auto-Programming (see page 13) adds all the channels it can find (on your Antenna or Cable TV system) into the TV's memory. Add/Delete Channels makes it easy for you to add other channels, or drop unwanted channels, from the list of channels in the TV's memory.

BEGIN

- 1 Select CHANNEL MEMORY (ADD/DELETE CHANNELS) control.

With the FEATURES MENU on screen, move the RED highlight with the MENU \leftarrow buttons. Then press the MENU (M) button.

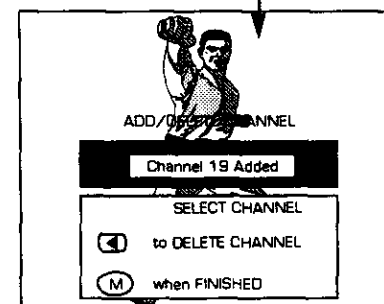
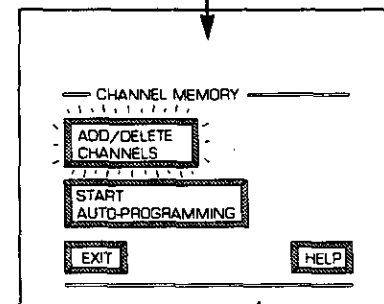
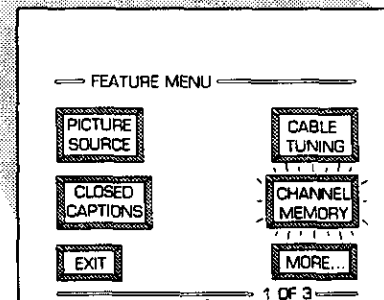
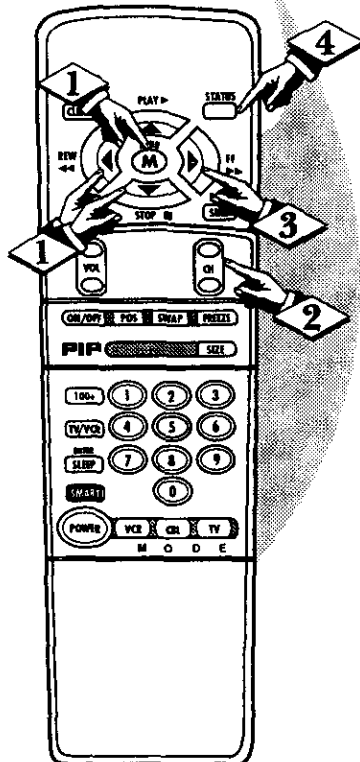
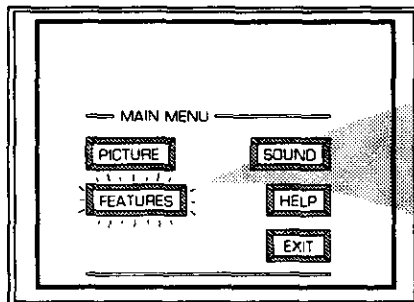
- 2 Press the CHANNEL \blacktriangle / \blacktriangledown or number buttons to select the channel you want to add or delete.

- 3 Press the MENU \blacktriangleright button to ADD the channel into the TV's memory.

Press the MENU \blacktriangleleft button to DELETE the channel from memory.

Repeat steps 2 and 3 for each channel you wish to add or delete.

- 4 Press the STATUS or MENU button to clear the screen.



SMART HELP



Remember. You can also add the VCR/AUX mode just like a channel. Then by pressing the CHANNEL \blacktriangle / \blacktriangledown buttons the VCR/AUX mode can quickly be selected to use the Input jacks on the rear of the TV (see page 26).

Note: "VCR/AUX" mode is located between the lowest and highest channel numbers within the ADD/DELETE CHANNEL control screen.

FEATURE MENU CONTROLS (CONTINUED)

SET CLOCK

NOTE: If you went through *First Time Setup* (in your *Quick Use Guide*), this task has already been completed for you. Your TV comes with an on-screen clock. During normal operation the clock appears on the screen with every channel change (and when the **STATUS** button is pressed).

BEGIN

- 1 Select **SET CLOCK** control.

With **FEATURES MENU** (2 of 3) on screen, move the **RED** highlight with the **MENU** (M) buttons. Then press the **MENU** (M) button.

- 2 Press the remote's number buttons to set the time clock.

- 3 Press the **STATUS** button to set the clock in operation and clear the screen.



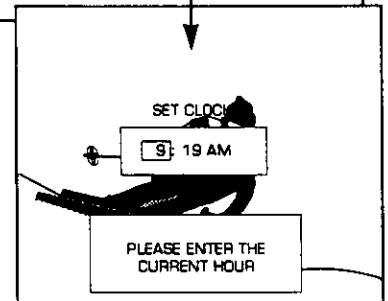
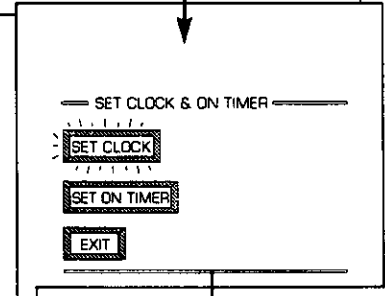
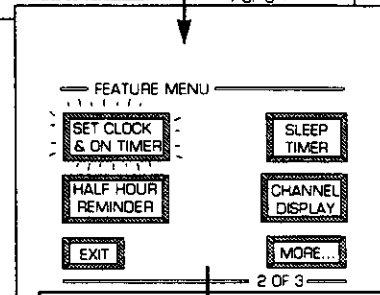
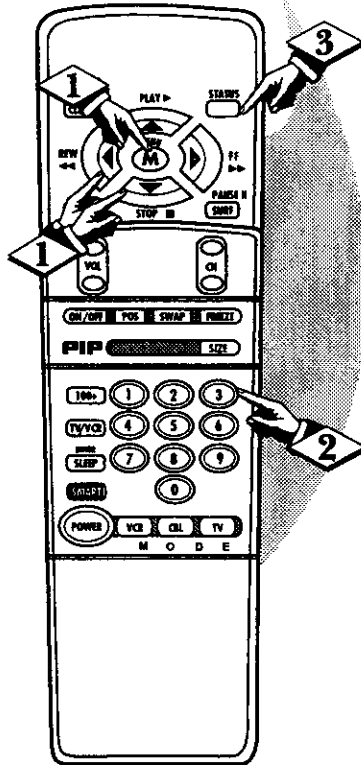
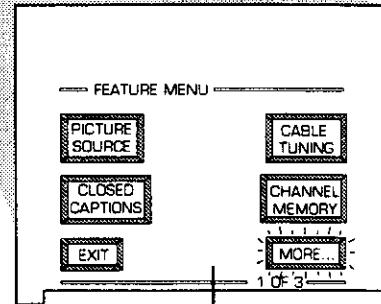
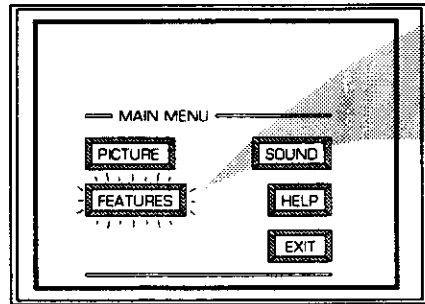
SMART HELP

Remember, be sure to press "0" first and then the hour number for single digit entries.

The remote's **MENU** (M) buttons can also be used to set the hours, minutes and **AM/PM** portions of the clock.

TV Clock settings may be lost when the TV is unplugged (or AC power to the set is interrupted.)

You can also set the TV Clock automatically if you follow the *First Time Set-up* procedure for the *Smart Clock* feature.



FEATURE MENU CONTROLS (CONTINUED)

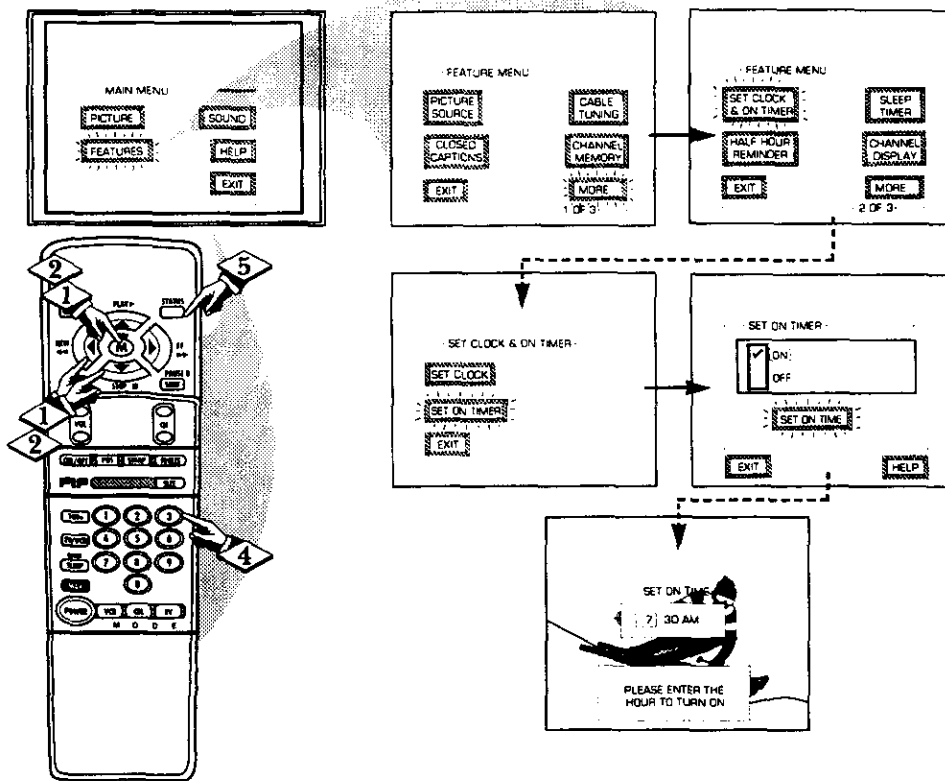
SET ON TIMER

Just like an alarm clock you can set the TV to turn itself on at the same time everyday.

BEGIN

- 1 Select SET ON TIMER control. With FEATURES MENU (2 of 3) on screen, move the RED highlight with the MENU \blacktriangleleft buttons. Then press the MENU (M) button.
- 2 Press the MENU \blacktriangleup and MENU (M) buttons to highlight and select "ON" (✓).
- 3 Press the MENU \blacktriangleup and then the MENU (M) buttons to select "SET ON TIME".
- 4 Press the remote's number buttons to set the "TURN ON" time for the TV. (Press MENU \blacktriangleup for AM or PM.)
- 5 Press the STATUS button to set the "ON TIME" and clear the screen.

STOP



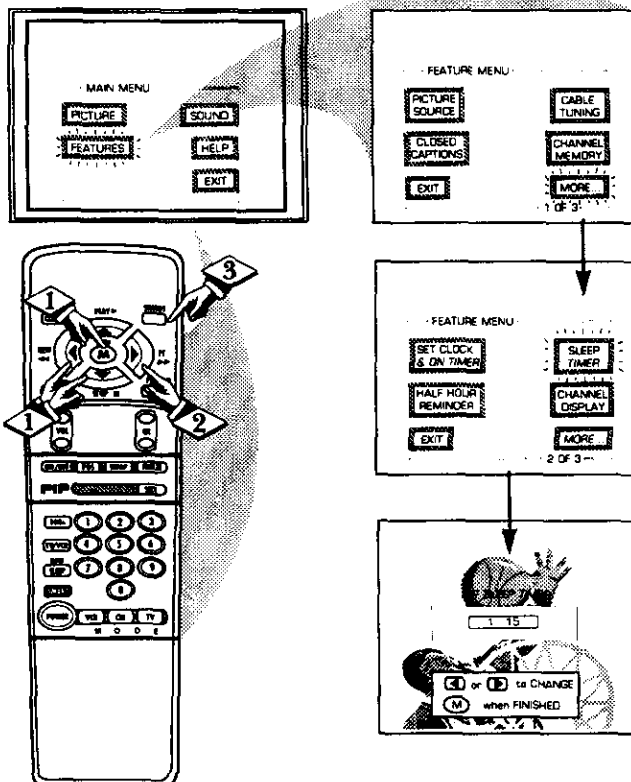
SLEEP TIMER

Have you ever fallen asleep in front of the TV only to have it wake you up at two in the morning with a test pattern screeching in your ears? Well, your TV can save you all that trouble by automatically turning itself off.

BEGIN

- 1 Select SLEEP TIMER control. With FEATURES MENU (2 of 3) on screen, move the RED highlight with the MENU \blacktriangleleft buttons. Then press the MENU (M) button.
- 2 Press the MENU \blacktriangleleft buttons to pick the amount of time (15 minutes to 2 hours ahead) before the TV will turn itself off.
- 3 Press the STATUS or MENU (M) button to clear the screen after you have set the time for the TV to turn off.

STOP



SMART HELP

Remember, to see how many minutes are left before the TV shuts itself off, reselect the SLEEP TIMER control screen. To stop a SLEEP TIMER setting, reset the timer back to OFF. (Turning the TV off and on, or pressing a button during the last minute of a timer setting, will also cancel a setting.) A few seconds before the TV is to shut off a message will come on the screen telling you **GOOD NIGHT.**

HALF HOUR REMINDER

With the Half Hour Reminder control the TV automatically shows you the current time and channel every thirty minutes.

BEGIN

- 1 Select HALF HOUR REMINDER control.

With FEATURES MENU (2 of 3) on screen, move the RED highlight with the MENU \blacktriangle \blacktriangledown buttons. Then press the MENU (M) button.

- 2 Press the MENU \blacktriangle \blacktriangledown and MENU (M) buttons to highlight and select (✓) the EVERY HALF HOUR item.

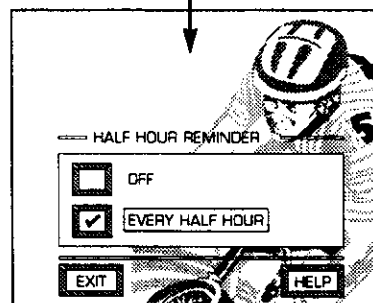
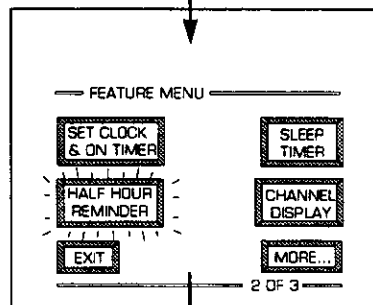
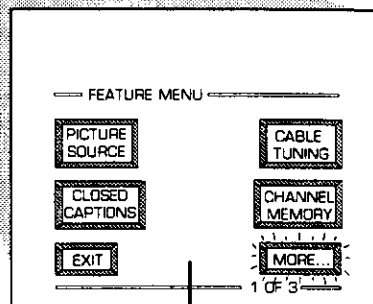
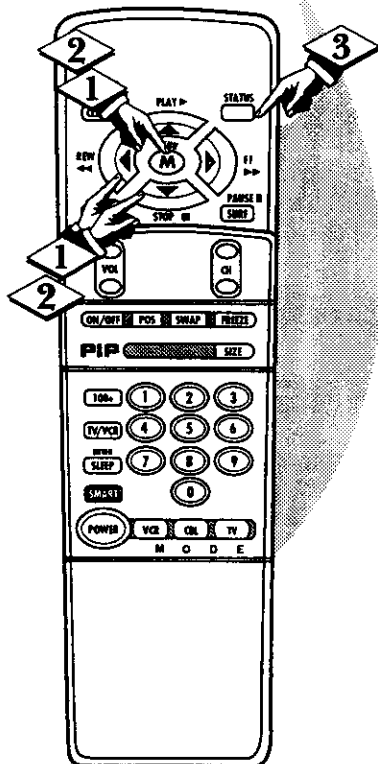
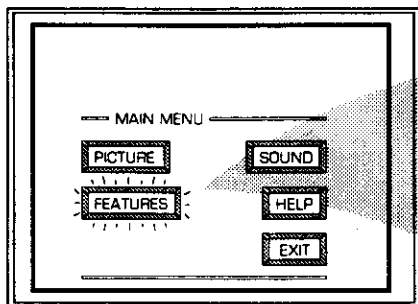
- 3 Press the STATUS button to clear the screen.



SMART HELP



Remember, the Time and Channel Reminders will show on the hour and the half-hour for several seconds.



FEATURE MENU CONTROLS (CONTINUED)

PARENTAL CONTROL

Parental Control allows parents to block out, or "censor", any channels they think children should not watch. A channel placed under Parental Control cannot be viewed until a correct access code is used to unlock the channel for viewing.

First let's set your Parental Code:

BEGIN

1 Select the PARENTAL CONTROL.

With FEATURES MENU (3 of 3) on screen, move the RED highlight with the MENU buttons. Then press the MENU (M) button.

"BLOCK CHANNELS" and "SETUP CODE" show on screen.

2 Press the MENU and MENU (M) buttons to highlight and select the SETUP CODE item.

3 Press 0, 7, 1, 1 on the remote.

"XXXX" shows on the ACCESS CODE SETUP screen as you press the number buttons.

"INCORRECT ACCESS CODE - TRY AGAIN" will also show on the screen.

4 Press 0, 7, 1, 1 on the remote again.

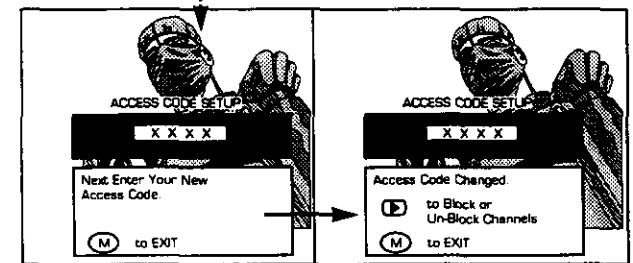
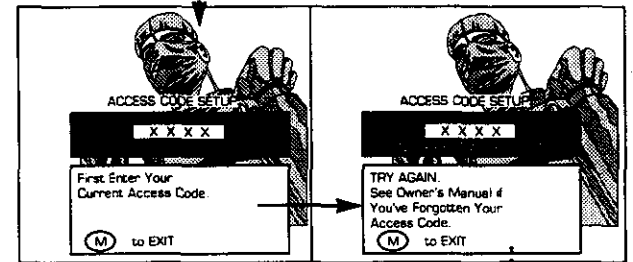
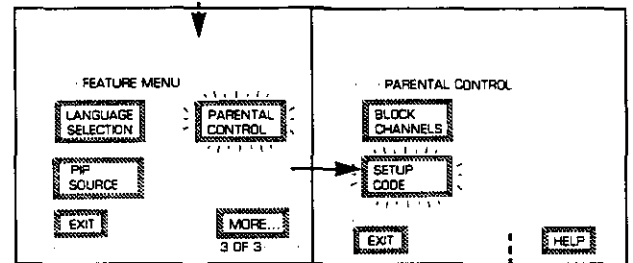
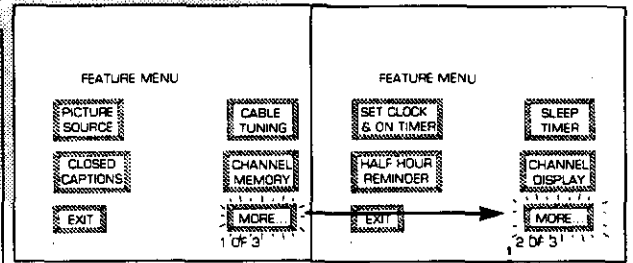
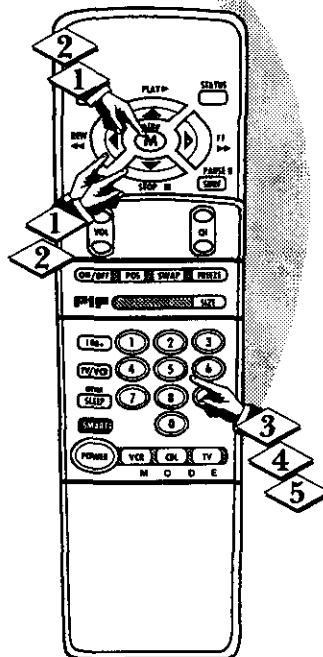
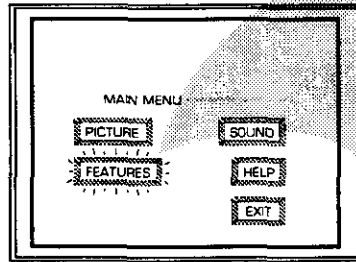
"Next Enter Your New Access Code" shows on the screen.

5 Enter a new four digit number code using the remote.

"Access Code Changed" shows on the screen to let you know the new code has been set.

Continue to the next page to find out how to "block" channels from viewing.

NOTE: Your TV left the factory with the Parental Code set to "0000". If you are using your TV and the Parental Control for the first time, and don't want to SETUP a new Access code number, you can use the "0000" number to block channels - see next page. The "0711" Parental Code (shown on this page) is given as a default or way to reset the Code when the current Access number is not known.



- Press MENU to go on and start to "block" channels
- Press MENU to return to the Parental Control Menu screen.
- Press STATUS to clear the screen.

SMART HELP



Parents - it isn't possible to unlock or defeat your Censor Code without changing to a new code number. So if your Code number changes, and you didn't change it yourself, then you will know that someone has altered the code and the blanked out channel has been viewed.

FEATURE MENU CONTROLS (CONTINUED)

PARENTAL CONTROL

After your personal Parental Code number has been set (see previous page), you are now ready to select the channels you want to block out or censor.

BEGIN

- 1 Select the **BLOCK CHANNELS** control.

With **FEATURES MENU (3 of 3)** on screen, move the **RED** highlight with the **MENU** (◀▶) buttons. Then press the **MENU (M)** button.

- 2 Press the **MENU** ▲▼ and **MENU (M)** buttons to highlight and select the **BLOCK CHANNELS** item.

- 3 Enter the correct Parental Code number.

- 4 Press **Channel** ▲▼ or **Channel Number** buttons to select the channel you want to block.

- 5 Press the **MENU** ► button to "**BLOCK VIEWING**" on the selected channel. Press the **MENU** ◀ button to "**ALLOW VIEWING**" on a blocked channel.

Repeat steps 3 and 4 for any other channels you wish to block out.

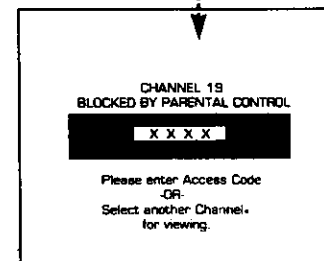
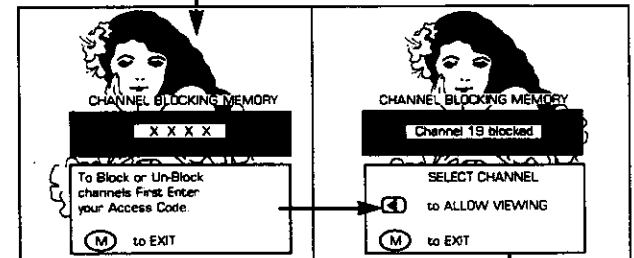
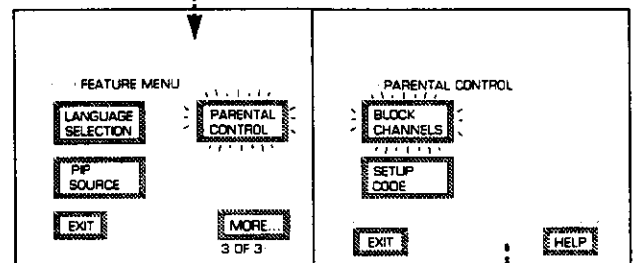
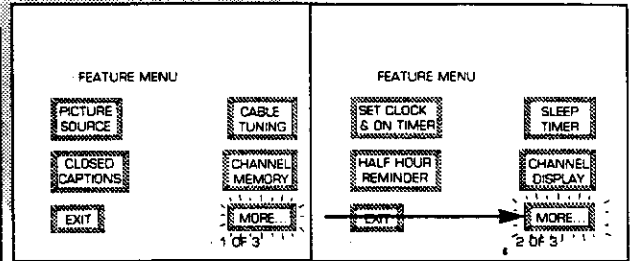
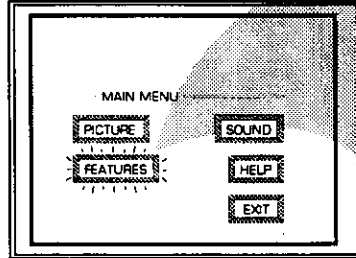


SMART HELP



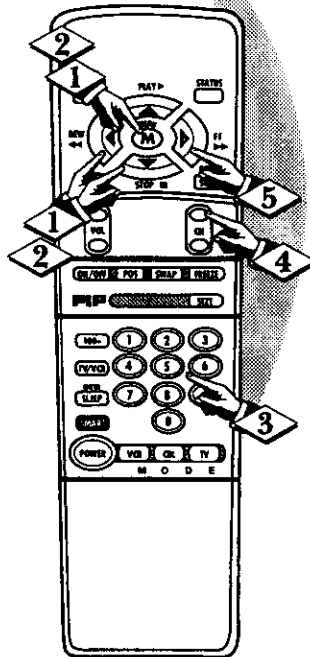
Remember, to make TV viewing easier all channels (and Audio/Video Input jacks) will be unblocked, once the correct Parental Code number has been entered.

When the TV is turned OFF and then back ON again, Parental Control is back in place for all channels.



Note: You can also block out the use of the Audio/Video Input jacks on the TV. This stops the viewing of VCR programs which can be shown through the A/V IN jacks. Just select VCR/AUX 1 (located between the lowest and highest channel numbers) on the Channel Blocking screen, and select "blocked".

BLOCKED CHANNEL SCREEN MESSAGE
(Appears when an attempt to select a blocked channel is made and Parental Control is ON.)



FEATURE MENU CONTROLS (CONTINUED)

CHANNEL DISPLAY

With the Channel Display control you can change the size and location of the on screen channel and clock information.

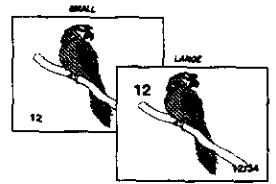
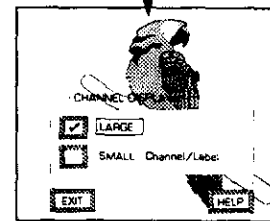
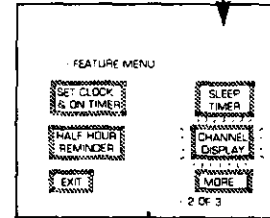
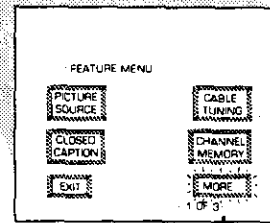
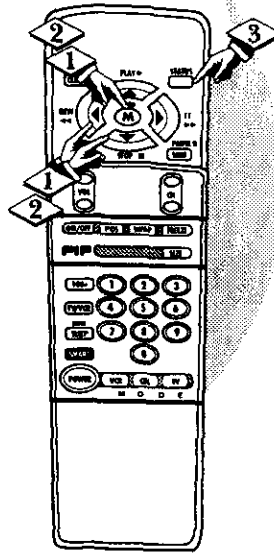
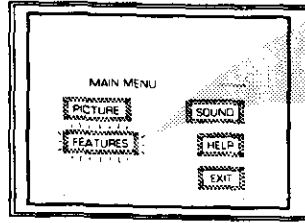
BEGIN

- 1 Select CHANNEL DISPLAY control.

With FEATURES MENU (2 of 3) on screen, move the RED highlight with the MENU (M) buttons. Then press the MENU (M) button.

- 2 Press the MENU ▲▼ and MENU (M) buttons to highlight and select (✓) the LARGE or SMALL display control.

- 3 Press the STATUS button to clear the screen.



CHANNEL DISPLAY OPTIONS

SMART HELP



Try it out. Press the CHANNEL ▲▼ buttons and you should see the Display Size you selected.

Remember. The SMALL SIZE display shows only the channel number, not the time (or clock).

LANGUAGE

Note: If you went through First Time Setup, This task has already been completed for you.

For our Spanish and French speaking TV owners an on-screen LANGUAGE option is present. With the LANGUAGE control you can set the TV's on-screen features to be shown in either English, Spanish or French.

BEGIN

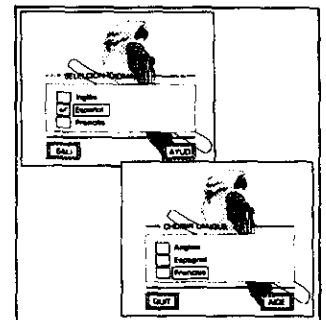
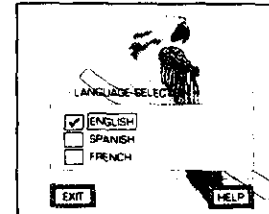
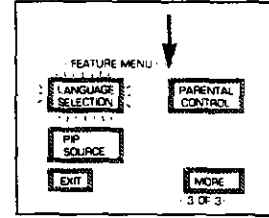
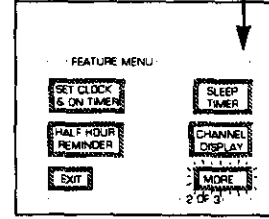
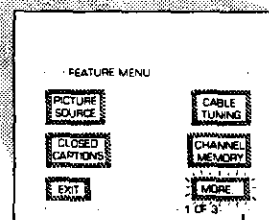
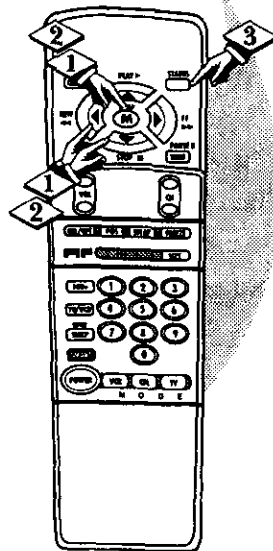
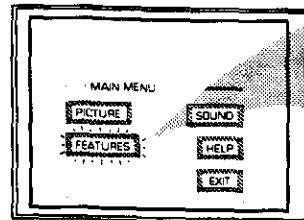
- 1 Select the LANGUAGE DISPLAY control.

With FEATURES MENU (3 of 3) on screen, move the RED highlight with the MENU (M) buttons. Then press the MENU (M) button.

- 2 Press the MENU ▲▼ and MENU (M) buttons to highlight and select (✓) English, Spanish (ESPAÑOL), or French (FRANCAIS) on the display control.

Text for the on-screen Menu will change to the selected language.

- 3 Press the STATUS button to clear the screen.



LANGUAGE DISPLAY OPTIONS

SMART HELP



Remember, the Language control only makes the TV's on-screen (MENU) items appear in English, Spanish, or French text. It does not change the other on-screen text features such as Closed Captioned (CC) TV shows.

SOUND MENU CONTROL ADJUSTMENTS

BASS, TREBLE, BALANCE

Your TV also has individual sound adjustment controls. The **BASS** (low frequency), **TREBLE** (high frequency), and **Speaker BALANCE** may all be used to adjust the sound playback of TV programs.

BEGIN

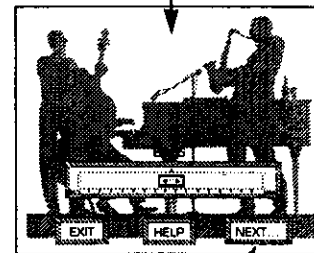
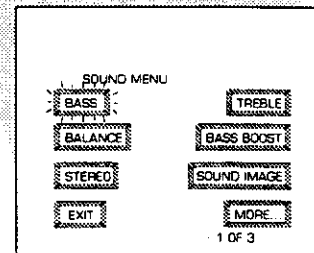
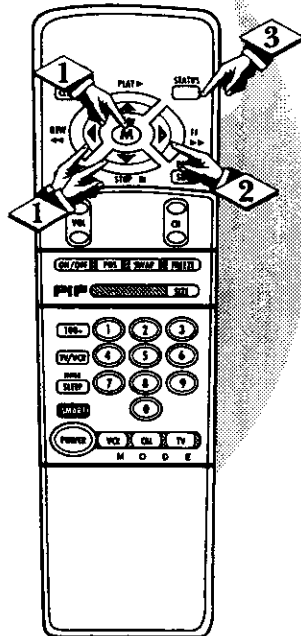
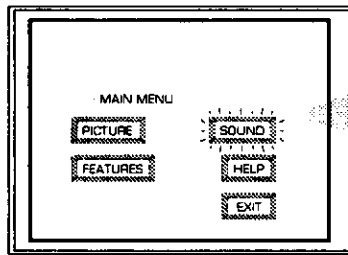
- 1 Select **BASS**, or **TREBLE**, or **BALANCE** sound control.

With the **SOUND MENU** on the screen, move the **RED** highlight with the **MENU** (◀▶) buttons. Then press the **MENU (M)** button.

- 2 Press the **(+)** or **(-)** buttons to adjust the sound control to levels you prefer.

- 3 Press the **STATUS** button to clear the screen.

STOP



Select and then press **MENU (M)** button to view additional controls grouped under same feature heading. For Example: Treble, Balance, Bass Boost, Stereo, etc.

BASS BOOST

The **BASS BOOST** control increases the low frequency audio range of the TV. This creates a deeper, fuller playback sound which can be heard through the TV's speakers.

BEGIN

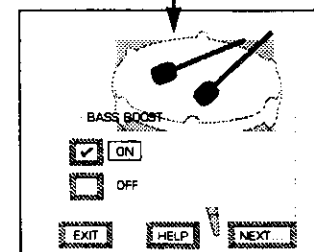
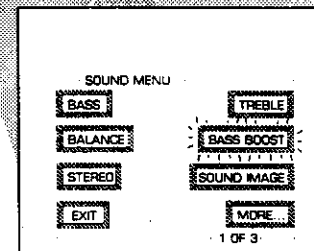
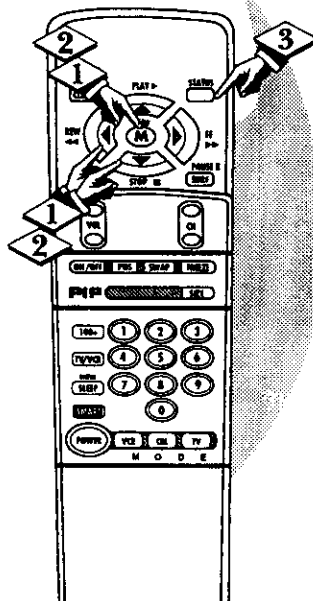
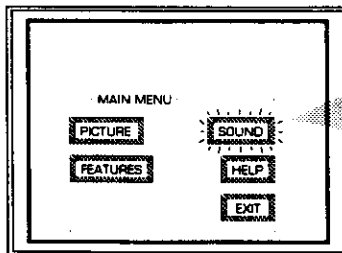
- 1 Select **BASS BOOST** sound control.

With the **SOUND MENU** on the screen, move the **RED** highlight with the **MENU** (◀▶) buttons. Then press the **MENU (M)** button.

- 2 Press the **MENU** (▲▼) and **MENU (M)** buttons to highlight and turn **ON** (✓) the **BASS BOOST** control.

- 3 Press the **STATUS** button to clear the screen.

STOP



SOUND MENU CONTROL (CONTINUED)

STEREO

Your TV is able to receive broadcast stereo TV programs. The TV is equipped with an amplifier and twin speaker system through which the stereo sound can be heard.

A RED stereo light (on the front of the TV) will come on when a stereo broadcast is received.

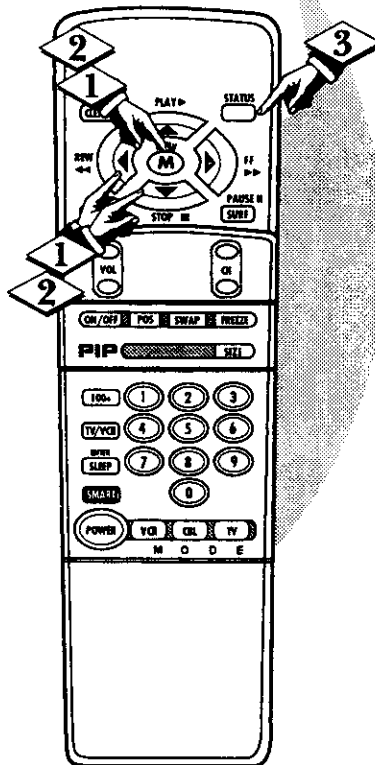
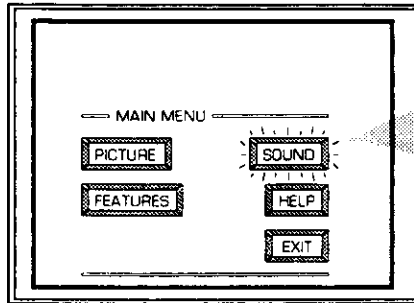
BEGIN

1 Select **STEREO** sound control.

With the **SOUND MENU** on the screen, move the **RED** highlight with the **MENU** buttons. Then press the **MENU (M)** button.

2 Press the **MENU** **▲▼** and **MENU (M)** buttons to highlight and turn **ON** the **STEREO** mode.

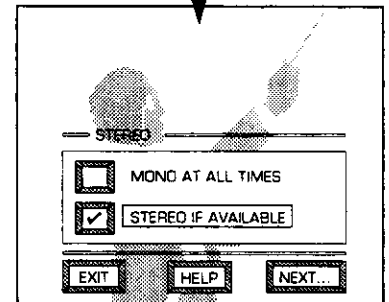
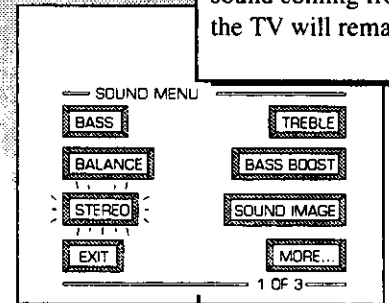
3 Press the **STATUS** button to clear the screen.



SMART HELP



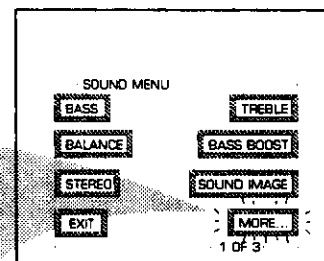
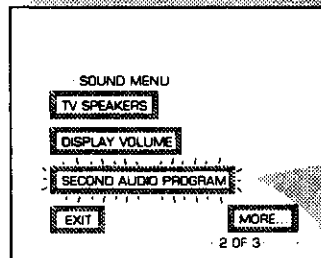
Remember. If a stereo signal is not available and the TV is placed in the **STEREO** mode, sound coming from the TV will remain



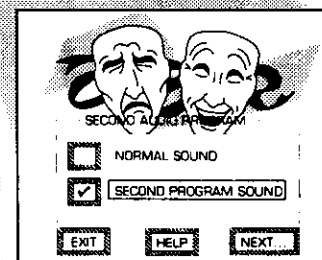
SECOND AUDIO PROGRAM

Second Audio Program (SAP) is part of the stereo broadcast system. Sent as a third audio channel SAP can be heard apart from the current TV program sound. TV stations are free to use SAP for any number of purposes, but many experts believe it will be used for foreign language translations of TV shows (or for weather and news bulletins.)

NOTE: If a SAP signal is not present with a selected program, the SAP option can not be selected. "This program does not contain SAP information" will show on the TV screen.



SECOND PROGRAM SOUND CAN ONLY BE SELECTED WHEN SAP INFORMATION IS PRESENT ON CURRENT CHANNEL.



SOUND MENU CONTROLS (CONTINUED)

SOUND IMAGE

The **Sound Image** control can be used to add greater depth and dimension to both **monaural (MONO)** and **STEREO TV** sound.

BEGIN

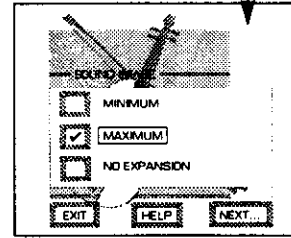
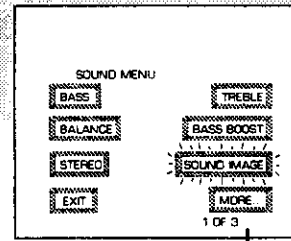
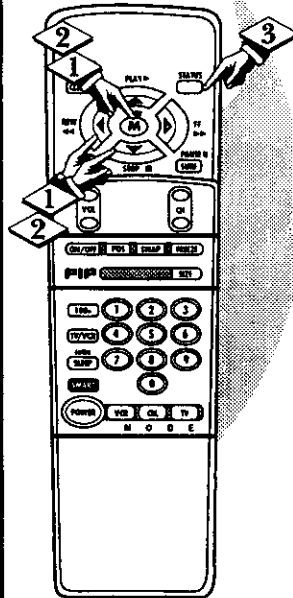
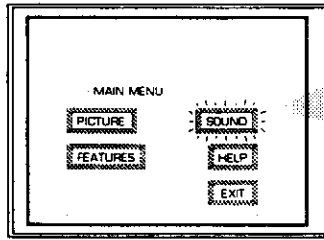
- 1 Select **SOUND IMAGE** control.

With the **SOUND MENU** on the screen, move the **RED** highlight with the **MENU** (◀▶) buttons. Then press the **MENU (M)** button.

- 2 Press the **MENU** ▲▼ and **MENU (M)** buttons to highlight and select (✓) the desired **SOUND IMAGE** mode.

For Example: "**MAXIMUM**" spreads the Sound Image effect as wide as possible.

- 3 Press the **STATUS** button to clear the screen.



SMART HELP



Remember, with the **Sound Image** control turned **ON** even monaural (mono) audio source material can be heard through rear Surround Sound speaker connections (see page 25).
 Note: The monaural version of Surround Sound may be louder at the rear set of speakers than what is normally heard with true stereo signal Surround Sound, but this is normal.

DISPLAY VOLUME

Use the **DISPLAY VOLUME** control to see the TV's volume level settings on the TV screen. Once set the Volume Display will be seen each time the **VOLUME** buttons (on the TV or remote) are pressed.

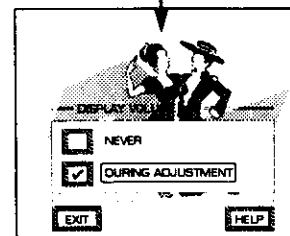
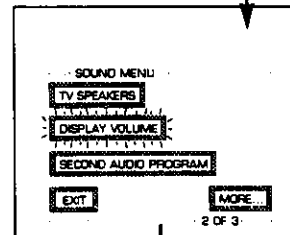
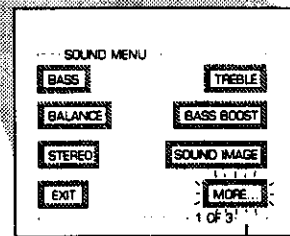
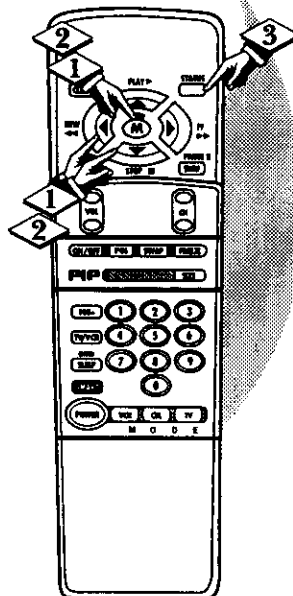
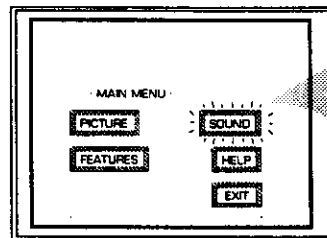
BEGIN

- 1 Select **DISPLAY VOLUME** control.

With **SOUND MENU** (2 of 3) on screen, move the **RED** highlight with the **MENU** (◀▶) buttons. Then press the **MENU (M)** button.

- 2 Press the **MENU** ▲▼ and **MENU (M)** buttons to highlight and turn **ON** (✓) the **DISPLAY VOLUME** control.

- 3 Press the **STATUS** button to clear the screen.



SMART HELP



Remember, "**DURING ADJUSTMENT**" means the volume level will be on screen whenever the **Volume** buttons are pressed.

TV SPEAKERS

Would you like to hear TV programs through your audio hi-fi system? The TV's Variable Audio Output jacks and TV Speaker On/Off control work together to offer you this TV sound option.

BEGIN

- 1 Connect the R(ight) and L(eft) VARIABLE AUDIO OUT jacks on the TV to the R and L Audio Input jacks on your amplifier or sound system.

Set the audio system's volume to normal listening level.

- 2 Turn the TV and audio system ON. You can now adjust the sound level coming from the audio system with the Volume ▲▼ buttons on the TV or remote.

- 3 To hear the TV sound from only the audio system speakers, select TV SPEAKERS control.

With SOUND MENU (2 of 3) on screen, move the RED highlight with the MENU ◀▶ buttons. Then press the MENU (M) button.

- 4 Press the MENU ▲▼ and MENU (M) buttons to highlight and turn OFF (↘) the TV SPEAKERS control.

You should now only hear TV sound coming from the audio system speakers.

- 5 Press the STATUS button to clear the screen.

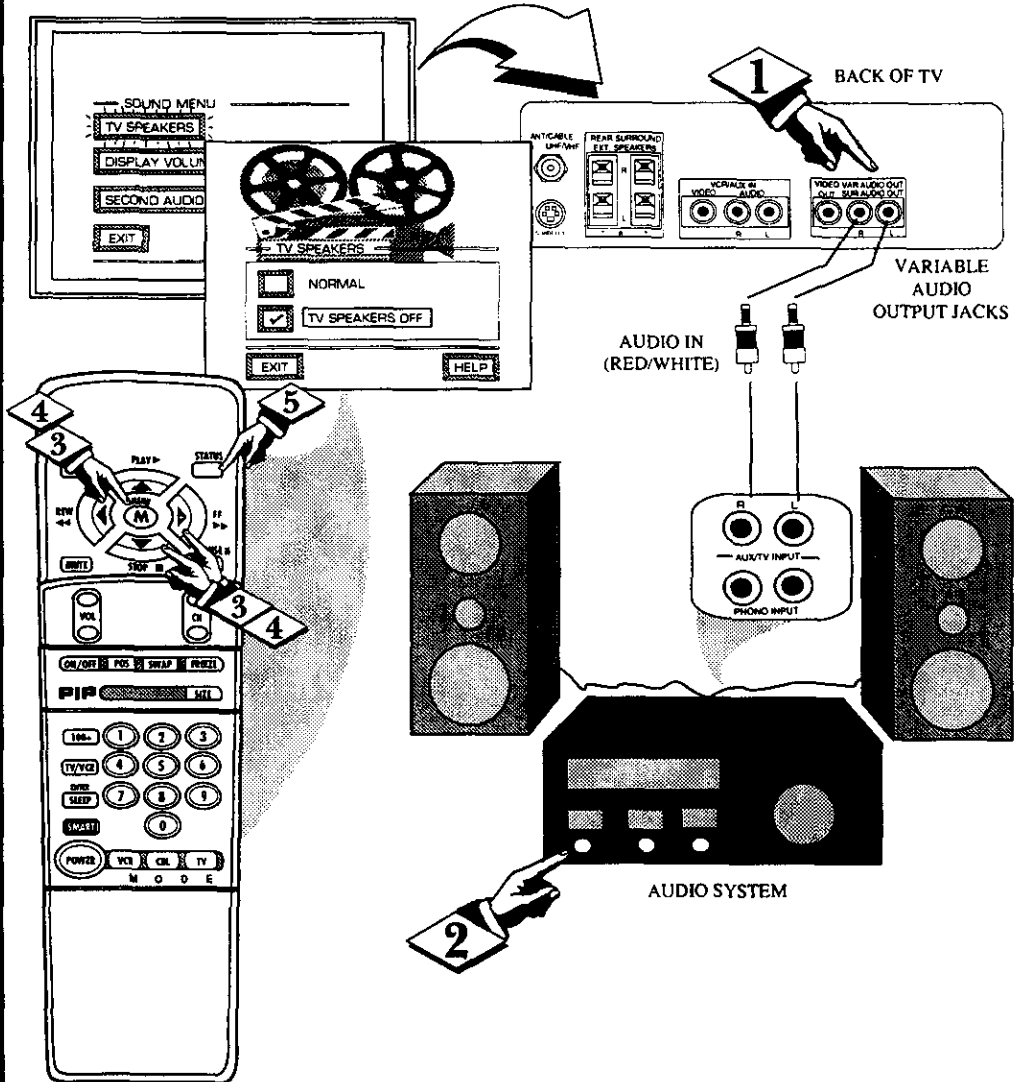


SMART HELP



Remember, the audio system may have to be in AUX(iliary) mode to play sound from the TV (Outputs).

Note: When the TV SPEAKER control is set to "NORMAL" (for TV speaker operation) make sure the VARIABLE AUDIO OUTPUT control (see next page) is also set to "STEREO" in order for the TV's AUDIO OUTPUT jacks to work properly.



SOUND MENU CONTROLS (CONTINUED)

SURROUND SOUND

By adding optional external speakers to the TV's sound system, you can create the feeling of reflected sound that surrounds you at a movie theater or concert hall.

BEGIN

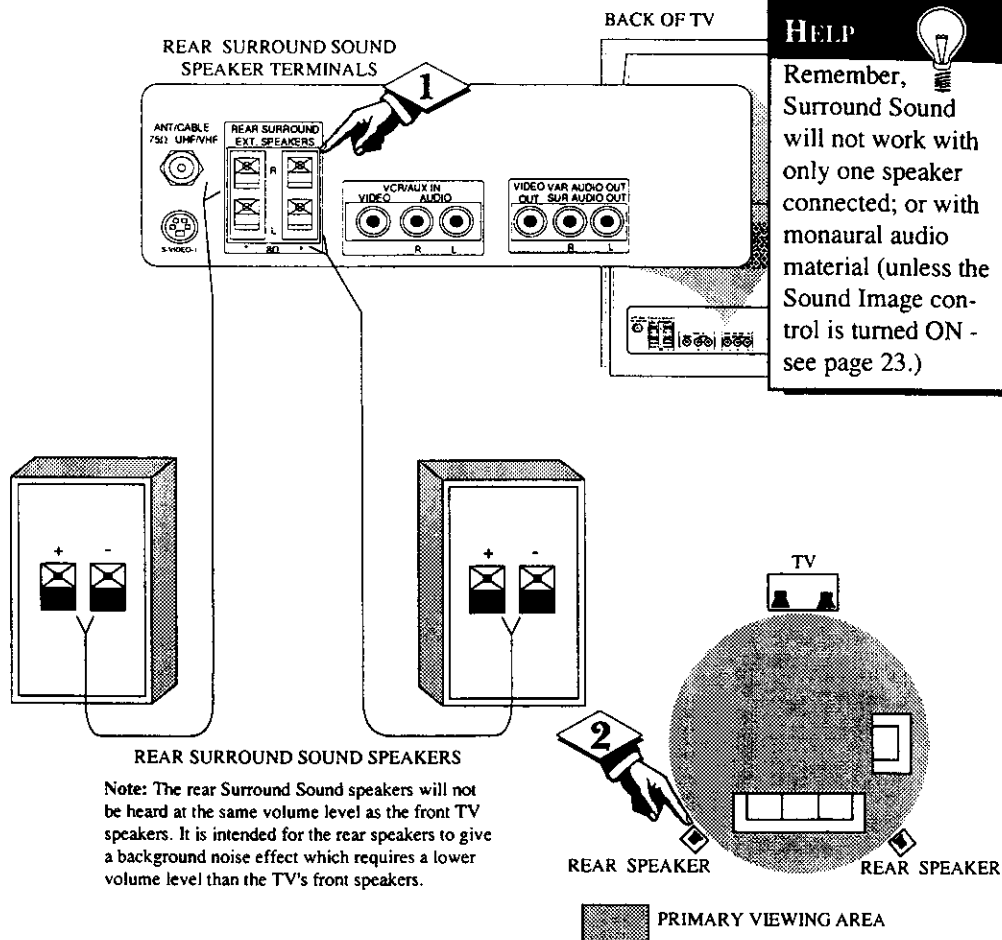
- 1 Connect both external speakers to the speaker wire terminals on the TV.

Recommended speakers: 8ohm, 15 watt minimum. Be sure the (+) and (-) speaker wires are connected to the correct R(ight) and L(ef) speaker terminals on the TV.

- 2 Place the speakers so the viewing area is between the TV and the rear surround speakers. (See overhead view drawing.)

- 3 Turn TV ON and place the STEREO control to the "STEREO IF AVAILABLE" (✓) position.

After setup whenever a stereo signal is received the audio will be heard in Surround Sound.



SMART HELP



Remember, Surround Sound will not work with only one speaker connected; or with monaural audio material (unless the Sound Image control is turned ON - see page 23.)

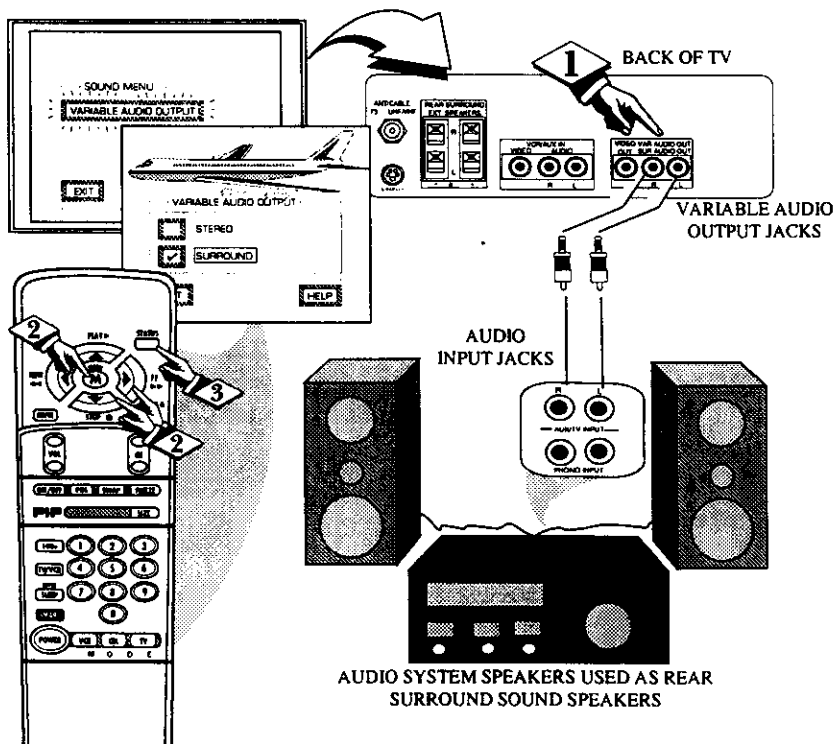
VARIABLE AUDIO OUTPUT

The TV's Variable Audio Output jacks can also be used for Surround Sound. Once they are connected an external hi-fi system its speakers can be used for the playback of Surround Sound.

BEGIN

- 1 Connect the R(ight) and L(ef) VARIABLE AUDIO OUT jacks on the TV to the R and L Audio Input jacks on your amplifier or sound system.

- 2 Turn TV ON and place the VARIABLE AUDIO OUTPUT on screen control to the SURROUND (✓) position. (Select the Main Menu Sound option, screen 3 of 3).



USING THE AUDIO/VIDEO INPUT JACKS

VCR/AUX INPUTS

The TV's Audio/Video Input jacks are for direct picture and sound connections between the TV and a VCR (or Video Disc Player, etc.) that has Audio/Video Output jacks.

To view the playback of a VCR tape by using the Audio/Video Input jacks on the TV:

BEGIN

- 1 Connect the VIDEO OUT jack from the VCR to the VCR/AUX VIDEO IN jack on the TV.
- 2 Connect the AUDIO OUT jacks R(right) and L(left) from the VCR to the VCR/AUX AUDIO IN jacks on the TV.
- 3 Select the "VCR/AUX" PICTURE SOURCE SELECT control on the TV.

With the FEATURES MENU on screen, move the RED highlight with the MENU $\blacktriangle/\blacktriangledown$ buttons. Then press the MENU (M) button.
- 4 Press the MENU $\blacktriangle/\blacktriangledown$ and MENU (M) buttons to highlight and select (\blacktriangleright) the VCR/AUX mode.
- 5 Turn the VCR ON and press PLAY to view the tape on the TV.

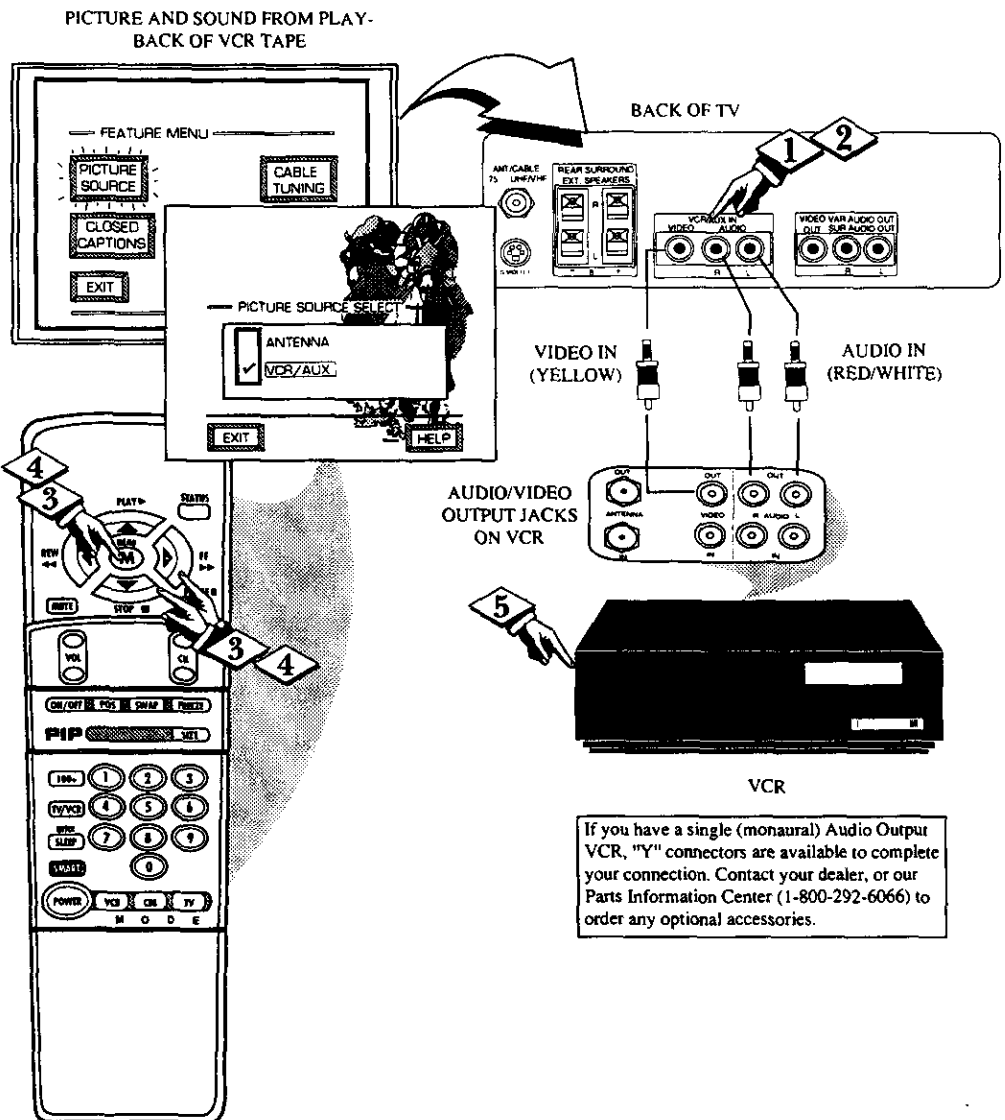
STOP

SMART HELP



Remember, an easy way to select VCR/AUX mode is to press the VCR button on the front of the TV. (Channels 3 and 4 can also be selected in this way.)

Or if you have added VCR/AUX to the TV's channel memory (see page 14), just press the CHANNEL $\blacktriangle/\blacktriangledown$ buttons to select the VCR/AUX mode.



If you have a single (monaural) Audio Output VCR, "Y" connectors are available to complete your connection. Contact your dealer, or our Parts Information Center (1-800-292-6066) to order any optional accessories.

USING THE AUDIO/VIDEO INPUT JACKS (CONTINUED)

S-VIDEO INPUT

The (Super)-Video connection on the rear of the TV can give you better picture detail and clarity, for the playback of S-VHS VCR tapes or Video Discs, than the normal antenna picture connections.

Note: The VCR (or Video Disc Player) must have a S-VIDEO OUT (put) jack in order for you to complete the connections shown on this page.

BEGIN

- 1 Connect the S-VIDEO (S-VHS) OUT jack from the VCR to the S-VIDEO 1 jack on the TV.

The S-VIDEO connecting cable will be supplied with the S-VHS VCR (or Video Disc Player).

- 2 Connect the AUDIO OUT jacks R(ight) and L(ef) from the VCR to the AUDIO VCR/AUX IN jacks on the TV.

- 3 Select the "S-VIDEO" PICTURE SOURCE control.

With the FEATURES MENU on screen, move the RED highlight with the MENU (M) buttons. Then press the MENU button.

The "S VIDEO" picture source option appears when a S-VIDEO cable has been connected to the TV.

- 4 Turn the VCR ON and place it in the S-VIDEO (or S-VHS) playback mode. Insert S-VHS cassette tape and playback in a normal manner.

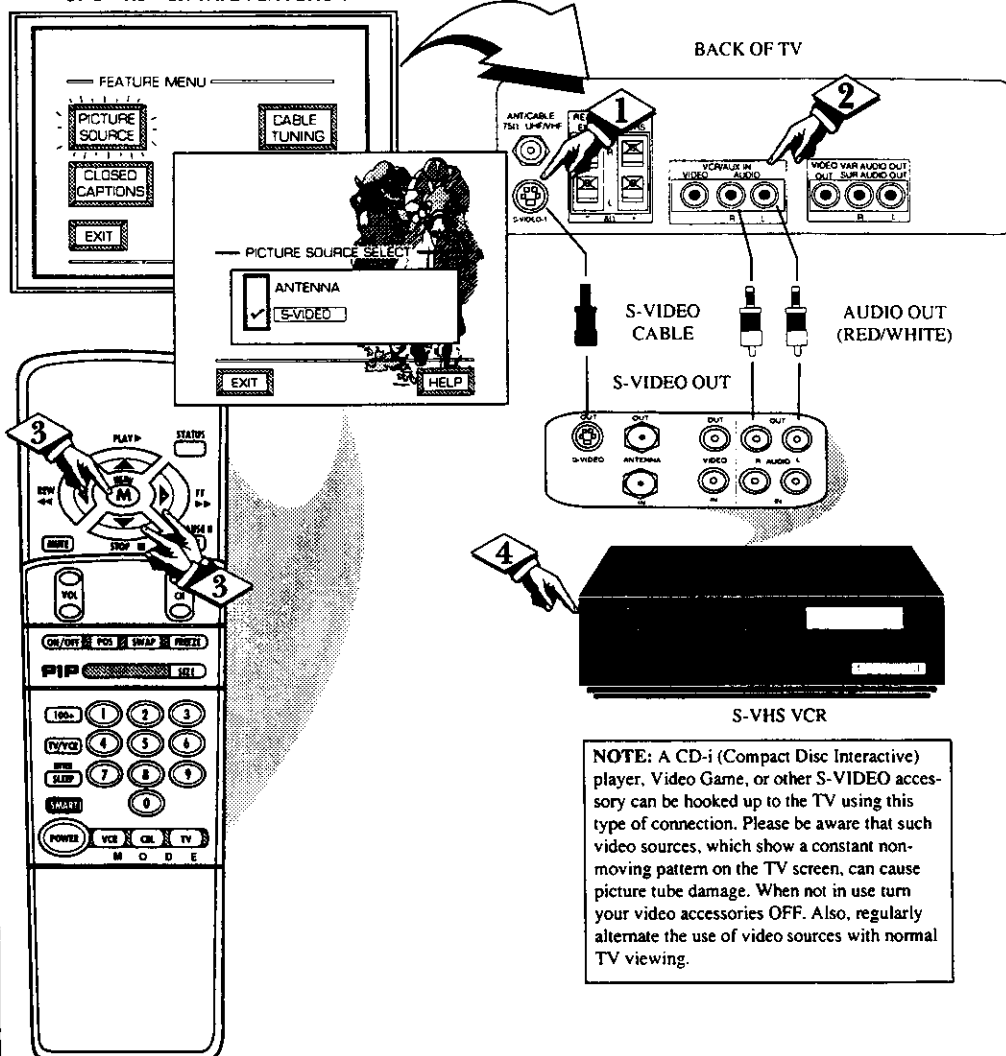
STOP

SMART HELP

Remember, after it is connected an easy way to select the S-VIDEO mode is to press the VCR button on the front of the TV (or the TV/VCR button on the remote.)

If you have added AUX 1 to the TV's channel memory, just press the CHANNEL ▲▼ buttons to select the S-VIDEO mode.

PICTURE AND SOUND FROM PLAYBACK OF S-VHS VCR TAPE PLAYBACK



USING THE AUDIO/VIDEO OUTPUT JACKS


AUDIO/VIDEO OUTPUTS

The Audio/Video Output jacks on the TV can be used to record TV programs on VCRs which have Audio/Video Input jacks.

To record TV programs by using the Audio/Video jacks on the TV:

BEGIN

- 1 Connect the VIDEO OUT jack from the TV to the VIDEO IN jack on the VCR.
- 2 Connect the AUDIO OUT jacks R(ight) and L(eft) from the TV to the AUDIO IN jacks on the VCR.
- 3 Select the "ANTENNA" PICTURE SOURCE control on the TV.

With the FEATURES MENU on screen, move the RED highlight with the MENU  buttons. Then press the MENU (M) button.

Select the channel on the TV that you want to record.

- 4 Turn the VCR ON. Put a cassette tape in the unit and place the VCR in the RECORD mode.

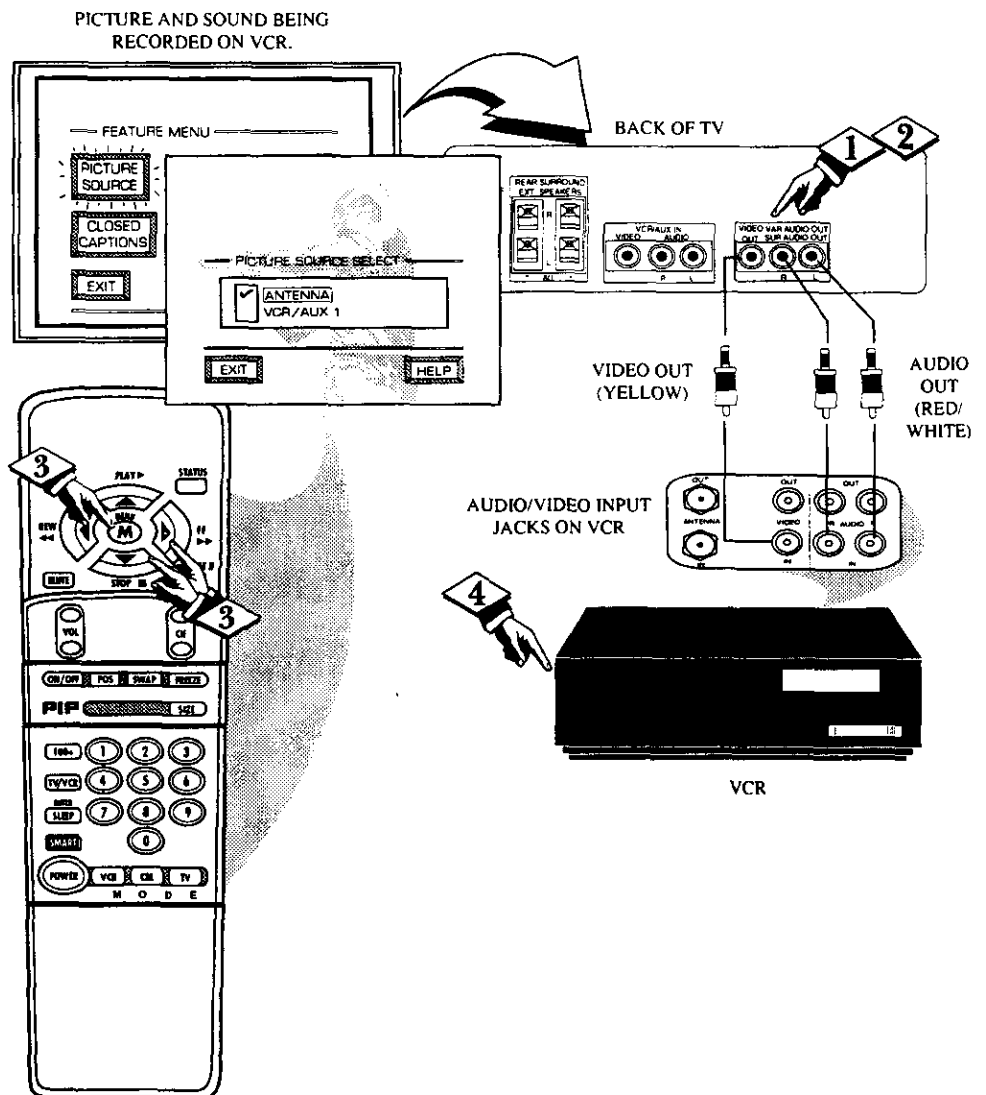
STOP

SMART HELP



Remember, if the VCR has an INPUT SELECTOR switch, place it in the LINE or CAMERA position.

Unattended Timer Recordings with a VCR are possible, but not recommended with this connection since the TV must be left ON for the VCR to record.



REMOTE CONTROL OPERATION

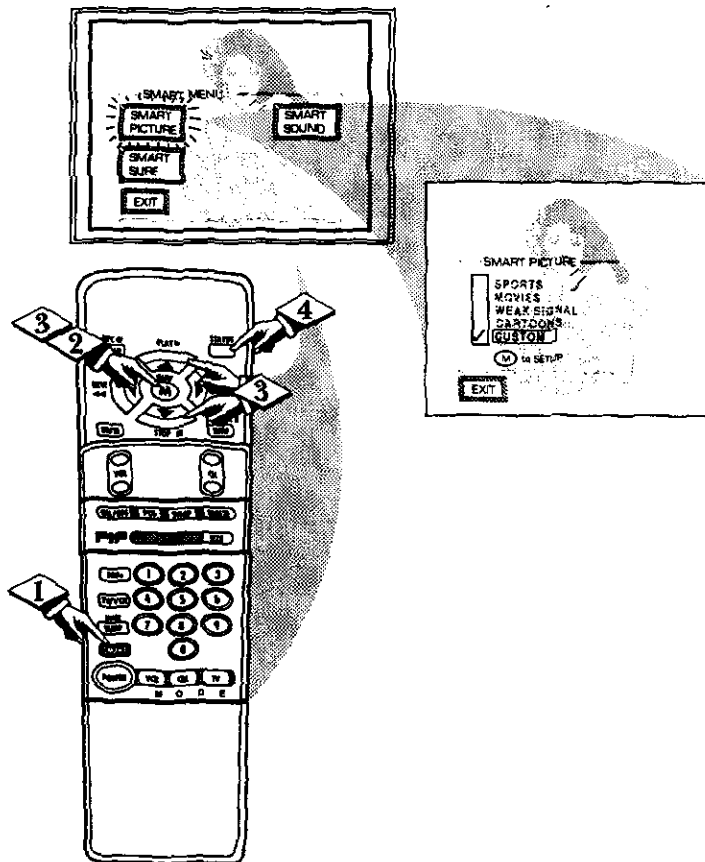
SMART PICTURE

Regardless of what type of program your watching, your TV has automatic video control settings matched for your current program source or content. The Smart Picture feature quickly resets your TV's video controls for a number of different types of programs and viewing conditions you may have in your home.

BEGIN

- 1 Press the Smart button on the remote.
- 2 Press the Menu (M) button to select the Smart Picture feature (highlighted in red).
- 3 Press the Menu (M) ▲ or ▼ buttons to choose any of the preset viewing categories (Example: Cartoons, Movies, etc.). Then press the Menu (M) button to select the highlighted control.
- 4 Press STATUS button on the remote control to clear the screen.

STOP



SMART HELP



Remember, with the Smart Picture "CUSTOM" mode selected you can set a number of video controls to your own preference. Use the remote's SMART button to reselect these personally adjusted Custom settings contained within the Smart Picture feature.

The video control settings for the Smart Picture categories (except CUSTOM) are memorized into the TV at the factory and can only be reset by field and service technicians.

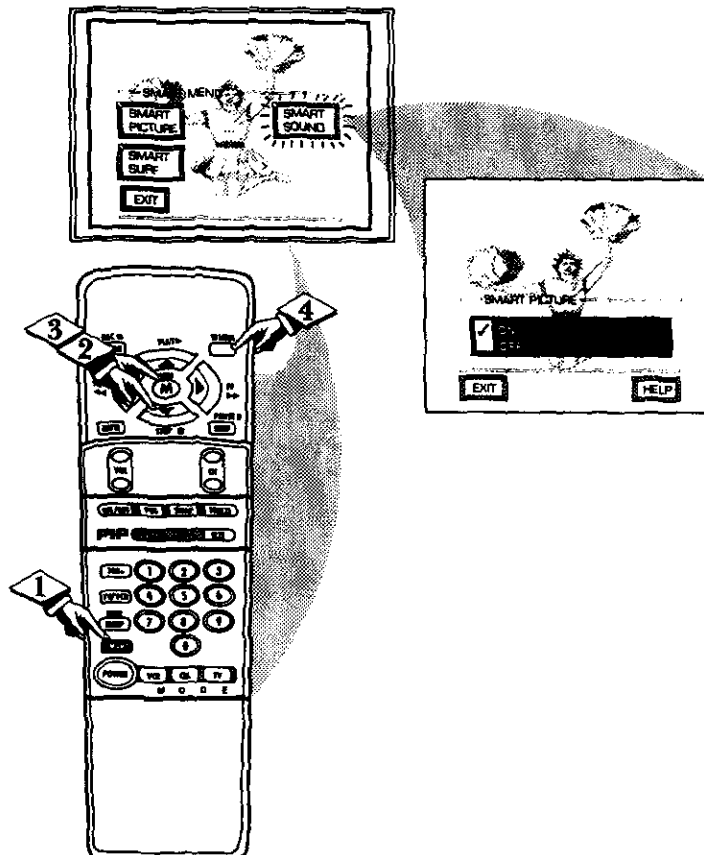
SMART SOUND

Are you tired of the sound of commercials following you throughout the house? Smart Sound allows you to preset a desired volume level that the TV sound will not go above. This makes for an even, more consistent sound by reducing the "peaks" and "valleys" that can occur during commercials.

BEGIN

- 1 Press the Smart button on the remote.
- 2 With the SMART Menu on screen, move the RED highlight with the Menu (M) buttons. Then press the MENU (M) button to select the highlighted Smart Sound control.
- 3 Press the Menu ▲ or ▼ and then the Menu (M) button to turn the Smart Sound control ON (or OFF.)
- 4 Press the STATUS button to clear the screen when completed.

STOP



SMART HELP



Remember, Smart Sound works for sound levels coming from either the Antenna/Cable input on the rear of the TV (RF audio); or the Auxiliary (VCR/AUX IN) audio inputs. When using a Cable Converter Box with the Smart Sound Control ON, the TV's volume level may take up to ten seconds to gradually increase to normal listening levels (when the TV's first turned on). This is considered NORMAL with various Cable Converter Box use.

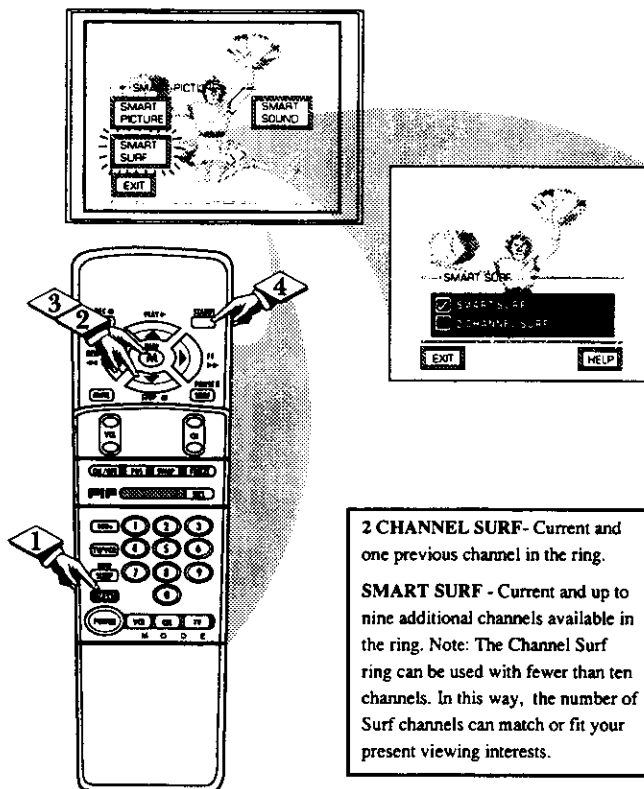
2-CHANNEL SURF/SMART SURF

A "list" or series of previously viewed channels can be selected with the SURF button on your remote control. With this feature you can easily switch between different TV programs that currently interest you. The Smart Surf control allows you to set up to 10 channels in its quick viewing "list".

BEGIN

- 1 Press the Smart button on the remote.
- 2 With the SMART Menu on screen, move the RED highlight with the Menu (M) (←→) buttons. Press the MENU button to select the highlighted Smart Surf control.
- 3 Press the Menu ▲ or ▼, then the Menu (M) button to select either Smart Surf or 2-Channel Surf. (See explanation of Surf options with the illustration on this page.)
- 4 Press STATUS button on the remote control to clear the screen.

STOP



2 CHANNEL SURF - Current and one previous channel in the ring.

SMART SURF - Current and up to nine additional channels available in the ring. Note: The Channel Surf ring can be used with fewer than ten channels. In this way, the number of Surf channels can match or fit your present viewing interests.

SMART HELP



To Use 2-Channel Surf:

With the 2-Channel Surf control ON, select the two desired channels for viewing with the number buttons on the remote control.

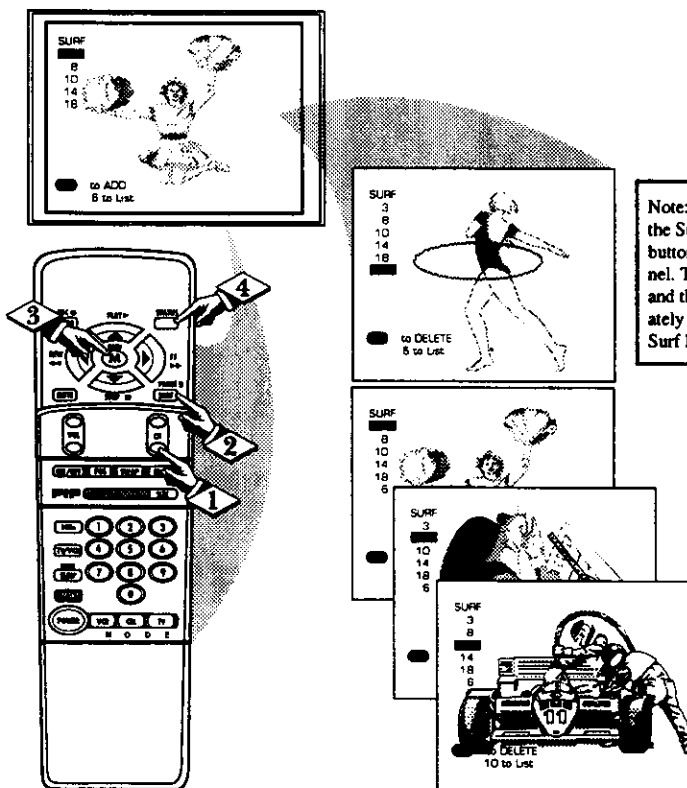
Press the SURF button on the remote to "toggle" between the two selected channels.

HOW TO USE SMART SURF

BEGIN

- 1 With the Smart Surf control ON (see above), select a desired channel for viewing. You can use the number buttons on the remote (or the Channel ▲▼ buttons).
- 2 Press the SURF button on the remote. (Some channel numbers may already appear within the Surf channel list.)
- 3 Press the Menu button to "ADD" the selected channel to the Surf list. Select the next desired channel and repeat steps 2 and 3. Continue until all desired channels are on the Surf list.
- 4 Press the SURF button on the remote to quickly review current action on channels contained within the Surf list.

STOP



Note: To Delete a channel from the Surf list just press the SURF button to select the desired channel. Then press the Menu button and the channel will be immediately dropped from the on screen Surf list.

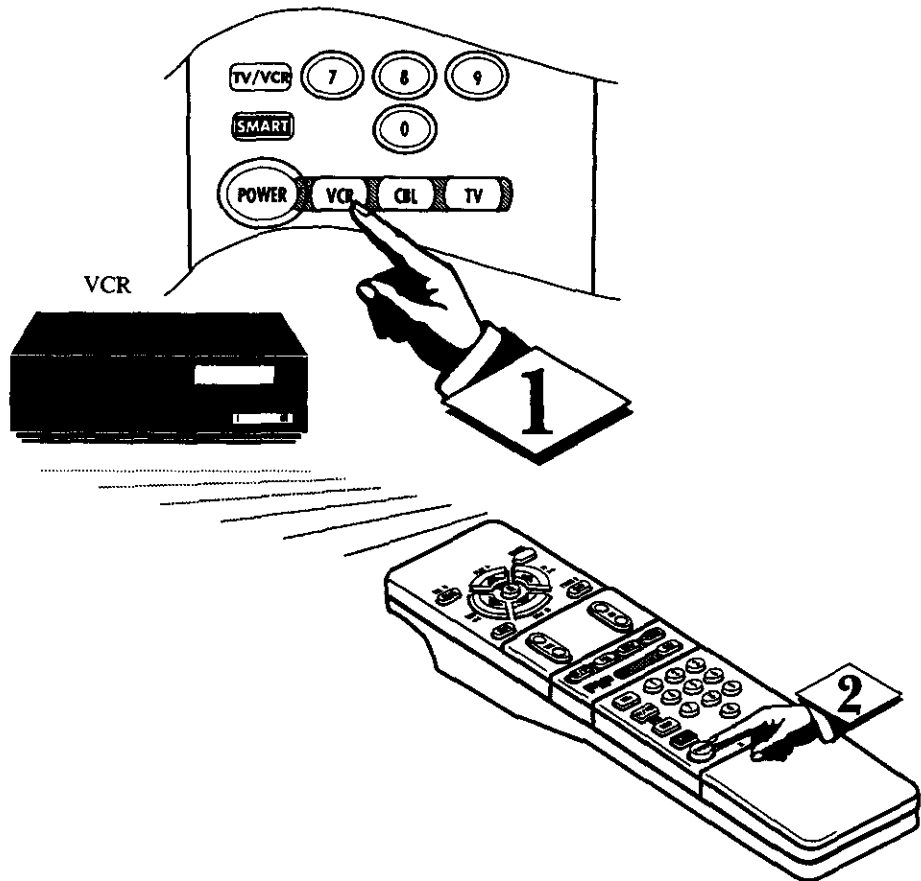
SETTING THE REMOTE TO WORK VCRs

Your remote control is set to work your TV and many infrared remote (IR) control VCRs. However, an easy one-time step may be necessary before the remote will work your VCR.

Try this initial check to see if going on to the following section is necessary.

BEGIN

- 1 Press the VCR System button on the remote.
- 2 Point remote toward VCR and press the POWER button.
- 3 Does the remote turn the VCR ON?
IF YES, and try the other VCR buttons on the remote. If they also work the VCR, then the remote is ready and no further steps are needed.
IF NO, continue...



- 1 First look up a **TWO-DIGIT remote code number** for your brand VCR before going through the simple "1,2,3" steps (on the following page).

continue to next page

SMART HELP

Remember, if more than one number is listed, you may have to try more than the first two-digit code given in order to locate your VCR's remote code.

VCR BRAND	REMOTE CODE NO.	VCR BRAND	REMOTE CODE NO.
Akai	.24, 25, 36	Panasonic	.01, 02, 52
Capehart	.33	Philips	.00, 05
Conoid	.13	Philips Video CD	.37
Curtis Mathes	.42	RCA	.04, 32, 42, 43, 44
Daewoo	.33	Samsung	.22, 30
Emerson	.20, 31, 34, 40	Sansui	.49
Fisher	.06, 07	Sanyo	.13
Goldstar	.23	Sears	.08
Go Video	.45, 46	Sharp	.11, 12
Hitachi	.03, 51	Shintom	.35
JVC	.14, 47, 48	Sony	.09, 10, 41
Magnavox	.00, 05	Teknika	.26
Matsushita	.01, 02	Toshiba	.18, 19
Mitsubishi	.16, 17, 38, 39, 50	Video Concepts	.29
Multitech	.27, 28	Zenith	.15
NEC	.21		

Now that you have looked up the two-digit Remote Code Number for your brand of VCR (on previous page), you are ready to follow the four simple steps below.

Please read through steps 1-4 before beginning.

BEGIN

- 1 Press and release the REC (RECORD) button.
- 2 Within thirty seconds after releasing the REC button, press and release the VCR System button.
- 3 Within thirty seconds after releasing the VCR System button, ENTER THE TWO DIGIT CODE NUMBER for the desired VCR. The remote is now ready to send commands to the VCR.
- 4 Point the remote at the VCR. Press the POWER button on the remote to turn the VCR ON.



SMART HELP

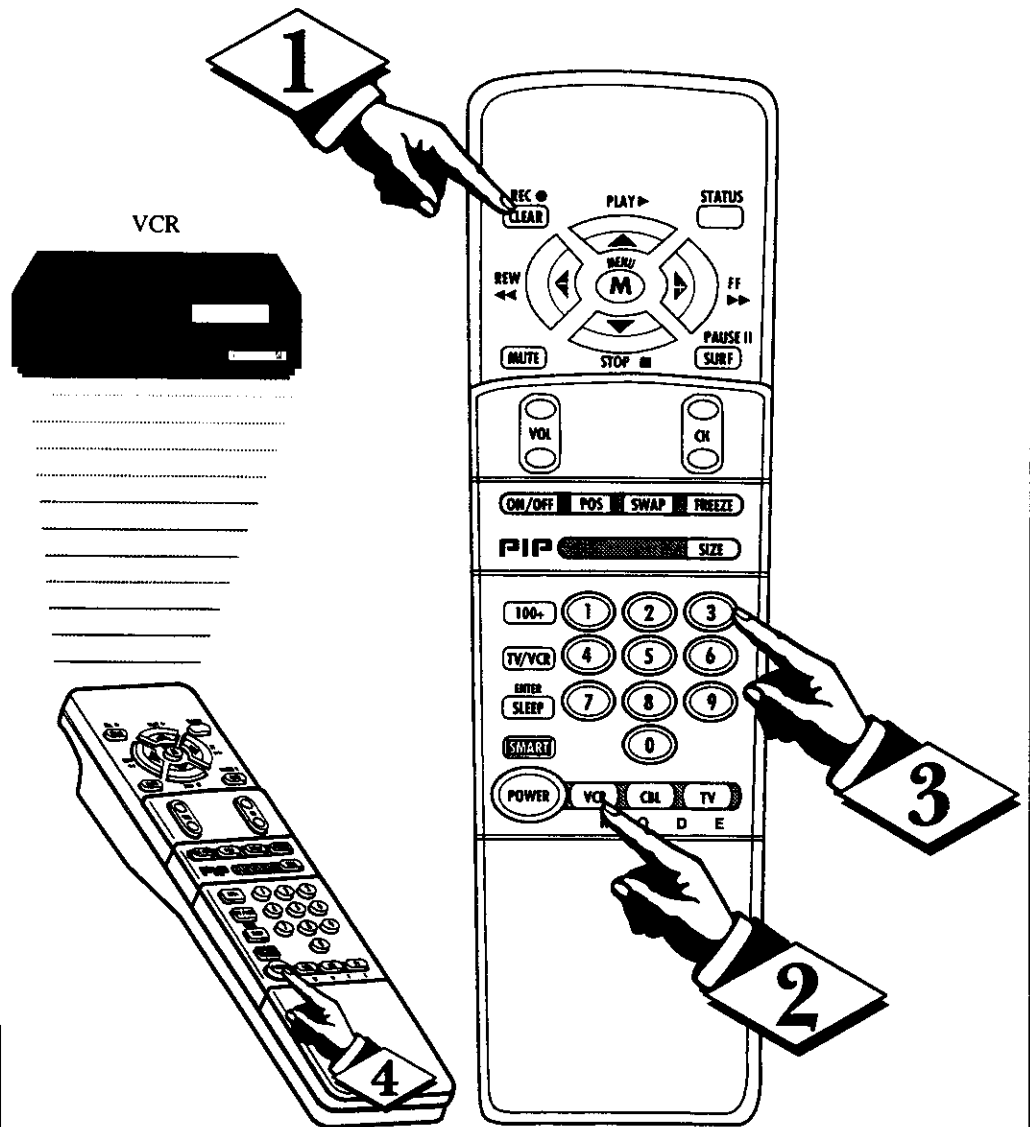


Try it out. The Channel and VCR buttons on the remote should now operate the VCR.

Remember, if this doesn't work the first time, repeat steps using the same remote code number.

If after a second try the remote does not operate your VCR, and there are more code numbers listed for your brand VCR, use the next listed code number.

If after repeated attempts the code number method does not work your VCR, try the "VCR SEARCH" method on page 34.



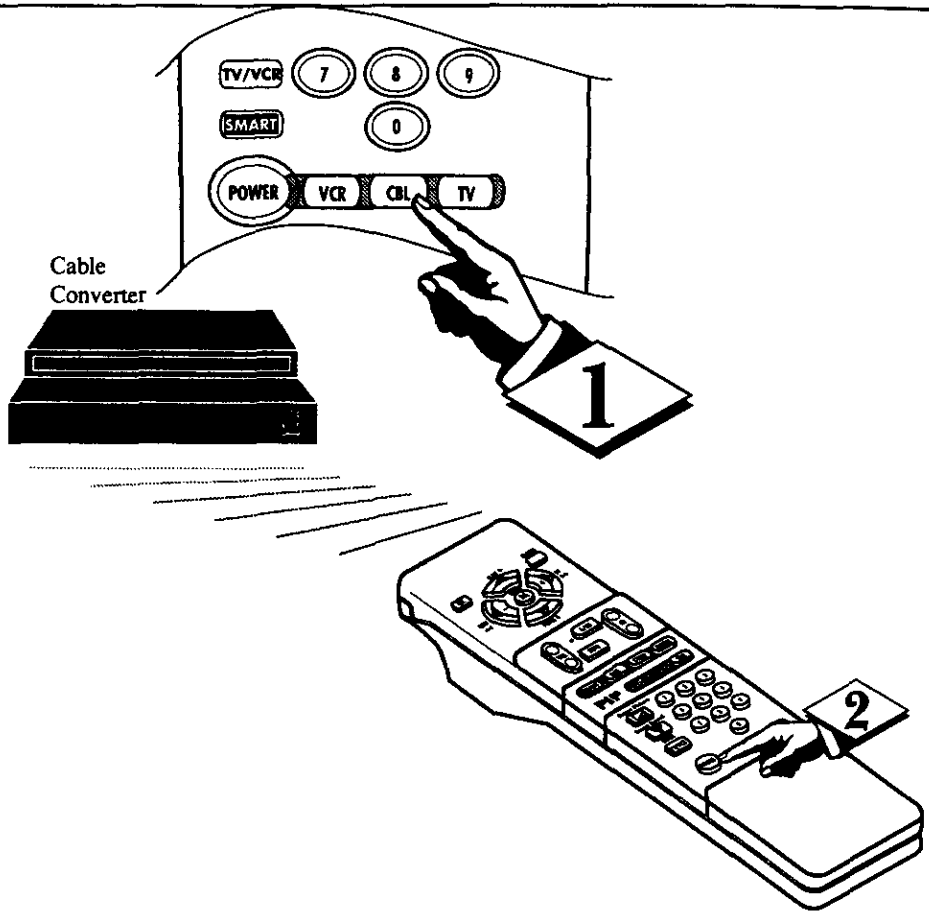
SETTING THE REMOTE TO WORK CABLE TV CONVERTERS

Your remote control is set to work your TV and many infrared remote (IR) control Cable Converters. However, an easy one-time step may be necessary before the remote will work your Converter.

Try this initial check to see if going on to the following section is necessary.

BEGIN


- 1 Press the CBL System button on the remote.
- 2 Point remote toward Cable Converter and press the POWER button.
- 3 Does the remote turn the Converter ON?
IF YES, and try the CH ▲ ▼ and CH number buttons on the remote. If they also work the Converter then the remote is ready and no further steps are needed.
IF NO, continue...



- 1 First look up a **TWO-DIGIT remote code number** for your brand Converter before going through the simple "1,2,3" steps (on the following page).

continue to next page

SMART HELP

 Remember, if more than one number is listed, you may have to try more than the first two-digit code given in order to locate your Converter's remote code.

CONVERTER BRAND	REMOTE CODE NO.	CONVERTER BRAND	REMOTE CODE NO.
Archer	.....28	Rembrandt	.....33
Diamond	.....23	Salora	.....52
Drake	.....37	Scientific Atlanta	...08, 22, 47
Gemini	.....45	Sheritech	.....34
Hamlin	.....14, 15	Starcom	.....30
Hitachi	.....25	Sylvania	.....16
Jerrold	.00,01,02,03,04,05,46,55	Texscan	.....48
Macom	.....29, 38	Tocom	.....12,13, 53
Magnavox	.....17, 31	Toshiba	.....43
NSC	.....49	Uniden Satellite	.....44
Oak	.....06, 27, 39	Unika	.....50
Panasonic	.....18, 35	United Satellite	.....54
Philips	.....19, 20, 21, 24, 26	Universal	.....36
Pioneer	.....09, 32	Video Tech	.....40
Regency	.....10, 11	Video Way	.....51
		Zenith	.....07, 41, 42

Now that you have looked up the two-digit Remote Code Number for your brand of Cable Converter (on previous page), you are ready to follow the four simple steps below.

Please read through steps 1-4 before beginning.

BEGIN

- 1 Press and release the REC (RECORD) button.
- 2 Within thirty seconds after releasing the REC button, press and release the CBL System button.
- 3 Within thirty seconds after releasing the CBL System button, ENTER THE TWO DIGIT CODE NUMBER for the desired Converter. The remote is now ready to send commands to the Converter.
- 4 Point the remote at the Converter. Press the POWER button on the remote to turn the Converter ON.



SMART HELP

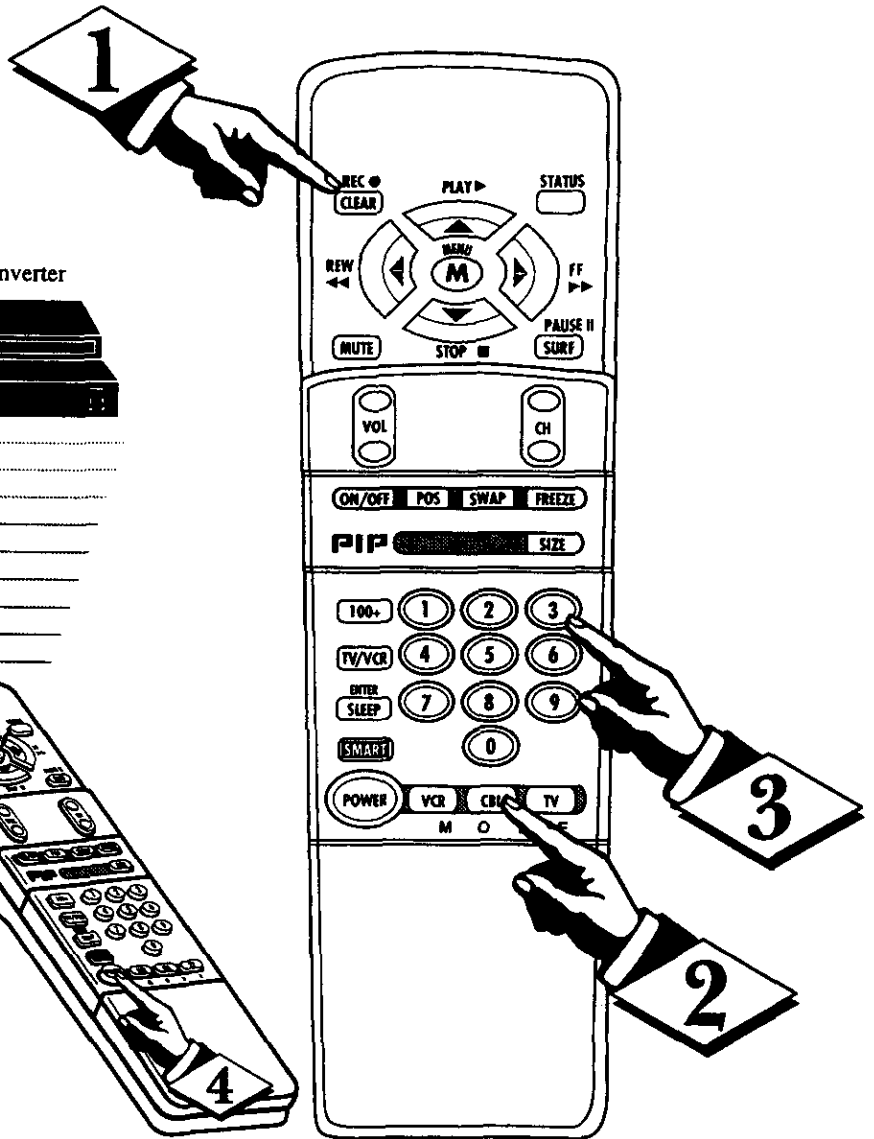
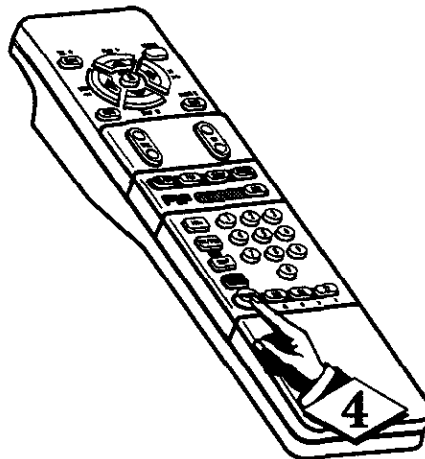
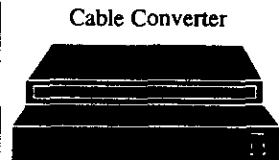


Try it out. The Channel and POWER buttons on the remote should now operate the Converter.

Remember, if this doesn't work the first time, repeat steps using the same remote code number.

If after a second try the remote does not operate your Converter, and there are more code numbers listed for your brand Converter, use the next listed code number.

If after repeated attempts the code number method does not work your Converter, try the "CONVERTER SEARCH" method on page 34.



SETTING YOUR REMOTE TO WORK VCRs, CONVERTERS - SEARCH

Your TV remote can be set to work your VCR or Cable Converter by what is called the SEARCH method.

If the "REMOTE CODE" number method shown in the previous section did not set your remote to work your VCR or Converter, then follow the easy steps listed below.

Please read through steps 1-4 before beginning.

BEGIN

1 Press the **POWER** button on the VCR or Converter to turn the unit ON.

2 Stand at least six feet away from the front of the VCR or Converter.
Point the remote toward the unit. HOLD DOWN the SURF and the desired System (VCR or CBL-Converter) buttons at the same time. KEEP HOLDING BUTTONS DOWN.

3 Watch the Channel Indicator on the unit. Channel Numbers will SCAN UP when the unit has been identified. This may take up to two minutes.

4 Release the SURF and System (VCR or CBL) buttons as soon as channel numbers start to scan up. The code has been identified and the remote is ready to operate with the VCR or Converter.

STOP

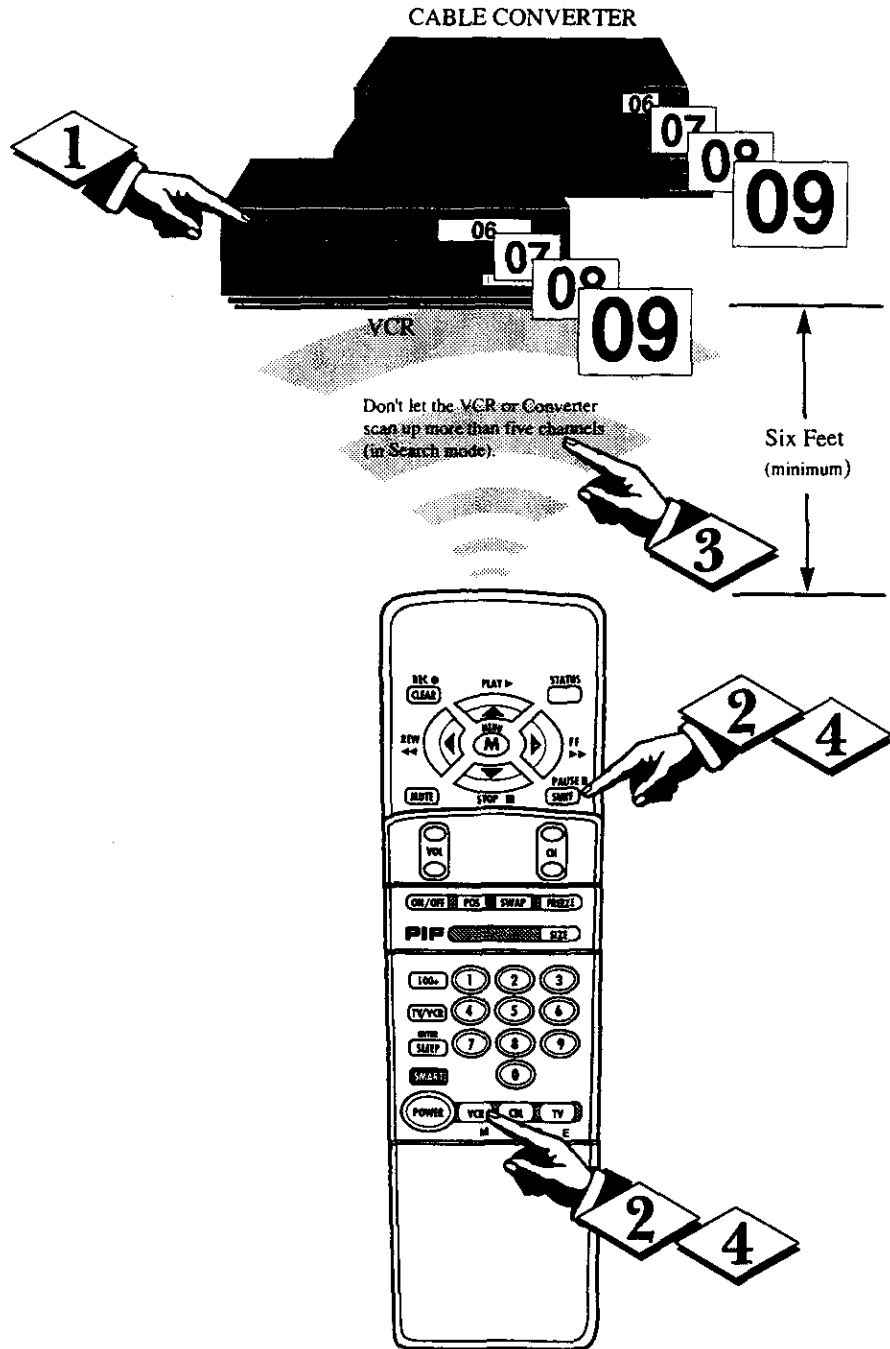
SMART HELP



Remember, a minute or two can seem very long, but the code should be located within two minutes.

Don't let the VCR scan up more than five channels. If you do the remote may pass up the right code and another two minute search cycle will have to be repeated.

If no channel change happens within two minutes, repeat steps 1-4. Should a channel change still not occur, the remote will not work with the desired unit.



USING THE REMOTE'S VCR BUTTONS



When using the TV remote with a VCR, first make certain it is set to control your VCR (by the REMOTE CODE or SEARCH method - see earlier section).

BEGIN

1 Press the VCR System button on the remote.

2 Point the top of the remote toward the front of the VCR (remote sensor window) when pressing buttons.



Record Button

Hold the RECORD button down, and then press the PLAY button to begin a VCR recording.

Rewind Button

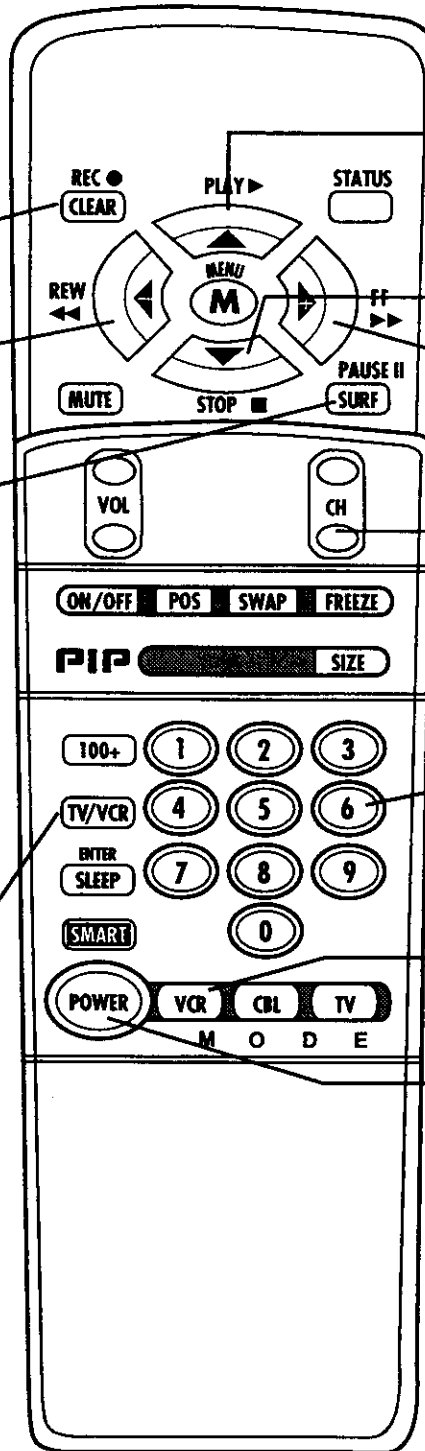
Press to rewind tapes. For some VCRs you may need to press STOP button first then REWIND. In playback mode, hold button down to view picture moving rapidly in reverse.

Pause Button

Press to temporarily stop the tape during a playback or recording. Press again to release Pause.

TV-VCR Button

Press to the VCR position ("VCR" indicator on the VCR will light) to view the playback of a tape. Press again to place in the TV position ("VCR" indicator on the VCR will go OFF) to view one program while recording another program. When used with the TV the TV/VCR button works as a source button. Each press cycles the TV between channels 3 and 4; or the VCR/AUX Input mode. It is a quick one-button way to select these channels and modes (without directly entering the TV's Menu system.)



Play Button

Press to playback a tape. Hold down after pressing the RECORD button to start a recording.

Stop Button

Press to stop the tape.

Fast Forward Button

Press to rapidly advance the tape. For some VCRs you may need to press STOP first then FF. In Playback mode hold button down to view the picture moving rapidly in the forward direction.

Channel Scan Buttons

Press to scan up or down through VCR channel numbers.

Number Buttons

Press buttons for direct VCR channel selections.

VCR System Button

Press to send remote commands to the VCR.

Power Button

Press to turn the VCR ON and OFF.

SMART HELP



Remember, the VCR buttons on the remote will not operate your VCR if those features are not already found on your VCR remote control.

Note: All VCR functions (particularly Search, Rewind, Fast Forward, etc.) will operate the same as with the original VCR remote control provided with the VCR.

HOW TO USE THE PICTURE-IN-PICTURE (PIP) FEATURE

Picture in Picture (PIP) is the showing of two pictures on the TV screen at the same time. (One main screen picture and one small inset picture - or PIP).

Note: The PIP picture must be supplied by a VCR (or other accessory equipped with a VIDEO OUTPUT jack). If you already went through FIRST TIME SETUP (in the Quick-Use Guide), then the connections for PIP have been completed.

To see how channels selected on a VCR can be shown as PIP:

BEGIN


- 1 **Connect the VIDEO OUT jack on the VCR to the VCR/AUX VIDEO IN jack (yellow) on the TV.**

Also connect the AUDIO OUT (R and L) jacks from the VCR to the VCR/AUX AUDIO IN jacks (red and white) on the TV.

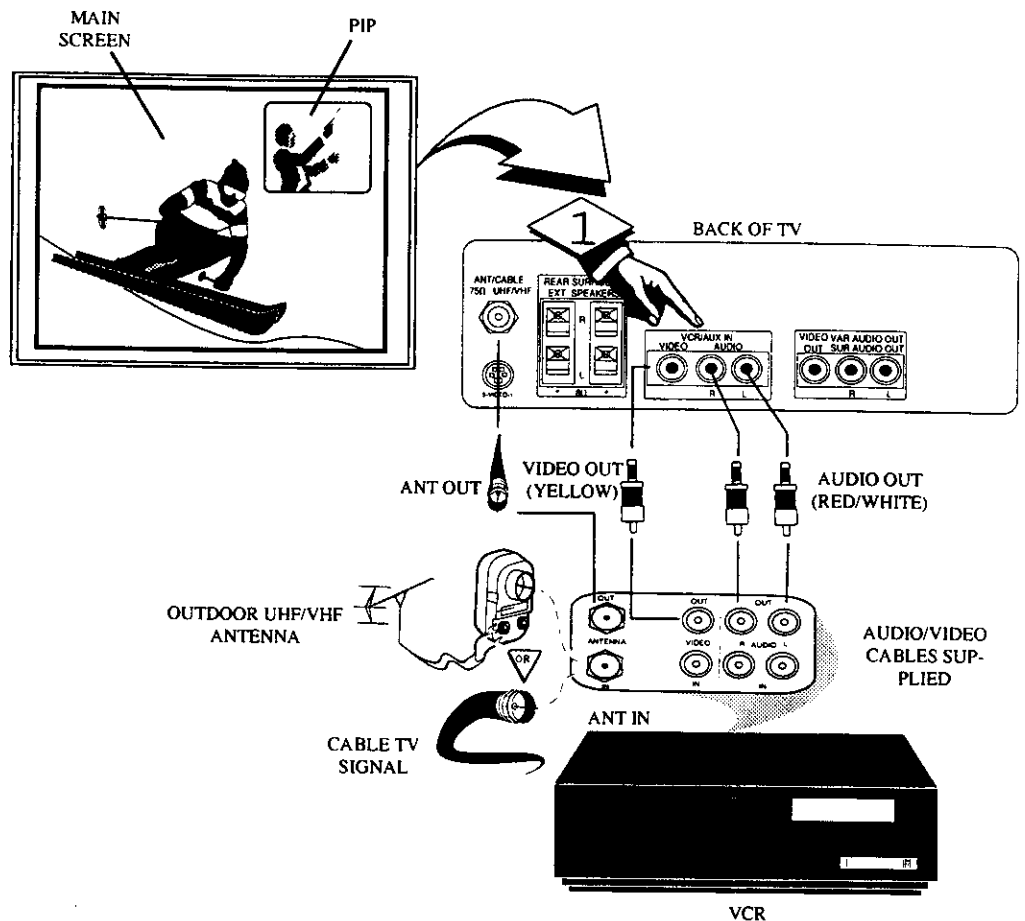
Also be sure the normal antenna connection between the VCR and TV are in place.

- 2 **Move to the next page after the VCR to TV PIP connections are completed.**

SMART HELP

 For other possible PIP connections see page 41 for the "More PIP Connections" section.

If you have a single (monaural) Audio Output VCR, "Y" connectors are available to complete your connection. Contact your dealer, or our Parts Information Center (1-800-292-6066), for details.



Now that you have completed the required connections on the previous page you are ready to follow the simple steps shown below.

3 Turn the VCR and TV ON.

Place the VCR in the TV mode - Use the TV/VCR button on the VCR (or on the TV remote if it has been set to work with your VCR - see page 30.)

Place the TV's PIP SOURCE SELECT control to "VCR/AUX" - With FEATURES MENU (3 of 3) on screen, move the RED highlight with the MENU (M) and arrow buttons. Then press the MENU button.

Press the MENU ▲▼ and MENU (M) buttons to highlight and select the "VCR/AUX" (✓) item.

4 Select the channel on the VCR to view in the PIP window.

Select the channel on the TV to view on the main screen.

5 Press the PIP ON/OFF button on the remote.

The PIP window should show in one of the corners of the TV screen.



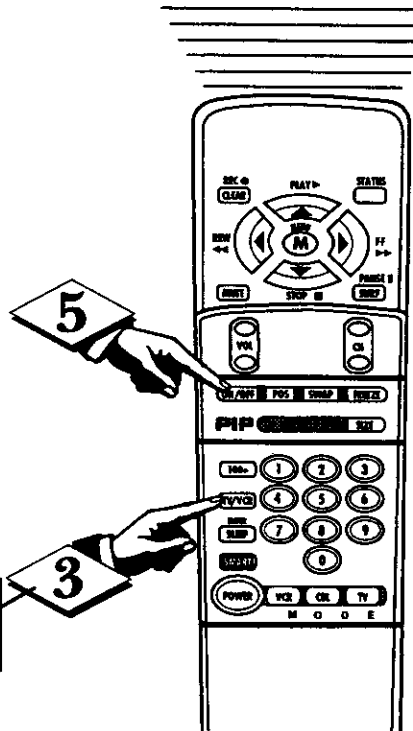
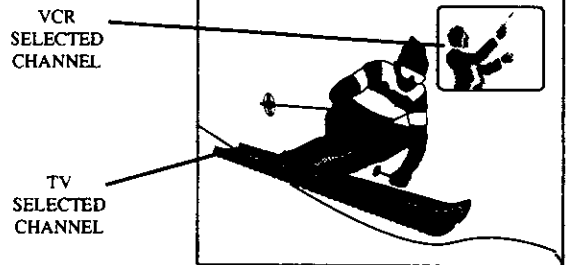
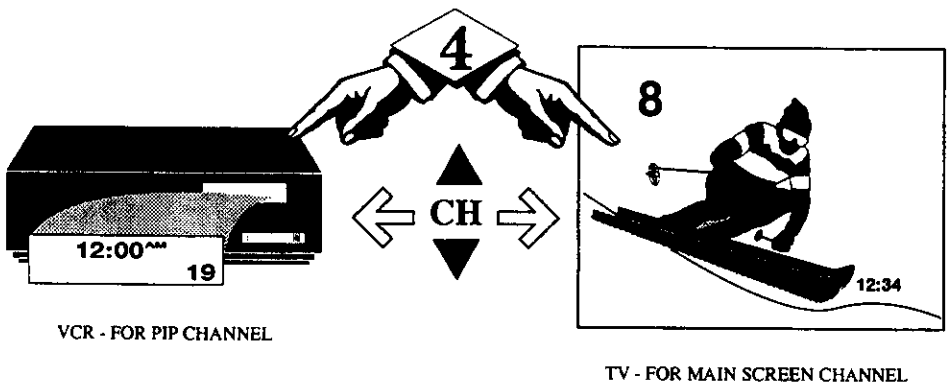
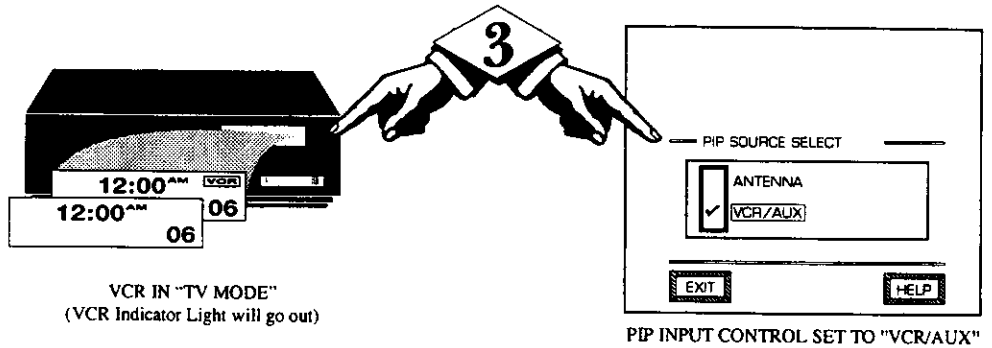
SMART HELP



Remember, if you see the same picture on the main screen and in the PIP window, you need to be sure the TV's PIP Picture Source control (page 39) is set to "VCR/AUX".

No sound will be heard with the PIP picture. See page 38 on how to "SWAP" the PIP picture with the main screen picture so that sound can be heard.

Also see the following page on how to operate other PIP features with the remote controls.



By using the PIP buttons on the remote the PIP picture can be moved and swapped with the main screen. The main screen picture can also be frozen in the PIP window.

BEGIN

- 1 Press the **PIP ON/OFF** button to show the PIP picture.

PIP appears in a corner of TV screen. Press PIP ON/OFF again to remove PIP from the main screen.

- 2 Press the **PIP POSITION** button to move the PIP picture (from corner-to-corner on the TV screen.)

This feature allows you to move PIP and avoid blocking off any main screen action.

- 3 With PIP on the TV screen, press the **SWAP** button to swap the main screen picture with the PIP picture. See "Smart Help" note on this page.

- 4 Press **FREEZE** to hold the current MAIN screen picture in the PIP window (Main picture is still active).

If PIP is currently OFF, the PIP window will automatically appear.

Press FRZ repeatedly to update the frozen PIP with current pictures from the Main screen.

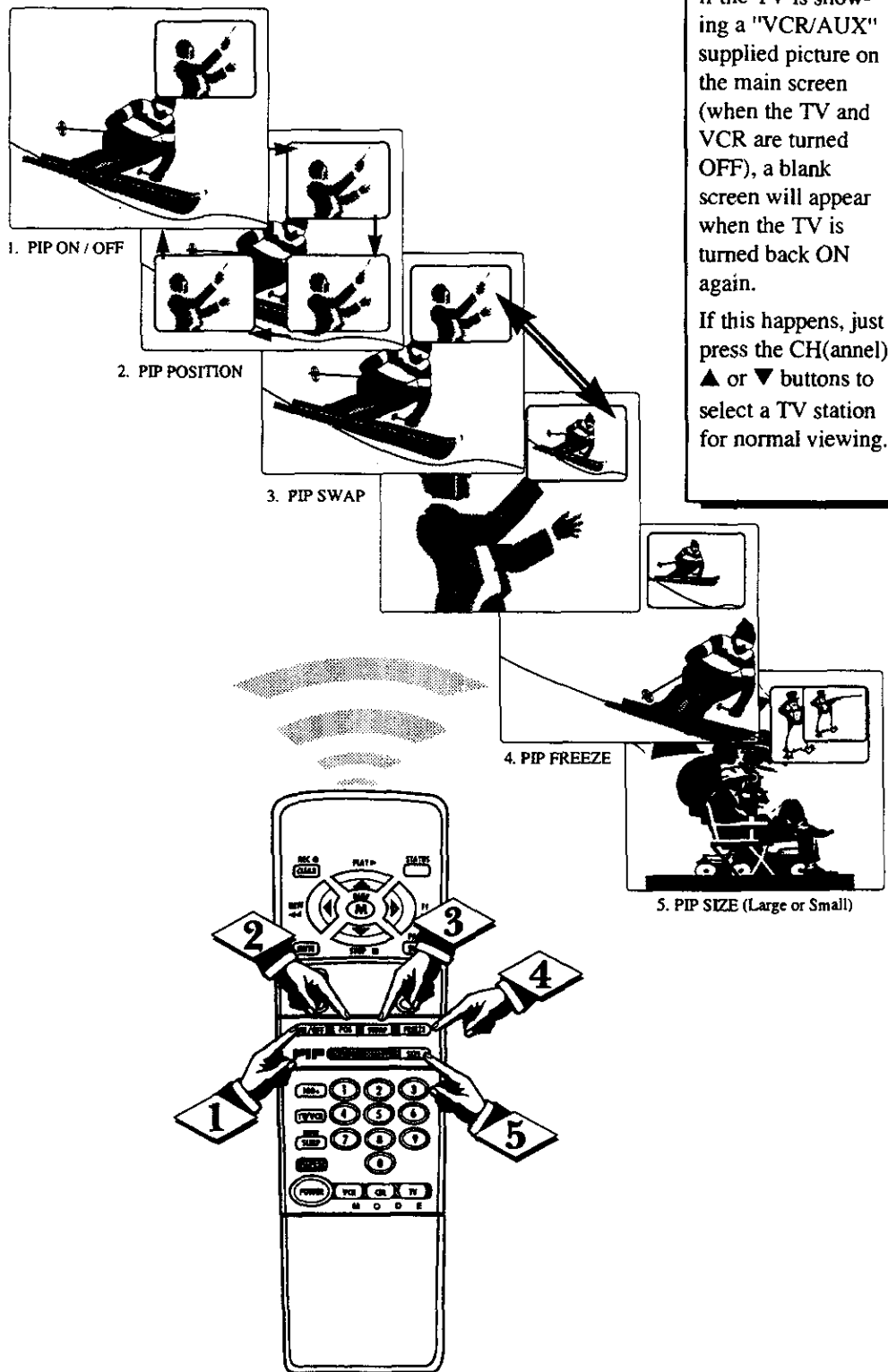
You cannot reposition a frozen PIP picture.

Press the PIP ON/OFF button to drop the frozen PIP picture from the screen.

- 5 Press the **PIP SIZE** button to change the size of the PIP window shown on the TV screen.

Press the PIP SIZE button again to see and compare the large and small size PIP windows.

You cannot change the size of a frozen PIP picture.



SMART HELP



Remember, if the TV is showing a "VCR/AUX" supplied picture on the main screen (when the TV and VCR are turned OFF), a blank screen will appear when the TV is turned back ON again.

If this happens, just press the CH(annel) ▲ or ▼ buttons to select a TV station for normal viewing.

PIP SOURCE

The picture for the PIP window can come through either the ANT/CABLE or VCR/AUX Inputs (on the rear of the TV). PIP Picture Source simply tells the TV which one of these sources it is to show in the PIP window.

BEGIN

1 Select PIP SOURCE control.

With FEATURES MENU (3 of 3) on screen, move the RED highlight with the MENU (M) buttons. Then press the MENU (M) button.

2 Press the MENU ▲▼ and MENU (M) buttons to highlight and select either the ANTENNA or VCR/AUX (✓) item.

VCR/AUX- for a picture signal coming from the VCR/AUX IN Audio/Video jacks on the TV.

ANTENNA- for a picture signal coming from the ANT/CABLE Input on the TV.

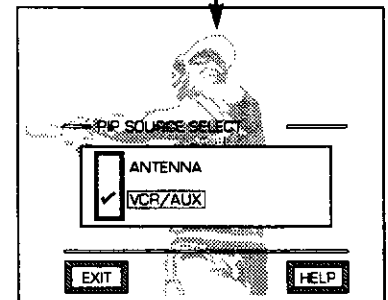
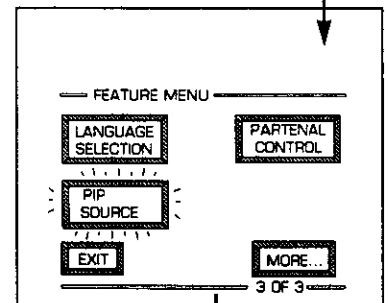
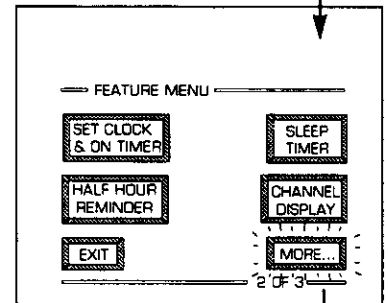
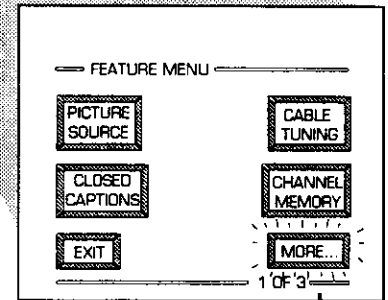
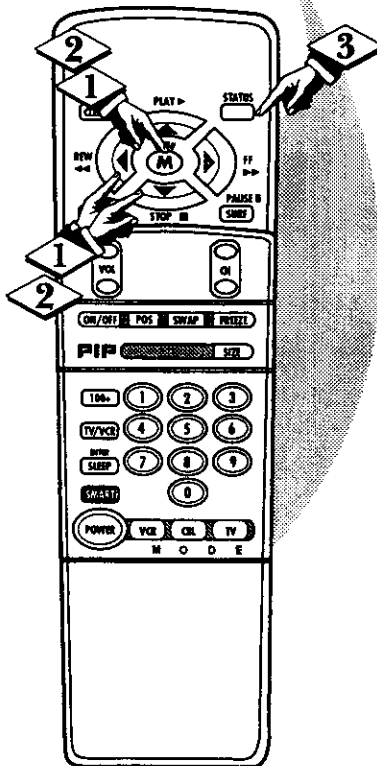
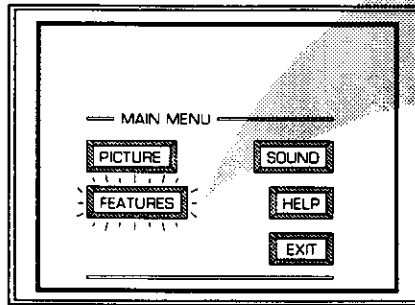
3 Press the STATUS button to clear the screen.



SMART HELP



Remember. The PIP screen will be blank unless a signal is connected to the selected source (either ANT/CABLE or VCR/AUX Inputs) on the rear of the TV.



ADJUSTING PICTURE-IN-PICTURE COLOR AND TINT

PIP COLOR / PIP TINT

The Picture-In-Picture (PIP) Color and Tint controls are used to make fine tune adjustments to the color settings for PIP (when it is shown on the TV screen).

BEGIN

- 1 Select PIP COLOR (or PIP TINT) control.

With PICTURE MENU (2 of 2) on screen, move the RED highlight with the MENU (◀▶) buttons. Then press the MENU (M) button.

- 2 Press the MENU ▲▼ buttons to move the RED highlight. Press the MENU button to turn the PIP COLOR or TINT control ON.

The PIP automatically comes on to show the PIP window on the TV screen.

- 3 Press the (+) and (-) buttons to adjust the PIP for Color (or Tint) levels you prefer.

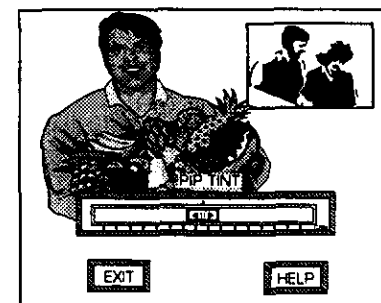
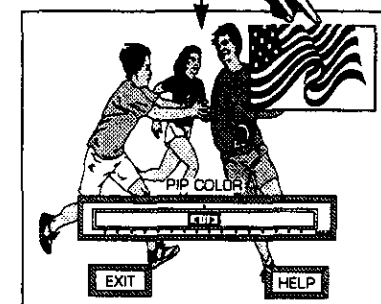
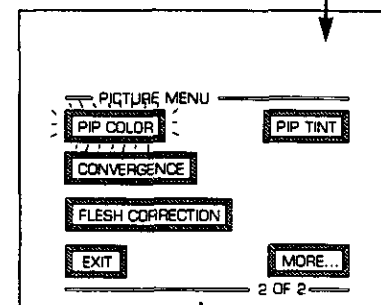
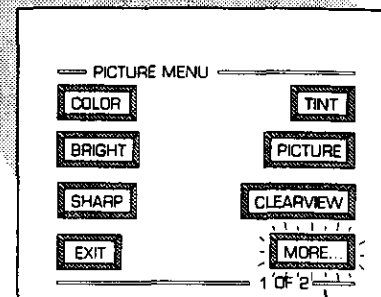
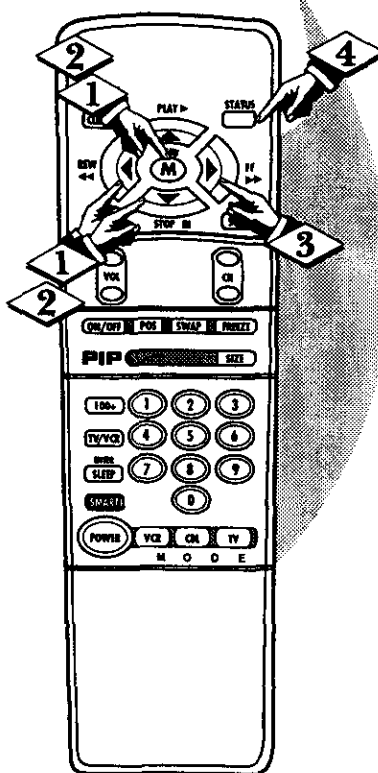
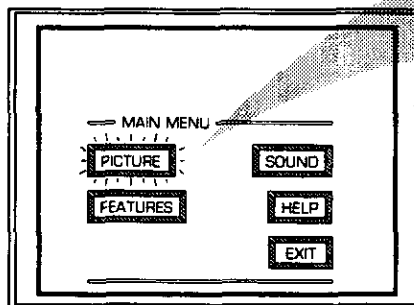
- 4 Press the STATUS button to clear the screen.

STOP

SMART HELP




Remember. Although there are separate COLOR and TINT controls for PIP, the adjustment levels for these controls depend on the TV's main picture. For example: If the main screen is showing a black and white picture, PIP would also be in black and white (even though its source is in color).



MORE PIP CONNECTIONS

SMART HELP

Remember  to use the Cable TV Converter Box to select channels for PIP, the VCR must be set to the same channel as the channel selection switch on the rear of the Cable Converter (either channel 3 or 4).

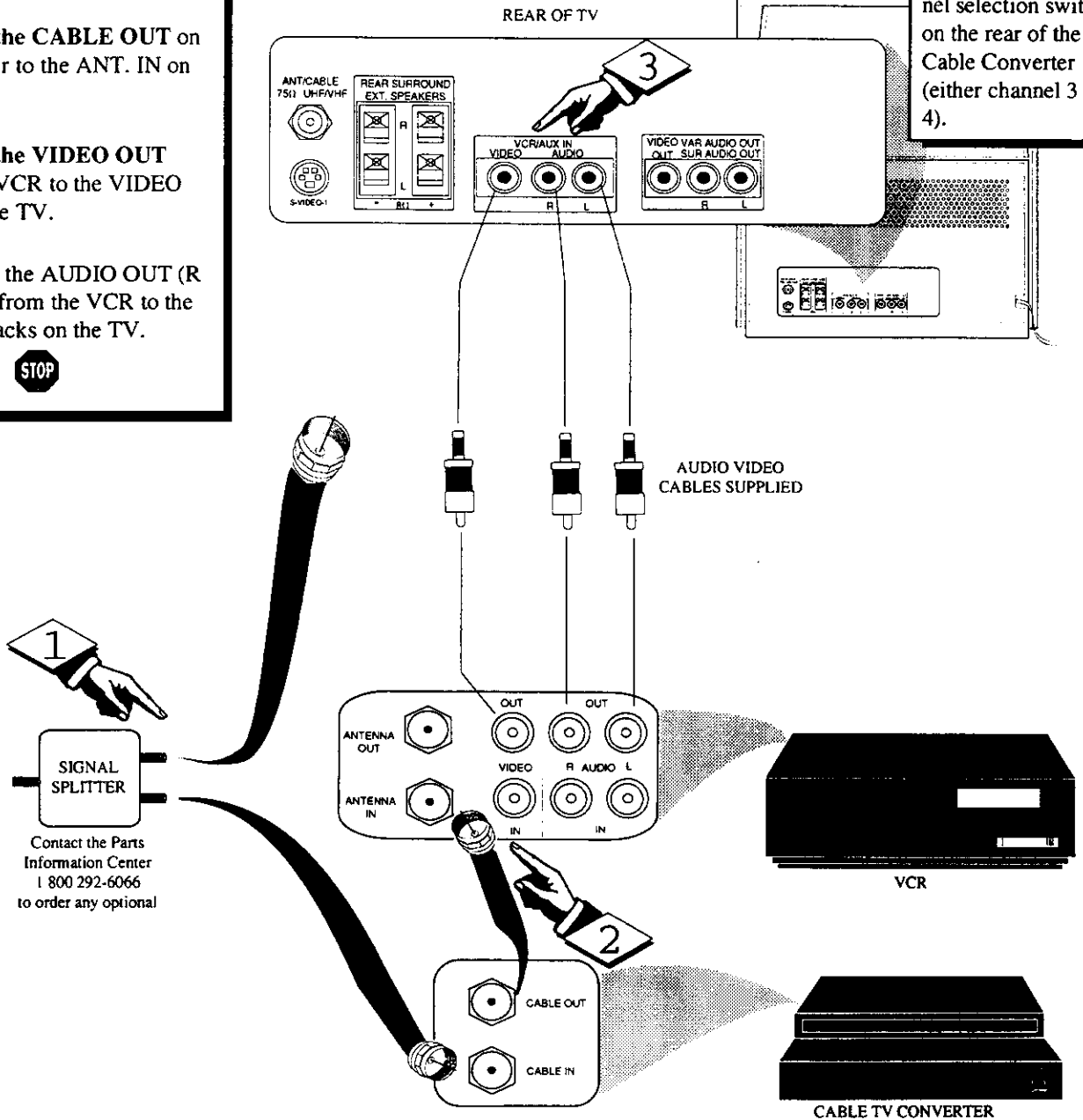
PIP hookup with Cable Converter Box and VCR.

BEGIN

- 1 First use an optional signal splitter and connect the original cable TV signal to both the CABLE IN on the Cable Converter and the ANTENNA plug on the rear of the TV.
- 2 Connect the CABLE OUT on the Converter to the ANT. IN on the VCR.
- 3 Connect the VIDEO OUT jack on the VCR to the VIDEO IN jack on the TV.

Also connect the AUDIO OUT (R and L) jacks from the VCR to the AUDIO IN jacks on the TV.

STOP



Contact the Parts Information Center 1 800 292-6066 to order any optional

TIPS IF SOMETHING ISN'T WORKING

Please make these simple checks before calling for service. These tips can save you time and money since charges for TV installation and adjustment of customer controls are not covered under your warranty.

No Power

CAUTION: A video source (such as a video game, Compact Disc Interactive - CDI, or TV information channel) which shows a constant non-moving pattern on the TV screen, can cause picture tube damage. When your TV is continuously used with such a source the pattern of the non-moving portion of the game (CDI, etc.) could leave an image permanently on the picture tube. When not in use, turn the video source OFF. Regularly alternate the use of such video sources with normal TV viewing.

- Check the TV power cord. Unplug the TV, wait 1 minute, then reinsert plug into outlet and push POWER button again.
- Check to be sure outlet is not on a wall switch.

No Picture

- Check antenna connections on the rear of the TV. Are they properly secured to the antenna plug on the TV?
- Check the CABLE TUNING control for correct position.
- Check PICTURE SOURCE control for correct position "VCR/AUX" position without a signal source will result in a blank screen.

No Sound

- Check the VOLUME buttons.
- Check the MUTE button on the remote control.
- Check the TV SPEAKER ON/OFF control for the correct position.
- If attempting auxiliary equipment hook-ups, check audio jack connections and that the auxiliary equipment is on and in the proper operating modes.

Remote Does Not Work

- Check TV-VCR-CBL "System" buttons on the remote. Press the remote's TV System button to send commands to the TV; VCR System to sent to VCR; etc.
- Check batteries. Replace with AA Heavy Duty (Zinc Chloride) or Alkaline batteries if necessary.
- Clean the remote and the remote sensor window on the TV.

TV Displays Wrong Channel or No Channels Above 13

- Repeat channel selection.
- Add desired channel numbers (ADD/DELETE CHANNELS control) into TV memory.
- Check CABLE TUNING control for correct position.

This TV is equipped with protective circuitry that shuts the TV off in case of moderate power surges. Should this occur turn the TV back on by pressing the POWER button once or twice, or unplug and then replug the power cord at the AC outlet. This feature is NOT designed to prevent damage due to high power surges such as those caused by lightning, which is not covered by your warranty.


Cleaning and Care

- To avoid possible shock hazard be sure the TV is unplugged from the electrical outlet before cleaning.
- When cleaning the TV screen take care not to scratch or damage the screen surface (avoid wearing jewelry or using anything abrasive- do not use household cleaners). Wipe the front screen with a clean cloth dampened with water. Use even, easy, vertical strokes when cleaning.
- Specially designed screen cleaning kits are also available which contain anti-static cleaners and cloths designed to get into the ridges of the TV screen. If interested, ask your dealer about the MAG4600 Projection TV Screen Cleaning Kit or call our toll-free Accessory Parts ordering number 1-800-292-6066.
- Gently wipe the cabinet surfaces with a clean cloth or sponge dampened in a solution of cool clear water and a mild soap or detergent. Use a clean dry cloth to dry the wiped surfaces.
- Occasionally vacuum the ventilation holes or slots in the cabinet back.
- Never use thinners, insecticide sprays, or other chemicals on or near the cabinet, as they might cause permanent marring of the cabinet finish.


The on screen *HELP* menu offers both *Operating Tips* and a list of *Glossary* definitions for different features on your TV. These items are given to provide you with more information and details on a select group of feature operations.

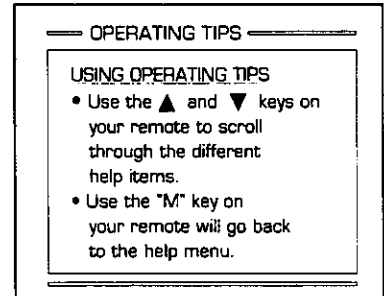
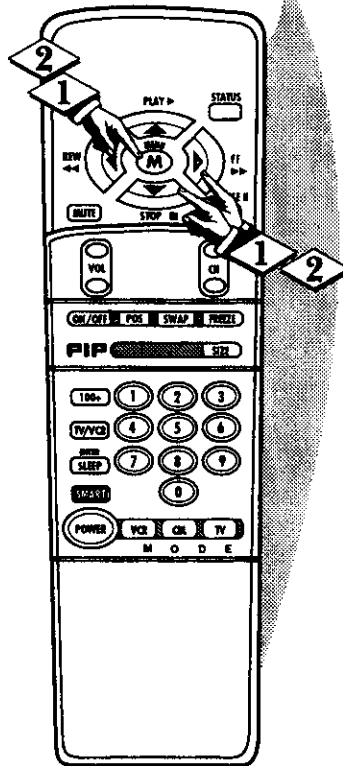
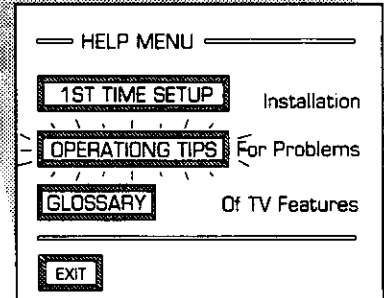
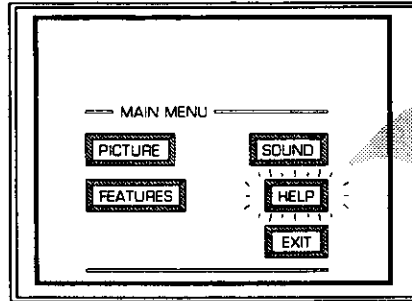
BEGIN

1 Select "HELP" on the TV's Main Menu.

Press the remote's Menu  buttons to move UP/DOWN and from SIDE-TO-SIDE within the list of on-screen features.

Press MENU (M) to select the highlighted "HELP" item.

2 Press the MENU  and then the MENU (M) buttons to select either the OPERATING TIPS or GLOSSARY item.



FOLLOW THE ON SCREEN DIRECTIONS TO VIEW OPERATING TIPS

GLOSSARY TO TELEVISION TERMS

Coaxial Cable * A single solid antenna wire normally matched with a metal plug (F-type) end connector that screws (or pushes) directly onto a 75 Ohm input found on the Television or VCR.

Display * An on screen message or graphics that help the user operate and adjust his Television feature controls. See On Screen Displays (OSD).

Direct Audio/Video Inputs * Located on the rear of the TV these connectors (RCA phono type plug) are used for the input of audio and video signals. Designed for use with VCRs (or other accessories) in order to receive higher picture resolution and offer sound connection options.

Identify* Method by which a remote control searches and finds an operating code for another product (such as a VCR or Cable Converter). Once the code has been "identified" then the TV remote can operate and send commands to the other product.

Multichannel Television Sound (MTS) * The broadcast standard that allows for stereo sound to be transmitted with the TV picture.

Menu * An on-screen listing of feature controls shown on the Television screen that are made available for user adjustments.

On Screen Displays (OSD) * Refers to the wording or messages generated by the television (or VCR) to help the user with specific feature controls (color adjustment, programming, etc.).

Picture -In-Picture (PIP) * Term used when two pictures are shown on the TV screen at the same time. The smaller PIP picture is supplied by a VCR (or other tuner/video playback source). The PIP picture can also be moved and swapped with the TV's main screen picture.

Programming * The procedure of adding or deleting channel numbers into the Television's memory circuits. In this way the Television "remembers" only the locally available or desired channel numbers and skips over any unwanted channel numbers.

Remote Sensor Window * A window or opening found on the Television control panel through which infrared remote control command signals are received.

Second Audio Program (SAP) * Another or additional audio channel provided for in the Multichannel Television Sound (MTS) broadcast standard. The most frequently proposed use for SAP is the simultaneous bilingual broadcast of TV program material.

Status * Allows the user to quickly confirm what channel number is currently being viewed. Status can also be used to clear the Television of on screen displays or information (rather than waiting for the displays to "time out" or automatically disappear from the screen).

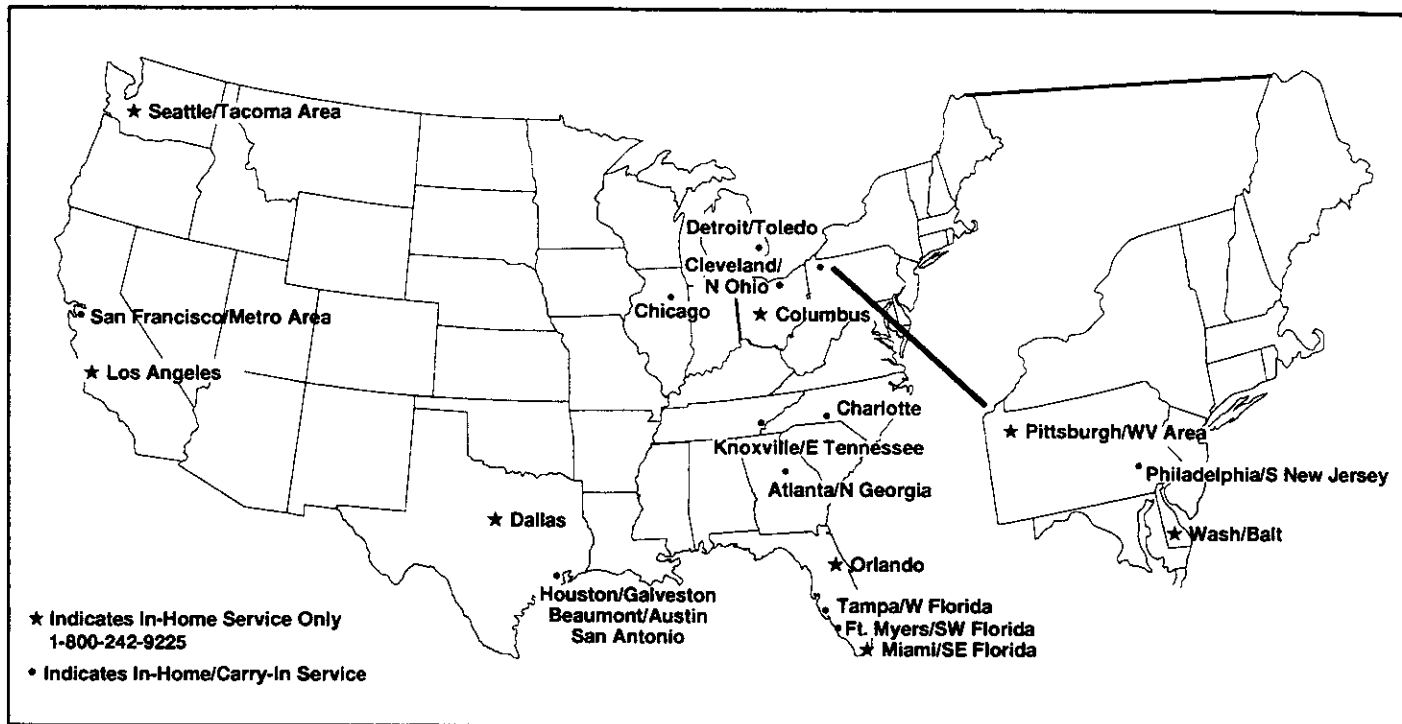
Twin Lead Wire * The more commonly used name for the two strand 300 Ohm antenna wire used with many indoor and outdoor antenna systems. In many cases this type of antenna wire requires an additional adapter (or balun) in order to connect to the 75 Ohm Input terminals designed into the more recent Televisions and VCRs.

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* Information contained in Quick-Use (Q/U) Guide - page listed

Philips Consumer Electronics Company Factory Service Center Locations



NOTE: If you reside in one of our Philips Factory Service Branch areas (see directory on back), you can contact the nearest Service Branch to obtain efficient and expedient repair for your product. If your product is In-Warranty, you should have proof-of-purchase to ensure No Charge Service. For Out-of-Warranty service, call the location nearest you.

NOTA: Si vous résidez dans une des régions desservies par une succursale de service après vente du fabricant Philips (voir liste ci-dessous), vous pourrez contacter la branche de service après vente la plus près de chez vous pour obtenir un service après vente rapide et efficace. Si le produit est sous garantie, il suffira de présenter une preuve d'achat pour bénéficier d'un service sans frais. Pour les produits non couverts par la garantie, contactez le centre le plus près de chez vous.

NOTA: Si Ud. reside en una de nuestras zonas para sucursales Philips de servicio al de fábrica (ver directorio más abajo), Ud. puede comunicarse con la sucursal de servicio más cercana para obtener una reparación oportuna y eficaz de su producto. Si su producto está todavía bajo garantía, Ud. debe presentar comprobante de compra para no ocasionar ningunos cargos por servicio. Para servicio después del vencimiento de la garantía, llame al lugar más cercano de los abajo indicados.

In Canada

How you can obtain efficient and expedient carry-in, mail-in, or in-home service for your product

Please contact Philips at

1-800-661-6162 (French speaking)

1-800-363-7278 (English speaking)

Au Canada

Comment obtenir le service après-vente pour les produits apportés ou envoyés par la poste à notre centre de service ou le service à domicile

Veillez contacter philips á:

1-800-661-6162 (Francophone)

1-800-363-7278

En el Canadá

Cómo recibir servicio eficiente para su producto, en persona, por correo o a domicilio

Favor de comunicarse con Philips al:

1-800-661-6162 (francófono)

1-800-363-7278 (anglófono)

QUALITY SERVICE IS AS CLOSE AS YOUR TELEPHONE! SIMPLY LOOK OVER THE LIST BELOW FOR THE NUMBER OF A FACTORY SERVICE CENTER NEAR YOU. YOUR PRODUCT WILL RECEIVE EFFICIENT AND EXPEDIENT CARRY-IN, MAIL-IN, OR IN-HOME SERVICE, AND YOU WILL RECEIVE PEACE OF MIND, KNOWING YOUR PRODUCT IS BEING GIVEN THE EXPERT ATTENTION OF PHILIPS' FACTORY SERVICE. AND, IF THE PHONE NUMBER LISTED FOR YOUR AREA IS LONG DISTANCE, CALL 1-800-242-9225 FOR FACTORY SERVICE.

COMMENT OBTENIR NOTRE SERVICE APRÈS VENTE RAPIDE ET EFFICACE SOIT PAR COURRIER, À DOMICILE, OU EN SE PRÉSENTANT À UN CENTRE DE SERVICE PHILIPS. PLUS DE 600 CENTRES DE RÉCEPTION DE PRODUITS À RÉPARER À TRAVERS LE PAYS: CONTACTER LE CENTRE DE SERVICE AUX CONSOMMATEURS LE PLUS PROCHE POUR SAVOIR L'EMPLACEMENT DE CES DÉPÔTS DANS UN RAYON DE 50 À 75 MILES (80 KM À 120 KM) DU CENTRE DE SERVICE LOCAL.

CÓMO OBTENER UN SERVICIO OPORTUNO Y EFICIENTE POR CORREO, EN CASA O EN PERSONA PARA SU PRODUCTO A TRAVÉS DE UN CENTRO PHILIPS DE SERVICIO. MAS DE 600 SITIOS POR TODO EL PAIS PARA LA RECEPCION DE PRODUCTOS NECESITADOS DE REPARACIONES: COMUNICARSE CON EL CENTRO DE SERVICIO DE FABRICA MAS CERCANO PARA ESTOS LUGARES DENTRO DE UN RADIO DE 80 A 120 KM (50 A 75 MILLAS) DEL CENTRO DE SERVICIO LOCAL.

GEORGIA

Philips Factory Service of Georgia
200 N. Cobb Pkwy., Suite 120
Marietta, GA 30062
(770) 795-0085

FT. MYERS, FLORIDA

Philips Factory Service Satellite - Ft. Myers
11601 Cleveland Ave., Suite 15
Ft. Myers, FL 33907
(941) 278-4242

FLORIDA

Philips Factory Service of Florida
1911 US Highway 301 North
Tampa, FL 33619
(813) 621-8181

WESTERN U.S.A.

Philips Factory Service Western Region
681 East Brokaw Rd.
San Jose, CA 95112
(408) 436-8566

NORTH CAROLINA

Philips Factory Service of N. Carolina
520 G Clanton Rd.
Charlotte, NC 28217
(704) 529-6330

TEXAS

Philips Factory Service of Texas
1110 N. Post Oak Rd., Suite 100
Houston, TX 77055
(713) 682-3990

CENTRAL U.S.A.

Philips Factory Service Central US
950 Keynote Circle
Brooklyn Heights, OH 44131
(216) 741-3334

MICHIGAN

Philips Factory Service of Michigan
25173 Dequindre
Madison Heights, MI 48071
(248) 544-2110

ILLINOIS

Philips Factory Service of Illinois
1360 W. Hamilton Pkwy.
Itasca, IL 60143
(630) 775-0990

TENNESSEE

Philips Factory Service of East Tennessee
6700 D Papermill Rd.
Knoxville, TN 37919
(423) 584-6614

MID-ATLANTIC

Philips Factory Service Mid-Atlantic
352 Dunks Ferry Rd.
Bensalem, PA 19020
(215) 638-7500

LIMITED WARRANTY

PROJECTION TELEVISION

One Year Free Labor

One Year Free Service on Parts

Two Years Free Service on Cathode Ray Tube Parts / 30 days Free Service on Projection TV Screen

This product can be repaired in-home.

WHO IS COVERED?

You must have proof of purchase to receive warranty service. A sales receipt or other document showing that you purchased the product is considered proof of purchase.

WHAT IS COVERED?

Warranty coverage begins the day you buy your product. For one year thereafter (30 days for the projection TV screen), all parts will be repaired or replaced, and labor and transportation are free. From one to two years from the day of purchase, you pay for the replacement or repair of all parts except the cathode ray tube and the "Clear-Vu" lens, and for all labor and transportation charges. After two years from the day of purchase, you pay for the replacement or repair of all parts except the "Clear-Vu" lens (which is guaranteed against manufacturer's defects for the life of the product), and for all labor and transportation charges.

All parts, including repaired and replaced parts, are covered only for the original warranty period. When the warranty on the product expires, the warranty on all replaced and repaired parts also expires.

WHAT IS EXCLUDED?

Your warranty does not cover:

- labor charges for installation or setup of the product, adjustment of customer controls on the product, and installation or repair of antenna systems outside of the product.
- product repair and/or part replacement because of misuse, accident, unauthorized repair or other cause not within the control of Philips Consumer Electronics Company.
- reception problems caused by signal conditions or cable or antenna systems outside the unit.
- a product that requires modification or adaptation to enable it to operate in any country other than the country for which it was designed, manufactured, approved and/or authorized, or repair of products damaged by these modifications.
- incidental or consequential damages resulting from the product. (Some states do not allow the exclusion of incidental or consequential damages, so the above exclusion may not apply to you. This includes, but is not limited to, prerecorded material, whether copyrighted or not copyrighted.)
- a product used for commercial or institutional purposes.

WHERE IS SERVICE AVAILABLE?

Warranty service is available in all countries where the product is officially distributed by Philips Consumer Electronics Company. In countries where Philips Consumer Electronics Company does not distribute the product, the local Philips service organization will attempt to provide service (although there may be a delay if the appropriate spare parts and technical manual(s) are not readily available).

MAKE SURE YOU KEEP...

Please keep your sales receipt or other document showing proof of purchase. Attach it to this owner's manual and keep both nearby. Also keep the original box and packing material in case you need to return your product.

BEFORE REQUESTING SERVICE...

Please check your owner's manual before requesting service. Adjustments of the controls discussed there may save you a service call.

TO GET WARRANTY SERVICE...

Repair must be performed by an authorized service center or a factory service center. *If you do not live near a factory service center, contact your dealer.* If your dealer is an authorized service center, he will arrange repair. If your dealer is not an authorized service center, he will direct you to the authorized service center engaged by him to service the products he sells.

(In U.S.A., Puerto Rico and U.S. Virgin Islands, all implied warranties, including implied warranties of merchantability and fitness for a particular purpose, are limited in duration to the duration of this express warranty. But, because some states do not allow limitations on how long an implied warranty may last, this limitation may not apply to you.)

(In Canada, this warranty is given in lieu of all other warranties. No other warranties are expressed or implied, including any implied warranties of merchantability or fitness for a particular purpose. Philips is not liable under any circumstances for any direct, indirect, special, incidental or consequential damages, howsoever incurred, even if notified of the possibility of such damages.)

IF YOU HAVE QUESTIONS...

Please contact Philips at:

1-800-661-6162 (French Speaking)

1-800-363-7278 (English Speaking)

REMEMBER...

Please record the model and serial numbers found on the product below. Also, please fill out and mail your warranty registration card promptly. It will be easier for us to notify you if necessary.

MODEL # _____

SERIAL # _____

This warranty gives you specific legal rights. You may have other rights which vary from state/province to state/province.

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