OWNER'S MANUAL Projection Television

16:9 COLOR STREAM SRS TOUCH FOCUS

Owner's Record

The model number and serial number are on the back of your TV. Record these numbers in the spaces below. Refer to these numbers whenever you communicate with your Toshiba dealer about this TV.

Model: 50H13

Serial No.:





Dear Customer,

Thank you for purchasing this Toshiba TV. This manual will help you use the many exciting features of your new TV. **Before operating the TV, please read this manual completely**, and keep it nearby for future reference.

Safety Precautions

WARNING

TO REDUCE THE RISK OF FIRE OR ELECTRIC SHOCK, DO NOT EXPOSE THIS APPLIANCE TO RAIN OR MOISTURE.



WARNING
RISK OF ELECTRIC SHOCK
DO NOT OPEN



WARNING: TO REDUCE THE RISK OF ELECTRIC SHOCK, DO NOT REMOVE COVER (OR BACK). NO USER-SERVICEABLE PARTS INSIDE. REFER SERVICING TO QUALIFIED SERVICE PERSONNEL



The lightning symbol in the triangle tells you that the voltage inside this product may be strong enough to cause an electric shock. DO NOT TRY TO SERVICE THIS PRODUCT YOURSELF.



The exclamation mark in the triangle tells you that important operating and maintenance instructions follow this symbol.

NOTE TO CATV INSTALLERS IN THE USA

This is a reminder to call the CATV system installer's attention to Article 820-40 of the NEC, which provides guidelines for proper grounding and, in particular, specifies that the cable ground shall be connected to the grounding system of the building, as close to the point of cable entry as practical. For additional antenna grounding information, see items 25 and 26 on page 4.

NOTICE OF POSSIBLE TV STAND INSTABILITY

DANGER: RISK OF SERIOUS PERSONAL INJURY OR DEATH! Use this TV with the TOSHIBA TV stand recommended in the "Specifications" section only. Use with other stands may result in instability, causing possible injury or death.

NOTICE OF POSSIBLE ADVERSE EFFECTS ON TV PICTURE TUBE

If a fixed (non-moving) pattern remains on the TV screen for long periods of time, the image can become permanently engrained in the picture tube. **This type of damage is NOT COVERED BY YOUR WARRANTY.** See item 33 on page 4.

Child Safety

It Makes A Difference Where Your TV Stands



Congratulations on your purchase! As you enjoy your new TV, keep these safety tips in mind:

The Issue

- ☐ If you are like most consumers, you have a TV in your home. Many homes, in fact, have more than one TV.
- ☐ The home theater entertainment experience is a growing trend, and larger TVs are popular purchases; however, they are not always supported on the proper TV stands.
- Sometimes TVs are improperly secured or inappropriately situated on dressers, bookcases, shelves, desks, audio speakers, chests, or carts. As a result, TVs may fall over, causing unnecessary injury.

Toshiba Cares!

☐ The consumer electronics industry is committed to making home entertainment enjoyable and safe.

☐ The Consumer Electronics
Association formed the Home
Entertainment Support Safety
Committee, comprised of TV and
consumer electronics furniture
manufacturers, to advocate
children's safety and educate
consumers and their families about
television safety.

Tune Into Safety

☐ One size does NOT fit all! Use appropriate furniture large enough to support the weight of your TV (and other electronic components).

- ☐ Use appropriate angle braces, straps, and anchors to secure your furniture to the wall (but never screw anything directly into the TV).
- ☐ Carefully read and understand the other enclosed instructions for proper use of this product.
- Do not allow children to climb on or play with furniture and TVs.
- ☐ Avoid placing any item on top of your TV (such as a VCR, remote control, or toy) that a curious child may reach for.
- ☐ Remember that children can become excited while watching a program and can potentially push or pull a TV over.
- ☐ Share our safety message about this hidden hazard of the home with your family and friends. Thank you!



2500 Wilson Blvd. Arlington, VA 22201 U.S.A. Tel. 703-907-7600 Fax 703-907-7690 www.CE.org

CEA is the Sponsor, Producer and Manager of the International CES®

Important Safety Instructions

- 1) Read these instructions.
- 2) Keep these instructions.
- 3) Heed all warnings.
- 4) Follow all instructions.



5) Do not use this apparatus near water.

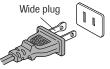


- 6) Clean only with a dry cloth.
- Do not block any ventilation openings. Install in accordance with the manufacturer's instructions.
- 8) Do not install near any heat sources such as radiators, heat registers, stoves, or other apparatus (including amplifiers) that produce heat.



9) **Do not defeat the safety purpose of the polarized or grounding type plug.** A polarized plug has two blades with one wider than the other. A grounding type plug has two blades and a third grounding

prong. The wide blade or the third prong are provided for your safety. If the provided plug does not fit into your outlet, consult an electrician for replacement of the obsolete outlet.



10) Protect the power cord from being walked on or pinched, particularly at plugs, convenience receptacles, and the point where it exits the apparatus.



- 11) Only use attachments/accessories specified by the manufacturer.
- 12) Use only with the cart, stand, tripod, bracket, or table specified by the manufacturer, or sold with the apparatus. When a cart is used, use caution when moving the cart/apparatus combination to avoid injury from tip-over.



13) Unplug this apparatus during lightning storms or when unused for long periods of time.



- 14) Refer all servicing to qualified service personnel.

 Servicing is required when the apparatus has been damaged in any way, such as power supply cord or plug is damaged, liquid has been spilled or objects have fallen into the apparatus, the apparatus has been exposed to rain or moisture, does not
- 15) CAUTION: To reduce the risk of electric shock, do not use the polarized plug with an extension cord, receptacle, or other outlet unless the blades can be inserted completely to prevent blade exposure.

operate normally, or has been dropped.

Installation, Care, and Service

Installation

Follow these recommendations and precautions and heed all warnings when installing your TV:

16) Never modify this equipment. Changes or modifications may void: a) the warranty, and b) the user's authority to operate this equipment under the rules of the Federal Communications Commission.

DANGER: RISK OF SERIOUS PERSONAL INJURY, DEATH, OR EQUIPMENT DAMAGE! Never place the TV on an unstable cart, stand, or table. The TV may fall, causing serious personal injury, death, or serious damage to the TV.

18) Never place or store the TV in direct sunlight; hot, humid areas; areas subject to excessive dust or vibration; or locations with temperatures at or below 41°F (5°C).



19) Always place the TV on the floor or a sturdy, level, stable surface that can support the weight of the unit.

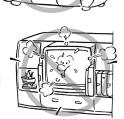


Never place items such as vases, aquariums, or candles on top of the TV.



- 21) Never block or cover the slots or openings in the TV cabinet back, bottom, and sides. Never place the TV:
 - on a bed, sofa, rug, or similar surface;
 - too close to drapes, curtains, or walls: or
 - in a confined space such as a bookcase, built-in cabinet, or any other place with poor ventilation.

The slots and openings are provided to protect the TV from overheating and to help maintain reliable operation of the TV.



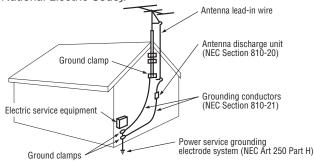
- 22) Never allow anything to rest on or roll over the power cord, and never place the TV where the power cord is subject to wear or abuse.
- 23) Never overload wall outlets and extension cords.



24) Always operate this equipment from a 120 VAC, 60 Hz power source only.



25) Always make sure the antenna system is properly grounded to provide adequate protection against voltage surges and built-up static charges (see Section 810 of the National Electric Code).



DANGER: RISK OF SERIOUS PERSONAL INJURY OR DEATH!

- Use extreme care to make sure you are never in a position where your body (or any item you are in contact with, such as a ladder or screwdriver) can accidentally touch overhead power lines. Never locate the antenna near overhead power lines or other electrical circuits.
- Never attempt to install any of the following during lightning activity:
- a) an antenna system; or b) cables, wires, or any home theater component connected to an antenna or phone system.

Care

For better performance and safer operation of your TOSHIBA TV, follow these recommendations and precautions:

- 27) Always sit approximately 10–25 feet away from the TV and as directly in front of it as possible. The picture can appear dull if you sit too far to the left or right of the TV, or if sunlight or room lights reflect on the screen. Turn the TV off to check for reflections on the screen, and then remove the source of reflections while viewing the TV.
- 28) Always unplug the TV before cleaning. Never use liquid or aerosol cleaners.



29) WARNING: RISK OF ELECTRIC SHOCK!

Never spill liquids or push objects of any kind into the TV cabinet slots.

- 30) [*This item applies to projection TVs only.*] If the air temperature rises suddenly (for example, when the TV is first delivered), condensation may form on the lenses. This can make the picture appear distorted or the color appear faded. If this happens, turn off the TV for 6 to 7 hours to allow the condensation to evaporate.
- 31) For added protection of your TV from lightning and power surges, always unplug the power cord and disconnect the antenna from the TV if you leave the TV unattended or unused for long periods of time.
- 32) During normal use, the TV may make occasional snapping or popping sounds. This is normal, especially when the unit is being turned on or off. If these sounds become frequent or continuous, unplug the power cord and contact a Toshiba Authorized Service Center.
- 33) Possible Adverse Effects on TV Picture Tube: If a fixed (non-moving) pattern remains on the TV screen for long periods of time, the image can become permanently engrained in the picture tube and cause subtle but permanent ghost images. This type of damage is NOT COVERED BY YOUR WARRANTY. Never leave your TV on for long periods of time while it is displaying the following formats or images:
 - **Fixed Images**, such as PIP/POP windows, stock tickers, video game patterns, TV station logos, and websites.
 - Special Formats that do not use the entire screen. For example, viewing letterbox style (16:9) media on a normal (4:3) display (gray bars at top and bottom of screen); or viewing normal style (4:3) media on a widescreen (16:9) display (gray bars on left and right sides of screen).

Service

WARNING: RISK OF ELECTRIC
SHOCK! Never attempt to service the
TV yourself. Opening and
removing the covers may expose
you to dangerous voltage or other
hazards. Refer all servicing to a
Toshiba Authorized Service Center.

35) If you have the TV serviced:

 Ask the service technician to use only replacement parts specified by the manufacturer.

ONLY AUTHORIZED

 Upon completion of service, ask the service technician to perform routine safety checks to determine that the TV is in safe operating condition.

36) When the TV reaches the end of its useful life, ask a qualified service technician to properly dispose of the TV. Improper disposal may result in a picture tube implosion and possible personal injury.

0303

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Introduction

Welcome to Toshiba

Congratulations! You have purchased one of the finest projection TVs on the market. The goal of this manual is to guide you through setting up and operating your Toshiba TV as quickly as possible.

Instructions in this manual are based on using the remote control. You also can use the controls on the TV if they have the same name as those on the remote control.

Please read all the safety and operating instructions carefully, and keep the manual for future reference.

Exploring your new TV

You can operate your TV using the buttons on the front panel or the remote control. The back panel and front panel (behind the door) provide all the terminal connections you will need to connect other equipment to your TV. See "Connecting your TV" on page 7.

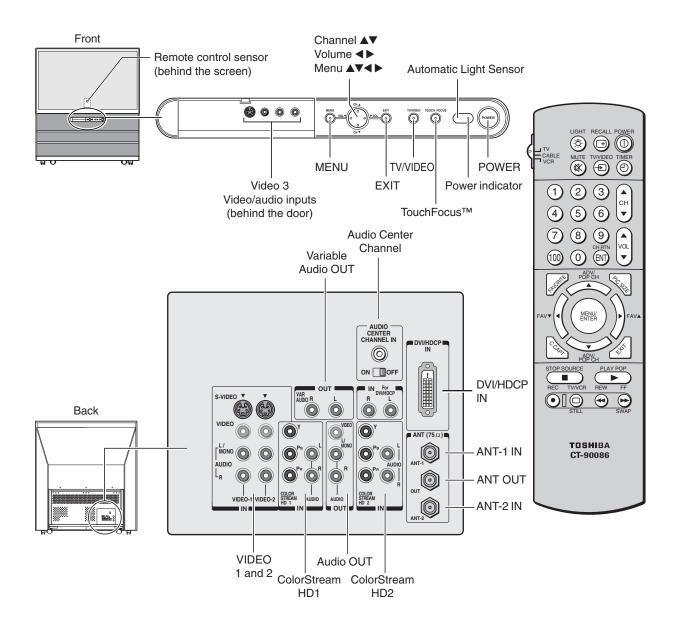
Note regarding Quick Connect Guide

The Quick Connect Guide

automatically appears on-screen the first time the TV is turned on. This feature provides on-screen instructions to guide you through initial setup of your TV.

To stop the **Quick Connect Guide**, either press EXIT or turn off the TV.

See page 23 for details.



Connecting your TV

Note: Cables are not supplied with your TV.

- **Coaxial cable** is the cable that comes in from your antenna, cable TV service, or cable converter box. Coaxial cable uses "F" connectors.
- Standard A/V (audio/video) cables usually come in sets of three, and are typically color-coded according to use: yellow for video, red for stereo right audio, and white for stereo left (or mono) audio. On your TV's back panel, the standard A/V inputs are color-coded in the same manner as the cables.
- S-Video cable is for use with video equipment that has an S-Video input.
- Component video cables come in sets of three, and are for use with video equipment that has component video inputs. (ColorStream® is Toshiba's brand of component video.)
- **DVI-D digital single-link cable** is for use with video equipment that has a DVI-D digital single-link connector (see page 13).

NOTE REGARDING PICTURE QUALITY

When connecting video equipment to your Toshiba TV:

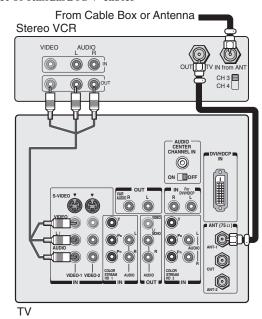
- For GOOD picture quality: Use a standard yellow video cable.
- For BETTER picture quality: If your equipment has an S-video input, use an S-video cable instead of a standard yellow video cable. (You still must connect the standard red and white audio cables for full system connection, but *do not connect the standard yellow video cable at the same time*, or the picture performance will be unacceptable.)
- **For BEST picture quality:** If your equipment has component video (or DVI) inputs, use either component video cables (or a DVI cable) **instead of** a standard video or S-video cable. (You still must connect the standard red and white audio cables for full system connection, but *do not connect the standard yellow video cable or an S-Video cable at the same time.*)

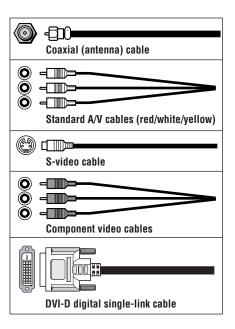
Connecting a VCR

This connection allows you to watch local channels and video programs, play or record on the VCR while watching TV, and record from one channel while watching another channel.

You will need:

- two coaxial cables
- one set of standard A/V cables





CAUTION:

Do not plug in any power cords until you have finished connecting all equipment.

Note:

If you have a mono VCR, connect L/Mono to VCR Audio OUT using only one audio cable.

If you have a VCR with S-video, use an S-video cable instead of a standard video cable

Do not connect a standard video cable and an S-video cable to Video-1 (or Video-2) at the same time, or the picture performance will be unacceptable.

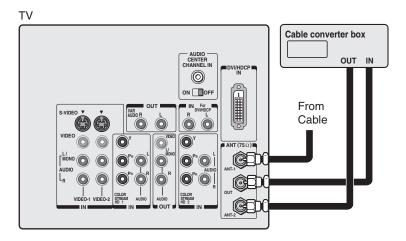
Connecting a cable converter box

This connection allows you to watch basic and premium cable channels.

To view basic channels and use the TV's features, select ANT-1. To view premium channels, select ANT-2, tune the TV to channel 3 or 4 (whichever channel is vacant in your area), and use the converter box to change channels.

You will need:

three coaxial cables



Note:

When you use a converter box with your TV, the remote control will not operate some features, such as programming your favorite channels, labeling channels, and locking channels.

Connecting a cable converter box and VCR

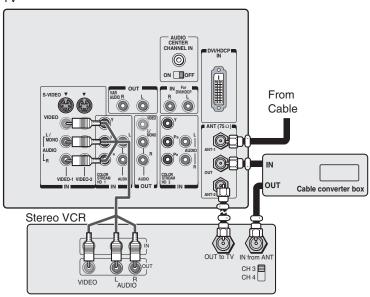
This connection allows you to watch and record basic and premium cable channels, watch videotapes, and record one channel while watching another channel. To view basic channels and use the TV's features, select ANT-1.

To view premium channels or record with the VCR, select ANT-2, tune the TV to channel 3 or 4 (whichever channel is vacant in your area), and use the converter box to change channels.

You will need:

- · four coaxial cables
- one set of standard A/V cables

TV



Note:

If you have a mono VCR, connect L/Mono to VCR Audio OUT using only one audio cable.

If you have a VCR with S-video, use an S-video cable instead of a standard video cable. Do not connect a standard video cable and an S-video cable to Video-1 (or Video-2) at the same time, or the picture performance will be unacceptable.

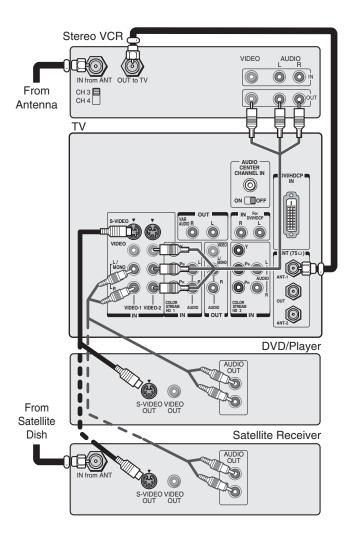
When you use a converter box with your TV, the remote control will not operate some features, such as programming your favorite channels, labeling channels, and locking channels.

Connecting a DVD player or satellite receiver and a VCR

This connection allows you to watch DVD/satellite, VCR, and TV programs, and record one TV channel while watching another channel.

You will need:

- two (or three, if satellite receiver is used) coaxial cables
- one set of standard A/V cables
- one pair of audio cables
- one S-video cable (between the TV and DVD player/satellite receiver)



Note:

For the highest possible picture quality from a DVD player or satellite receiver without component video or DVI/HDCP, use an S-video cable. (If your DVD player has component video, see page 10. If your satellite receiver has component video, see page 11. If your DVD player or satellite receiver has DVI/HDCP, see page 13.)

Do not connect both an S-video cable and a standard video cable to VIDEO-1 (or VIDEO-2) at the same time or the picture performance will be unacceptable.

Do not connect the DVD player/satellite receiver and VCR to the same set of A/V jacks on the TV. (See the illustrations, which show the DVD player/satellite receiver connected to Video-1 on the TV, and the VCR connected to Video-2 on the TV.)

Connecting a DVD player with component video and a VCR

This connection allows you to watch DVD, VCR, and TV programs, and record TV programs.

Your TV has ColorStream® (component video) inputs. Connecting your TV to a DVD player with component video (such as a Toshiba DVD player with ColorStream®) can greatly enhance picture quality and realism.

- To record one TV program while watching another TV program, tune the VCR to the channel to record, and tune the TV to the channel to watch.
- To record a TV program while watching a DVD, tune the VCR to the channel to record, and select ColorStream HD1 on the TV (see "Selecting the antenna input" on page 21).

You will need:

- two coaxial cables
- one set of standard A/V cables
- one pair of audio cables
- one set of component video cables

Stereo VCR From Antenna OH STORMANT OUT TO TV VIDEO AUDIO RECHANNEL IN CHANNEL IN CHAN

DVD Player with component video

Note:

For the highest possible picture quality, use component video cables (or a DVI-D digital single-link cable) between the TV and DVD player.

You can connect component video cables to either set of ColorStream jacks on the TV (HD1 or HD2).

The ColorStream HD1/HD2 and DVI/HDCP jacks can be used with Progressive (480p, 720p) and Interlaced (480i,1080i) scan systems; however, a 1080i signal will provide the best picture performance.

For DVI/HDCP connection, see page 13.

If your DVD player is not compatible with component video or DVI/HDCP, use the S-video connections (plus the standard audio connections) instead (see page 9).

Connecting a DTV receiver/set-top box with component video and a VCR

This connection allows you to watch DTV (digital TV), VCR, and TV programs, and record DTV and TV programs.

Your TV has ColorStream (component video) inputs. Connecting your TV to a DTV receiver with component video can greatly enhance picture quality and realism.

- To record and watch a DTV program, select LINE IN on the VCR, and select ColorStream HD2 (or VIDEO 1 for a non-ColorStream connection) on the TV (see "Selecting the antenna input" on page 21).
- To record a TV program while watching a DTV program, tune the VCR to the channel to record, and select ColorStream HD2 on the TV.
- To record and watch the same TV program, tune the VCR to the channel to record, and select VIDEO 1 on the TV.
- To record one TV program while watching another TV program, tune the VCR to the channel to record, and tune the TV to the channel to watch.

You will need:

- three coaxial cables
- two sets of standard A/V cables
- one pair of audio cables
- one set of component video cables

DTV receiver with component video

Note:

For the highest possible picture quality, use component video cables (or a DVI-D digital single-link cable) between the TV and DTV receiver/set-top box.

You can connect component video cables to either set of ColorStream jacks on the TV (HD1 or HD2).

The ColorStream HD1/HD2 and DVI/HDCP jacks can be used with Progressive (480p, 720p) and Interlaced (480i, 1080i) scan systems; however, a 1080i signal will provide the best picture performance.

For DVI/HDCP connection, see page 13.

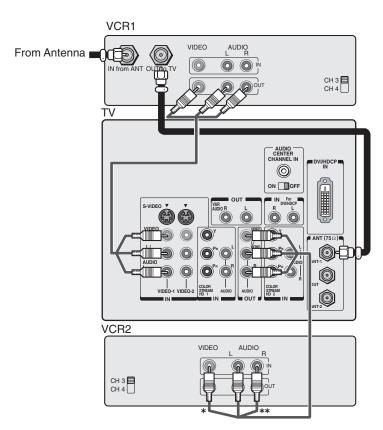
If your DTV receiver or set-top box is not compatible with component video or DVI/HDCP, use the S-video connections (plus the standard audio connections) instead (see page 9).

Connecting two VCRs

This connection allows you to record (dub/edit) from one VCR to another VCR while watching a videotape. You also can record from one TV channel while watching another TV channel.

You will need:

- two coaxial cables
- two sets of standard A/V cables

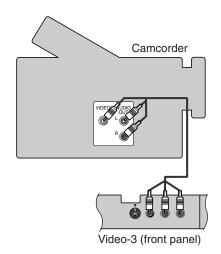


Connecting a camcorder

This connection allows you to watch video materials recorded on a camcorder.

You will need:

• one set of standard A/V cables



Note:

If you have VCRs with S-video, use S-video cables instead of standard video cables for better picture performance. Do not connect a standard video cable and an S-video cable to Video-1 (or Video-2) at the same time, or the picture performance will be unacceptable.

Do not connect the same VCR to the output and input jacks on the TV at the same time.

To dub or edit, VCR 2 must select Line IN, and the TV must select VIDEO 1 (see "Selecting the antenna input" on page 21).

The unauthorized recording, use, distribution, or revision of television programs, videotapes, DVDs, and other materials is prohibited under the Copyright Laws of the United States and other countries, and may subject you to civil and criminal liability.

- * The Video OUT jack does not output the POP picture.
- **The Audio OUT jacks can output the sound of either the Main or POP picture (see "Selecting the Audio OUT sound" on page 51).

Note:

If you have a camcorder with S-video, use an S-video cable instead of the standard video cable. Do not connect a standard video cable and an S-video cable at the same time, or the picture performance will be unacceptable.

Connecting a device to the DVI/HDCP input

The DVI/HDCP¹ input on your TV is designed to accept HDCP program material in digital form from EIA/CEA-861–compliant² consumer electronic devices, such as a set-top box or DVD player equipped with a DVI-D digital single-link output connection.³

The DVI/HDCP input is designed for best performance with 1080i high-definition video signals. The DVI/HDCP input also will accept and display 480p, 720p, and 480i picture signals.

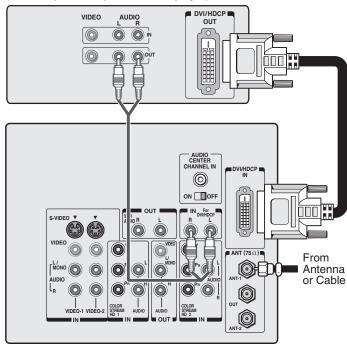
Note: This TV is not intended for connection to and should not be used with a PC (personal computer).

You will need:

- · one coaxial cable
- one DVI-D digital single-link cable

 Note: For proper operation, the DVI-D cable length should not exceed 3m (9.8 ft). The recommended length is 2m (6.6 ft).
- one pair of standard audio cables

DVI/HDCP device (for example, set-top box or DVD player)



Notes:

- ¹ DVI/HDCP = Digital Visual Interface/ High-bandwidth Digital Content Protection.
- ² EIA/CEA-861 compliance covers the transmission of uncompressed digital video with high-bandwidth digital content protection, which is being standardized for future reception of high-definition video signals.
- ³ Consult your consumer electronics dealer for availability.

Caution:

To ensure that the DVI/HDCP device is reset properly, it is recommended that you follow these procedures:

- When turning on your electronic components, turn on the TV first, and then the DVI/HDCP device.
- When turning off your electronic components, turn off the DVI/HDCP device first, and then the TV.

Connecting an audio system

This connection allows you to use an audio amplifier to adjust the audio level. This also allows you to use external speakers.

To control the audio, turn on the TV and the stereo amplifier, and turn off the built-in speakers (see "Turning off the built-in speakers" on page 51).

You will need:

• one pair of audio cables

Note:

To hear sound when using an external audio amplifier, the volume of both the TV and the amplifier must be set above 0 (zero).

Connecting an A/V receiver

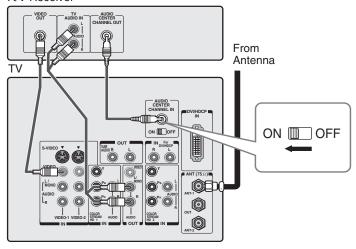
This connection allows you to use an audio/video (A/V) receiver to enhance your TV's sound.

If you have a system with Dolby Pro Logic® surround sound, you can add to the realism of the sound by using the TV's internal speakers as center channel speakers.

You will need:

- one coaxial cable
- one set of standard A/V cables
- one single audio cable for the audio center channel

A/V Receiver



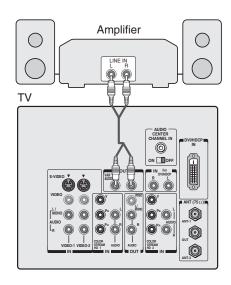
Note:

Refer to the instructions provided with your A/V receiver for details about your surround sound system.

When the Audio Center Channel ON/OFF switch is in the ON position, the TV speakers will function only as center channel speakers. At this time, the SBS feature should be set to OFF. See page 50.

Adjust the volume for the center channel speakers using the center level control on your A/V receiver.

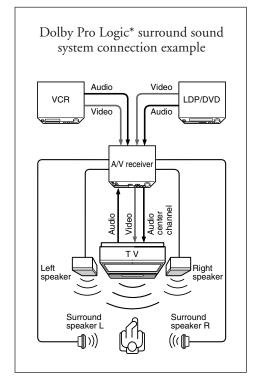
To use the TV speakers as normal speakers, set the Audio Center Channel ON/OFF switch to the OFF position.



Caution:

To avoid damaging the TV speakers:

- Turn off the TV before connecting or disconnecting the Audio Center Channel cable.
- Do not connect from the A/V receiver's Center Speaker OUT (amplified signal) to the TV's Audio Center Channel IN.



 Dolby Pro Logic is a registered trademark of Dolby Laboratories Licensing Corporation.

Using the remote control

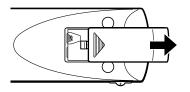
Preparing the remote control for use

With the remote control, you can operate your TV, most VCR models, and cable TV converters together, even if they are different brands. If you will be using your TV with a Toshiba VCR, your remote control is already programmed and ready to use. If you own different brands of VCRs and/or converters, you first have to program your remote control. (See "Programming the remote control for use with a non-Toshiba VCR or cable TV converter" on page 16.)

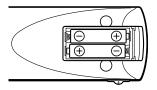
Installing the remote control batteries

To install the batteries:

1. Slide the battery cover off the back of the remote control.



2. Install two "AA" size alkaline batteries. Match the + and - signs on the batteries to the signs on the battery compartment.



3. Slide the battery cover back on to the remote control until the lock snaps.

Using the remote control with a VCR or cable TV converter

If you own a non-Toshiba device or a Toshiba device that the remote control is not preprogrammed to operate, you must program the remote control to recognize your device. See page 16.

To control a VCR:

Set the TV/CABLE/VCR switch to the VCR position. The buttons shown at right will then control the VCR. The unshaded buttons will operate the TV as usual.

(Continued on next page)

Note:

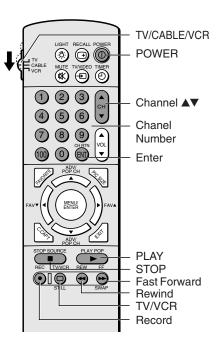
Your TV's remote control may not operate certain features on your VCR, cable TV converter, or other electronic device.

Refer to the owner's manuals for your other devices to determine their available features.

If your TV's remote control does not operate a specific feature on a device, use the remote control that came with the device.

Caution:

- Dispose of batteries in a designated disposal area. Do not throw batteries into a fire.
- Do not mix battery types or combine used batteries with new ones.
- If the remote control does not operate correctly, or if the operating range becomes reduced, replace both batteries with new ones.
- If the batteries are dead or if you will not use the remote control for a long time, remove the batteries to prevent battery acid from leaking into the battery compartment.



To control a cable TV converter:

Set the TV/CABLE/VCR switch to the CABLE position. The shaded buttons shown at right will control the cable TV converter.

Programming the remote control

The remote control is preprogrammed to operate most Toshiba devices. To program the remote control to operate a non-Toshiba device or a Toshiba device that the remote control is not preprogrammed to operate:

1. Refer to the "VCR code table" or "Cable TV converter code table" on pages 17–18 to find the code for your VCR or converter.

If more than one code is listed, try each one separately until you find one that works.

- 2. If you are programming the remote control to operate your:
 - VCR, set the TV/CABLE/VCR switch on the remote control to VCR.
 - Cable converter, set the TV/CABLE/VCR switch on the remote control to CABLE.
- 3. While holding down the RECALL button, press the Number buttons (0–9) to enter the three-digit code for your brand of VCR or converter.
- 4. Point the remote control at the VCR or converter and press POWER to test the code.

If the VCR or converter turns on, you have entered the correct code.

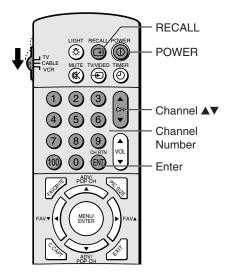
Note: In addition to POWER, confirm that all necessary keys on the TV remote control operate your device. If some keys are not operational, repeat the device code setup using another code (if other codes are listed for your device). If, after trying all listed codes, the necessary keys do not operate your device, use the device's original remote control.

If the VCR or converter does not respond to the remote control, you may have entered the wrong code. Repeat steps 1–4 with another code.

5. Reset the TV/CABLE/VCR switch to TV to control the TV.

For future reference, write down the codes you used:





Note:

- Each time you replace the batteries, you must reprogram the remote control.
- Some newer VCRs are capable of working on either of two remote codes. These VCRs have a switch labeled "VCR1/VCR2."

If your VCR has this kind of switch, and does not respond to any of the codes for your VCR brand, set the switch to the other position (VCR1 or VCR2) and reprogram the remote control.

VCR code table

Adventura 019 Jemen 060 Qussar 054,06 Al Aliva 019 Kerwood 027,060,086 Radix 056 Alaia 060,068,080,125, KLH 091 Randex 056 Alai 050,060,088,081,125, KLH 091 124,125,168,221 American High 054 Lloyd 019 124,125,168,221 Asha 259 Lloyds 227 Realistic 019,034,056,065,065,065,066,076,078,181,081,083 Beatmark 259 LXI 056 Resistic 0123,259 Bell & Flowell 123 Magnavo 054,058,100,129,129 Ricoh 053 Brandr 206 Magnin 259 Samsung 064,259 Brandr 206 Marar 054 Sansy 065,067,239 Calix 056 Marar 054 Sansy 060,068 Caphar 309 MFI 094 Scort 062,061,232,292 Carbear 309 <td< th=""><th>Brand name</th><th>Code number</th><th></th><th></th><th></th><th></th></td<>	Brand name	Code number				
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Bealmark 259 LXI 056 Recommon (Companie) 123.259 Bell & Howell 123 Magnavox 054,058,100,129 Runco 058 Broksonic 140,203,230,314, Magnin 259 Samsung 064,259 Broksonic 140,203,230,314, Magnin 259 Samky 058,067 Calix 056 Marta 056 Santy 065,066,023 Canon 054 Masushita 054 Sanyo 062,064,140,203, Capchart 39 MEI 054 Sanyo 062,064,140,203, Carver 100 Memorex 199,054,056,058, Scort 062,064,140,203, Citizen 056,297 259 Sars 064,054,061,065, Cirize 050,066,091,259 MGN Technology 259 Sharp 066,073,085,123, Curtis Mathes 054,060,079 Minolta 061,124 Shintom 091 Dayroro 039 Motorola 054,062,080,80,94, Shogun 259	Audiovox	056	Logik	091		066,067,081,085,
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Daytron 039 Motorola 054,067 Sony 051,052,053,054 Dynatech 019 MTC 019,259 STS 061 Electrohome 056 Multitech 019,091 Sylvania 019,054,062,100, Emerex 051 NAd 077 129 Emerson 019,021,056,062, 086 Tatung 060 080,087,140,203, Nikko 056 Teac 019,060 227,228,230,231, Noblex 259 Technics 054,181 297,313,314,380, Olympus 054 Teknika 019,054,056,071 498 Optimus 056,067,077,123 Telefunken 060,206 Fisher 066,073,085,123 Optonica 081 TMK 227,259 Fuji 052,054 Orion 498 Toshiba 062,064,085,229, Funai 019,344 Panasonic 054,096,181,244 231,385 Garrard 019,344 Penney 054,056,057,059, Totevision 056,259 </td <td>Cybernex</td> <td>259</td> <td>Mitsubishi</td> <td>062,080,086,094,</td> <td>Shogun</td> <td>259</td>	Cybernex	259	Mitsubishi	062,080,086,094,	Shogun	259
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Electrophonic 056	Dynatech	019	MTC	019,259	STS	061
Emerex 051 NEC 057,059,060,069, 069, 086 Symphonic 019,344 Emerson 019,021,056,062, 086,080,087,140,203, 080,087,140,203, 227,228,230,231, 297,313,314,380, 297,313,314,380, 09mpus Noblex 259 Technics 054,181 297,313,314,380, 498 Optimus 056,067,077,123 Telefunken 060,206 Fisher 066,073,085,123 Optonica 081 TMK 227,259 Fuji 052,054 Orion 498 Toshiba 062,064,085,229, 062,064,085,229, 064,085,081,094,081,081,094 Funai 019,344 Panasonic 054,096,181,244 231,385 Garrard 019,344 Penney 054,056,057,059, 07,	Electrohome	056	Multitech	019,091	Sylvania	019,054,062,100,
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Fisher 066,073,085,123 Optimus 056,067,077,123 Telefunken 060,206 Fisher 066,073,085,123 Optonica 081 TMK 227,259 Fuji 052,054 Orion 498 Toshiba 062,064,085,229, Funai 019,344 Panasonic 054,096,181,244 231,385 Garrard 019,344 Penney 054,056,057,059, Totevision 056,259 GE 054,079,084,221 061,073,259 Unitech 259 Go Video 251,298 Pentax 061,084,124 Vector 064 Goldstar 037,056,057 Philco 054 Vector Research 057,059 Gradiente 019 Philips 054,081,100,129 Video Concepts 059,064,080 Harley Davidson 019 Pilot 056 Videosonic 259 Harman/Kardon 057,094 Pioneer 077,086 Wards 019,054,061,066, Harwood 087,091 Portland 039 067,081,091,168,		227,228,230,231,	Noblex	259	Technics	054,181
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Garrard 019,344 Penney 054,056,057,059, Totevision 056,259 GE 054,079,084,221 061,073,259 Unitech 259 Go Video 251,298 Pentax 061,084,124 Vector 064 Goldstar 037,056,057 Philco 054 Vector Research 057,059 Gradiente 019 Philips 054,081,100,129 Video Concepts 059,064,080 Harley Davidson 019 Pilot 056 Videosonic 259 Harman/Kardon 057,094 Pioneer 077,086 Wards 019,054,061,066, Harwood 087,091 Portland 039 067,081,091,168, Headquarter 065 Protec 091 231,259 HI-Q 066 Pulsar 058 XR-1000 019,054,091 Hitachi 060,061,084,124, Quarter 065 Yamaha 057	Fuji	052,054	Orion	498	Toshiba	062,064,085,229,
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Goldstar 037,056,057 Philco 054 Vector Research 057,059 Gradiente 019 Philips 054,081,100,129 Video Concepts 059,064,080 Harley Davidson 019 Pilot 056 Videosonic 259 Harman/Kardon 057,094 Pioneer 077,086 Wards 019,054,061,066, Harwood 087,091 Portland 039 067,081,091,168, Headquarter 065 Protec 091 231,259 HI-Q 066 Pulsar 058 XR-1000 019,054,091 Hitachi 060,061,084,124, Quarter 065 Yamaha 057	GE	054,079,084,221		061,073,259	Unitech	259
Gradiente 019 Philips 054,081,100,129 Video Concepts 059,064,080 Harley Davidson 019 Pilot 056 Videosonic 259 Harman/Kardon 057,094 Pioneer 077,086 Wards 019,054,061,066, Harwood 087,091 Portland 039 067,081,091,168, Headquarter 065 Protec 091 231,259 HI-Q 066 Pulsar 058 XR-1000 019,054,091 Hitachi 060,061,084,124, Quarter 065 Yamaha 057	Go Video	251,298	Pentax	061,084,124	Vector	064
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Harman/Kardon 057,094 Pioneer 077,086 Wards 019,054,061,066, Harwood 087,091 Portland 039 067,081,091,168, Headquarter 065 Protec 091 231,259 HI-Q 066 Pulsar 058 XR-1000 019,054,091 Hitachi 060,061,084,124, Quarter 065 Yamaha 057	Gradiente	019	1	054,081,100,129	Video Concepts	059,064,080
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Headquarter 065 Protec 091 231,259 HI-Q 066 Pulsar 058 XR-1000 019,054,091 Hitachi 060,061,084,124, Quarter 065 Yamaha 057	Harman/Kardon	057,094	Pioneer	077,086	Wards	019,054,061,066,
HI-Q 066 Pulsar 058 XR-1000 019,054,091 Hitachi 060,061,084,124, Quarter 065 Yamaha 057			Portland	039		
Hitachi 060,061,084,124, Quarter 065 Yamaha 057	_					
			Pulsar			
254 Quartz 065 Zenith 052,053,058	Hitachi		_			
		254	Quartz	065	Zenith	052,053,058

Cable TV converter code table

Brand name Code number ABC 020,022,026,027, 030,033,036, 066 Scientific Atlanta 025,027,036,296 Antronix 041 Signal 034,059 Antronix 041 Signature 030 Antronix 041,058,172 SL Marx 059 Belcor 075 Sprucer 040 Cable Star 075 Standard Cableview 041 Components 174 Cableview 041 Starcom 022,034,066 Century 172 Starquest 034,059 Citizen 172 Starquest 034,059 Colour Voice 044,050 Sylvania 020 Comtronics 059,079 Teleview 059 Contec 038 Tesscan 020 Dae Ryung 021 Toshiba 019 Gorieral Ustronics 172 Toshiba 019 Garrard 172 United Artists 026 Gemini 034,089 United Artists 026	coue table			
030,032,033,036, 066 Signal 034,059	Brand name	Code number		
Antronix	ABC	020,022,026,027,	Samsung	059,163
Antronix 041 Archer 041,058,172 Belcor 075 Cable Star 075 Colour Voice 044,050 Sylvania 020 Cable Star 034 Cable Star 020 Cable Star 034 Cable Star 020 Cabl		030,032,033,036,	Scientific Atlanta	025,027,036,296
Archer 041,058,172 SL Marx 059 Belcor 075 Sprucer 040 Cable Star 075 Standard Cabletenna 041 Components 174 Cableview 041 Starcom 022,034,066 Century 172 Stargate 034,059 Citizen 172 Starquest 034 Colour Voice 044,050 Sylvania 020 Comtronics 059,079 Teleview 059 Contec 038 Texscan 020 Dac Ryung 027 Tocom 031,032,078 Eastern 021 Toshiba 019 Focus 419 Tusa 034 Garrard 172 Unika 041,172 GC Electronics 035,075 United Artists 026 General Instrument 030,295 Universal 041,058,075,096, GoldStar 059,163 172,210 Hytex 026 172,210		066	Signal	034,059
Belcor 075 Sprucer 040 Cable Star 075 Standard Cabletenna 041 Components 174 Cableview 041 Starcom 022,034,066 Century 172 Stargate 034,059 Citizen 172 Starquest 034 Colour Voice 044,050 Sylvania 020 Comtronics 059,079 Teleview 059 Contec 038 Texscan 020 Dae Ryung 027 Tocom 031,032,078 Eastern 021 Toshiba 019 Focus 419 Tusa 034 Garrard 172 Unika 041,172 GC Electronics 035,075 United Artists 026 General Instrument 030,295 Universal 041,058,075,096, GoldStar 059,163 172,210 Hamlin 028,039,053,278, Viewstar 046,079,230 Jerrold 022,030,031,033, <	Antronix	041	Signature	030
Cable Star 075 Standard Cabletenna 041 Components 174 Cableview 041 Starcom 022,034,066 Century 172 Stargate 034,059 Citizen 172 Starquest 034 Colour Voice 044,050 Sylvania 020 Comtronics 059,079 Teleview 059 Contec 038 Texscan 020 Dae Ryung 027 Tocom 031,032,078 Eastern 021 Toshiba 019 Focus 419 Tusa 034 Garrard 172 Unika 041,172 GC Electronics 035,075 United Artists 026 Gemini 034,089 United Cable 022 General Instrument 030,295 Universal 041,058,075,096, GoldStar 059,163 172,210 Hamlin 028,039,053,278, Viewstar 046,079,230 Hytex 026 Jas	Archer	041,058,172	SL Marx	059
Cabletenna 041 Components 174 Cableview 041 Starcom 022,034,066 Century 172 Stargate 034,059 Citizen 172 Starquest 034 Colour Voice 044,050 Sylvania 020 Comtronics 059,079 Teleview 059 Contec 038 Texscan 020 Dae Ryung 027 Tocom 031,032,078 Eastern 021 Toshiba 019 Focus 419 Tusa 034 Garrard 172 Unika 041,172 GC Electronics 035,075 United Artists 026 Gemini 034,089 United Cable 022 General Instrument 030,295 Universal 041,058,075,096, GoldStar 059,163 172,210 Hitachi 030 Xenith 019 Hitachi 030 Xenith 019 Maco 172 Xenith <td>Belcor</td> <td>075</td> <td>Sprucer</td> <td>040</td>	Belcor	075	Sprucer	040
Cableview 041 Starcom 022,034,066 Century 172 Stargate 034,059 Citizen 172 Starquest 034 Colour Voice 044,050 Sylvania 020 Comtronics 059,079 Teleview 059 Contec 038 Texcan 020 Dae Ryung 027 Tocom 031,032,078 Eastern 021 Toshiba 019 Focus 419 Tusa 034 Garrard 172 Unika 041,172 GC Electronics 035,075 United Artists 026 Gemini 034,089 United Cable 022 General Instrument 030,295 Universal 041,058,075,096, GoldStar 059,163 172,210 Hamlin 028,039,053,278, Viewstar 046,079,230 Hytex 026 Jasco 172 Jerrold 022,030,031,033, 034,043,043,046,295 Macom 052 <	Cable Star	075	Standard	
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Colour Voice 044,050 Sylvania 020 Comtronics 059,079 Teleview 059 Contec 038 Texscan 020 Dae Ryung 027 Tocom 031,032,078 Eastern 021 Toshiba 019 Focus 419 Tusa 034 Garrard 172 Unika 041,172 GC Electronics 035,075 United Artists 026 Gemini 034,089 United Artists 026 General Instrument 030,295 Universal 041,058,075,096, GoldStar 059,163 172,210 Hamlin 028,039,053,278, Viewstar 046,079,230 Hytex 026 Jasco 172 Jerrold 022,030,031,033, O34,043,066,295 Viewstar 046,079,230 Macom 052 Magnavox 046 Memorex 019 O46 O46 Memorex 019 O44,046,047,048, O49,050,172	Century	172	Stargate	034,059
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Dae Ryung	Comtronics	059,079	Teleview	059
Toshiba O19	Contec	038	Texscan	020
Focus 419 Garrard 172 GC Electronics 035,075 Gemini 034,089 General Instrument 030,295 GoldStar 059,163 Hamlin 028,039,053,278, 292 Hitachi 030 Hytex 026 Jasco 172 Jerrold 022,030,031,033, 034,043,066,295 Magnavox 046 Memorex 019 Movie Time 175 NSC 089,175 Oak 026,038,267 Panasonic 019,040,126 Paragon 019 Philips 044,046,047,048, 049,050,172 Pioneer 042,163,552 Popular Mechanics 419 Pulsar 019 RCA 040 Recoton 419 Regal 039,278,292 Regency 021 Rembrandt 030,3089 United Artists 026 United Cable United Artists 026 United Cable United Cab	Dae Ryung	027	Tocom	031,032,078
Garrard 172 GC Electronics 035,075 Gemini 034,089 General Instrument 030,295 GoldStar 059,163 Hamlin 028,039,053,278, 292 Hitachi 030 Hytex 026 Jasco 172 Jerrold 022,030,031,033, 034,043,066,295 Macom 052 Magnavox 046 Memorex 019 Movie Time 175 NSC 089,175 Oak 026,038,267 Panasonic 019,040,126 Paragon 019 Philips 044,046,047,048, 049,050,172 Pioneer 042,163,552 Popular Mechanics 419 Pulsar 019 RCA 040 Recoton 419 Regal 039,278,292 Regency 021 Rembrandt 030,295 United Artists 026 United Cable 022 Universal 041,058,075,096, 172,210 Viewstar 046,079,230 Zentek 419	Eastern	021	Toshiba	019
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Regency 021 Rembrandt 030,089	Recoton	419		
Rembrandt 030,089	-	039,278,292		
		021		
Runco 019	Rembrandt	030,089		
	Runco	019		

Learning about the remote control

POWER turns the TV on and off

RECALL displays screen information (page 52)

LIGHT illuminates the keypad for five seconds

TIMER sets the TV to turn off at a specific time (page 47)

TV/VIDEO selects video input source (page 45)

MUTE mutes the sound (page 48)

TV/CABLE/VCR switches between TV, Cable and VCR (pages 15–16)

Channel ▲ ▼ cycles through programmed channels (page 24)

Channel Numbers allow direct access to channels (page 24)

Volume ▲ ▼ adjusts the volume level

CH RTN returns to the memorized channel (page 26)

MENU allows access to on-screen programming menus (page 20)

ENTER sets programmed menu information (page 20)

▲ ▼ ◀ ▶ select or adjust programming menus (page 20)

POP Channel ▲ ▼ selects the POP (picture-out-picture) channel (page 33)

FAV ▼ ▲ cycles through favorite channels (page 27)

FAVORITE allows access to the favorite channel search function (page 34)

PIC SIZE cycles through the five picture sizes: Normal, Theater Wide 1, 2, 3, and Full (page 29)

C.CAPT allows access to closed caption menu (page 46)

EXIT exits programming menus (page 20)

POP turns the POP feature on and off (page 33)

SOURCE selects the POP picture source (page 33)

STILL freezes the POP picture (page 34)

SWAP switches the main and POP pictures (page 34)

VCR Functions allow access to VCR functions (page 15)

STOP stops a videotape

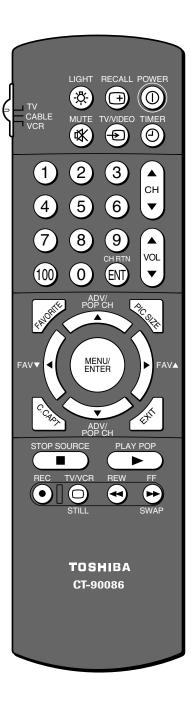
REC starts recording a videotape

PLAY plays a videotape

FF fast forwards a videotape

REW rewinds a videotape

TV/VCR toggles between TV and VCR when viewing while recording



Note:

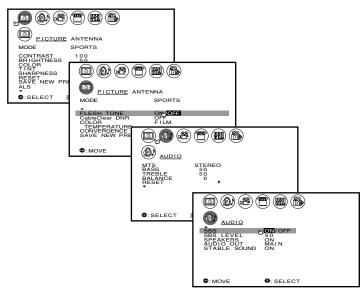
The error message "Not Available" will appear if you press a key for a function that is not available.

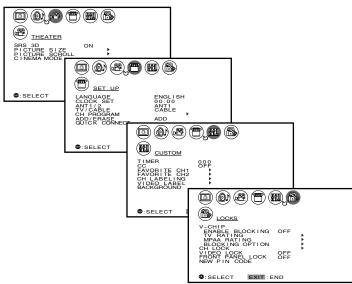
Setting up your TV

Learning about the menu system

After you have installed the batteries and programmed the remote control, you will need to set some preferences on the TV using the menu system. You can access the menus using the buttons on your TV or remote control.

- 1. Press MENU to display the menu system.
- 2. Press ◀ or ▶ to select a menu.
- 3. Press \triangle or ∇ to select an item.
- 4. Press ◀ or ▶ to select or adjust a setting.





ress ENTER to activate the function settings in the menus. he main menu display will close automatically if you do not ake a selection within 15 seconds. To close an on-screen display nstantly, press EXIT.

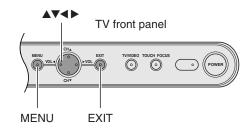
Note regarding Quick Connect Guide

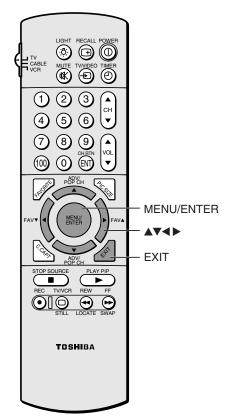
The Quick Connect Guide

automatically appears on-screen the first time the TV is turned on. This feature provides on-screen instructions to guide you through initial setup of your TV.

To stop the **Quick Connect Guide**, either press EXIT or turn off the TV.

See page 23 for details.





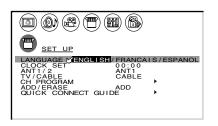
Note:

You can change the background of the menu. See page 52 for details.

Changing the on-screen display language

You can choose from three different languages (English, French and Spanish) for the on-screen display of adjustment menus and messages. To select a language:

- 1. Press MENU, and then press ◀ or ▶ until the SET UP menu appears.
- 2. Press ▲ or ▼ to highlight LANGUAGE.



3. Press ◀ or ▶ to highlight your desired language.

Selecting the antenna input

You can connect to two different antenna input sources (ANT 1 or ANT 2).

To select the antenna input using the TV/VIDEO button:

- 1. Press the TV/VIDEO button on the remote control or TV (see illustrations below). The current signal source displays in purple.
- 2. Continue pressing the TV/VIDEO button to select ANT 1 or ANT 2.



Pressing TV/VIDEO on the remote control <u>displays</u> the current signal source (to change the signal source, press TV/VIDEO again or 0–6)



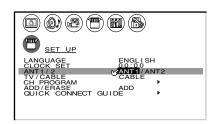
Pressing TV/VIDEO on the TV <u>changes</u> the current signal source

To select the antenna input using the menu system:

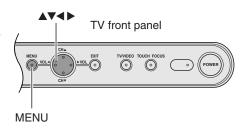
- Press MENU, and then press

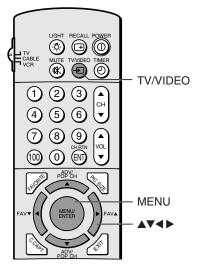
 or

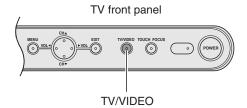
 to highlight the SET UP menu.
- 2. Press \triangle or ∇ to highlight ANT 1/2.



3. Press ◀ or ▶ to highlight either ANT 1 or ANT 2, depending on the antenna terminal you wish to use.







Adding channels to the TV's memory

When you press Channel ▲ or ▼, your TV will stop only on the channels stored in the TV's channel memory.

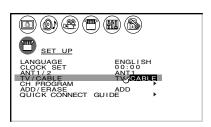
Follow the steps below and on the next page to program all active channels into the TV's memory.

Programming channels automatically

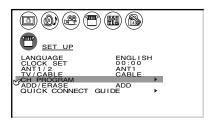
Your TV can automatically detect all active channels in your area and store them in its memory. After the channels are stored automatically, you can manually add or erase individual channels (see below).

To program channels automatically:

- 1. Press MENU, and then press ◀ or ▶ until the SET UP menu appears.
- 2. Press \blacktriangle or \blacktriangledown until the TV/CABLE is highlighted.
- 3. Press ◀ or ▶ to highlight either TV or CABLE, depending on which you use. If you use an antenna, highlight TV; if you use cable, highlight CABLE.



4. Press ▼ to select CH PROGRAM.



- 5. Press ◀ or ▶ to start channel programming. The TV will automatically cycle through all the TV or Cable channels (depending on which you selected), and store all active channels in the channel memory.
 - While the TV is cycling through the channels, the message "Programming Now—Please Wait" appears.
- 6. When channel programming is complete, the message "Completed" appears.
- 7. Press Channel \triangle or ∇ to view the programmed channels.

Adding and erasing channels manually

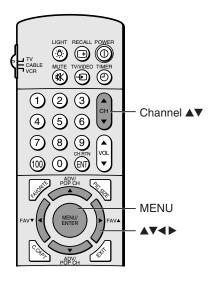
After you have automatically programmed all active channels, you can manually add or erase specific channels.

To add or erase channels:

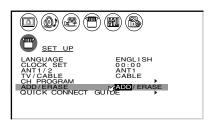
- 1. Select the channel you want to add or erase. If you are adding a channel, you must select the channel using the Channel Number buttons.
- 2. Press MENU, and then press ◀ or ▶ until the SET UP menu appears.

Note:

To tune the TV to a channel not programmed in the channel memory, you must use the Channel Number buttons on the remote control.



3. Press ▲ or ▼ to highlight ADD/ERASE.



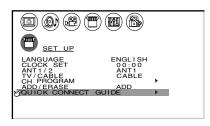
- TV front panel
- 4. Press ◀ or ▶ to select ADD or ERASE, depending on the function you want to perform.
- 5. Repeat steps 1–4 for other channels you want to add or erase.

Using the Quick Connect Guide

The Quick Connect Guide automatically starts the first time the TV is turned on.

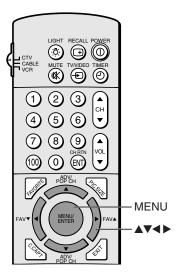
You can change the current settings any time.

- 1. Press MENU, and then press ◀ or ▶ until the SET UP menu appears.
- 2. Press ▲ or ▼ to highlight "QUICK CONNECT GUIDE."



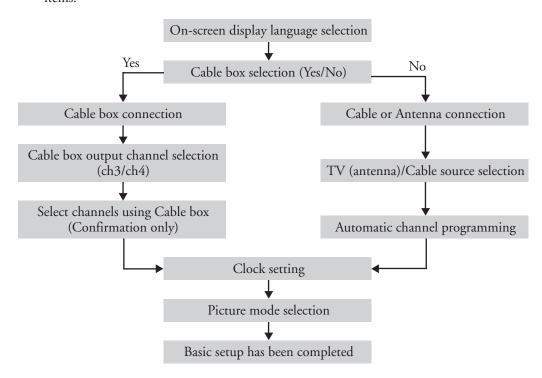
- 3. Press ◀ or ▶ to enter the Quick Connect Guide mode. Advance through the setup according to the guide displayed on-screen.
 - Press ◀ or ▶ to make a selection.
 - Press MENU to continue to the next screen.

The Quick Connect Guide will guide you through the following items.



Note:

To stop the Quick Connect Guide, press EXIT or turn off the TV.



Changing channels

To change to a specific channel (programmed or unprogrammed): Press the Channel Number buttons (0–9 and 100). For channels 100 and higher, press the 100 button, and then the next two numbers. For example, to select channel 125, press 100, 2, 5.

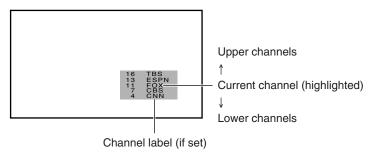
To change to the next programmed channel:

Press Channel ▲ or ▼ on the TV or remote control.

Changing channels using SpeedSurf

To use SpeedSurf to change to a specific programmed channel:

1. Press and hold Channel ▲ or ▼ for about one second. The TV will enter the SpeedSurf mode.



2. Repeatedly press or hold Channel ▲ or ▼ while the SpeedSurf mode is on-screen to scroll the channel list. Release the button to display the highlighted channel.

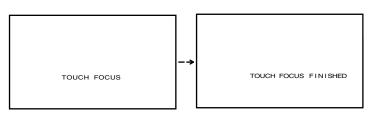
Adjusting the color convergence

This projection TV uses three separate TV tubes: red, green, and blue. The red, green, and blue images are projected onto the screen where they converge to form a full-color picture. You can see a clear picture only when the three images converge correctly. Convergence may drift over time or if you move the TV. If you can see clear images on your TV screen, skip this procedure.

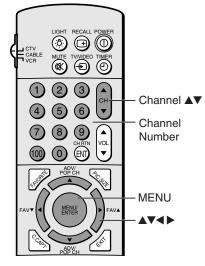
It is recommended that the adjustment is made only after the TV has been on for at least 30 minutes.

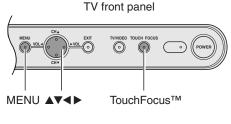
Automatically adjusting the color convergence using TouchFocus™

Press TOUCHFOCUS on the TV once. The TV will enter auto-convergence mode and adjust the convergence automatically.



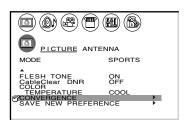
When the adjustment is complete, the normal picture appears. If the error message "TouchFocus Error" appears, retry the TouchFocus adjustment, or adjust the convergence manually, as described on the next page.

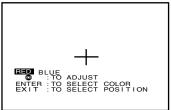




Manually adjusting the color convergence

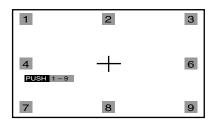
- 1. Press MENU, and then press ◀ or ▶ until the PICTURE menu appears.
- 2. Press ▲ or ▼ to highlight CONVERGENCE (below left).
- 3. Press ◀ or ▶ to display the Center Convergence menu (below right).



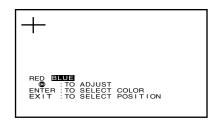


If you see separate red, blue, or green crossed lines (or red or blue shadows next to white lines), you need to adjust the convergence.

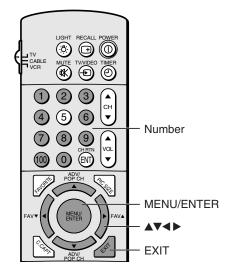
- 4. Press ENTER to highlight RED or BLUE, depending on which color needs adjusting. If both red and blue need adjusting, you will need to perform steps 4 and 5 twice.
- 5. Press ▲ (up), ▼ (down), ◀ (left), or ▶ (right) on the remote control to converge the red or blue line into the green line, which will turn completely white when correctly adjusted. When color convergence is correctly adjusted, you will see two single crossed white lines.
- 6. Press EXIT to display the Circumference Convergence menu.
- 7. Press the corresponding Number button (1–4 and 6–9) to select the area you want to adjust.



8. Press ENTER to highlight RED or BLUE, depending on which color needs adjusting. If both red and blue need adjusting, you will need to perform steps 8 and 9 twice for the selected area.



- 9. Press ▲▼◀▶ to converge the red or blue line into the green line, which will turn completely white when correctly adjusted. Repeat steps 8 and 9 until you see two single crossed white lines.
- 10. Press EXIT once to select another area to adjust, and then repeat steps 7–9.
- 11. Press EXIT twice to close the Convergence menu.



Using the TV's features

Adjusting the channel settings

Switching between two channels using Channel Return

The Channel Return feature allows you to switch between two channels without entering an actual channel number each time.

- 1. Select the first channel (or video mode) you want to view.
- 2. Select a second channel using the Channel Number buttons (0-9, 100).
- 3. Press CH RTN. The previous channel will display.

Each time you press CH RTN, the TV will switch back and forth between the last two channels that were selected.

Switching between two channels using SurfLock™

The Surf LockTM feature temporarily "memorizes" one channel in the CH RTN button, so you can return to that channel quickly from any other channel by pressing CH RTN.

To memorize a channel in the CH RTN button:

- 1. Select the channel you want to program into the CH RTN button.
- 2. Press and hold CH RTN for about 2 seconds until the message "Channel Memorized" appears (flashing) on the screen. The channel has been programmed into the CH RTN button.





- 3. Continue to change channels.
- 4. Press CH RTN. The memorized channel will be selected.

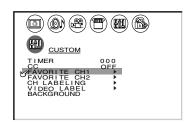
The TV will return to the memorized channel one time only. Once you press CH RTN and then change channels again, the CH RTN button memory will be cleared and the button will function as Channel Return, by switching back and forth between the last two channels that were selected.

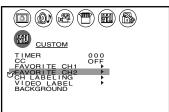
Programming your favorite channels

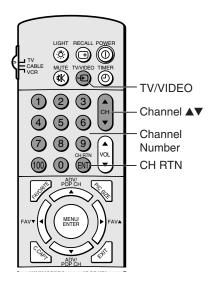
You can preset up to nine of your favorite channels each for FAVORITE CH1 and FAVORITE CH2 modes using the Favorite Channel Programming feature. Because this feature scans through only your favorite channels, it allows you to skip other channels you do not normally watch.

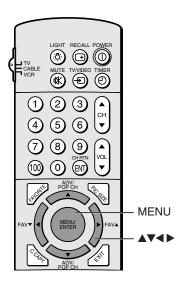
To program your favorite channels:

- 1. Press MENU, and then press ◀ or ▶ until the CUSTOM menu
- 2. Press \triangle or ∇ to highlight FAVORITE CH1 or FAVORITE CH2.

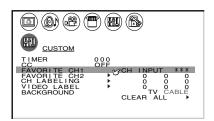








3. Press ◀ or ▶ to display the FAVORITE CH1 menu, for example. CH INPUT will be highlighted.



- Press the Channel Number buttons to enter one of your favorite channels.
- 5. Press ENTER.
- 6. Repeat steps 4 and 5 for other channels.

To select your favorite channels:

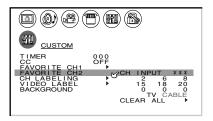
Press FAV ▼ or ▲.

To quickly scan through your favorite channels in a 9-picture multiwindow:

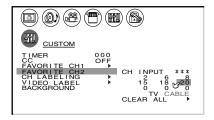
Press FAVORITE (see page 34).

To clear a favorite channel:

- 1. Press MENU, and then press ◀ or ▶ until the CUSTOM menu appears.
- 2. Press \triangle or ∇ to highlight FAVORITE CH2, for example.
- 3. Press ◀ or ▶ to display the FAVORITE CH2 menu.



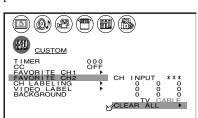
4. Press **yz** ► to highlight the channel you want to clear, and then press ENTER.



5. Repeat step 4 for other channels.

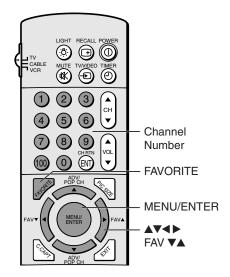
To clear all favorite channels at once:

Press ▲ or ▼ to highlight CLEAR ALL in step 4 above, and then press ◀ or ▶ to clear all favorite channels at once.



Notes:

- The FAV ▼▲ buttons operate as MENU ◀► buttons when a menu is onscreen.
- The favorite channel feature is not available in ANT2 mode.

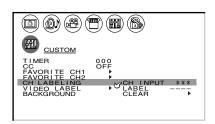


Labeling channels

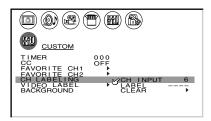
Channel labels appear above the on-screen channel number display each time you turn on the TV, change a channel, or press RECALL. You can choose any four characters to identify a channel.

To create a channel label:

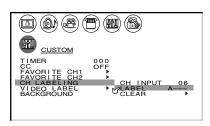
- 1. Press MENU, and then press ◀ or ▶ until the CUSTOM menu appears.
- 2. Press ▲ or ▼ to highlight CH LABELING.
- 3. Press ◀ or ▶ to display the CH LABELING menu. CH INPUT will be highlighted.



4. Press the Channel Number buttons to select a channel you want to label.



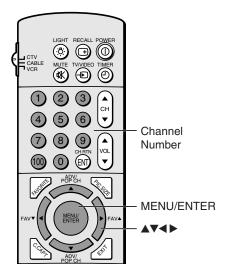
- 5. Press ▼ to highlight LABEL.
- 6. Press ◀ or ▶ repeatedly to select a character for the first space, and then press ENTER.



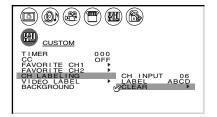
- 7. Repeat step 6 to enter the rest of the characters.
 - If you would like a blank space in the label name, you must choose an empty space from the list of characters. Otherwise, a dash "-" will appear in that space.
- 8. Repeat steps 4–7 for other channels. You can assign labels to a maximum of 32 channels.

To erase a channel label:

- 1. Press MENU, and then press ◀ or ▶ until the CUSTOM menu appears.
- 2. Press ▲ or ▼ to highlight CH LABELING.
- 3. Press ◀ or ▶ to display the CH LABELING menu.
- 4. Press ▼ to highlight CH INPUT, then select the channel you want to clear with the Channel Number buttons.



- 5. Press ▼ to highlight CLEAR.
- 6. Press ◀ or ▶ to erase the channel label.
- 7. Repeat steps 4–6 to erase other channel labels.

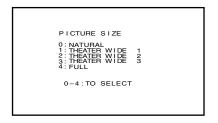


Viewing the wide-screen picture formats

You can view programs that have the conventional TV picture format (4:3 aspect ratio) and the wide-screen format (16:9 aspect ratio) in a variety of picture sizes.

Selecting the picture size

Repeatedly press PIC SIZE to select either Natural, Theater Wide 1, Theater Wide 2, Theater Wide 3, or Full picture size, as described below.



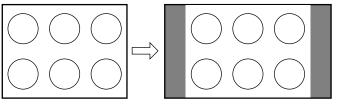
While the above menu is on-screen, you can select the desired picture size by pressing the corresponding number button.

480i/480p signal source : 0–4
 1080i signal source : 0–3

Receiving a 480i/480p signal source

Natural

The Natural picture size displays a conventional picture signal in the conventional 4:3 aspect ratio, with bars at the left and right.

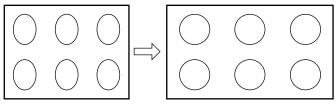


Conventional (4:3) picture on a conventional (4:3) TV screen

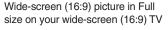
Conventional (4:3) picture in Natural size on your wide-screen (16:9) TV

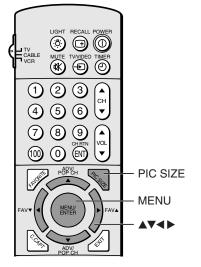
Full

The Full picture size displays the picture signal in the wide-screen 16:9 aspect ratio.



Wide-screen (16:9) picture on a conventional (4:3) TV screen (squeezed horizontally)





NOTICE OF POSSIBLE ADVERSE EFFECTS ON TV PICTURE TUBE

Avoid displaying stationary images on your TV screen for extended periods of time. Fixed (non-moving) images (such as still PIP/POP windows or black/gray bars in wide-screen picture or PIP/POP formats) can become permanently engrained in the picture tube. This type of damage is NOT COVERED BY YOUR WARRANTY because it is the result of misuse. See item 33 on page 4.

Note:

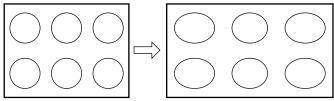
If you select a Theater Wide picture size for a conventional picture signal (4:3 aspect ratio), parts of the picture at the top and bottom of the screen may be hidden.

Note:

If you select Full picture size for a conventional 4:3 picture, the picture will be stretched horizontally to fill the screen.

Theater Wide 1

• Theater Wide 1 enlarges the picture non-uniformly—the center of the picture remains close to its true proportion, but the left and right edges are stretched wider to fill the screen.

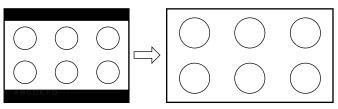


Conventional picture on a conventional TV screen

Theater Wide 1

Theater Wide 2

- Theater Wide 2 enlarges the entire picture uniformly—it is stretched the same amount both wider and taller (retains its true proportion).
- Part of the picture at the top and bottom is hidden. To view the hidden areas, see "Scrolling the Theater Wide picture" on page 32.

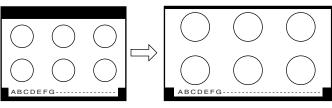


Wide-screen picture on a conventional TV screen (also known as the "letter box" format, with bars at top and bottom)

Theater Wide 2

Theater Wide 3

- Theater Wide 3 enlarges the picture non-uniformly—it is stretched wider to fill the width of the screen, but only slightly stretched taller.
- A small part of the picture at the top and bottom is hidden. To view the hidden areas (for example, subtitles or captions), see "Scrolling the Theater Wide picture" on page 32.

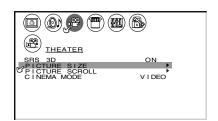


Wide-screen picture with subtitles on a conventional TV screen

Theater Wide 3

Note:

You can also change the Theater Wide 1, 2, 3 using the menu system. Select PICTURE SIZE in the THEATER menu.



NOTICE OF POSSIBLE ADVERSE EFFECTS ON TV PICTURE TUBE

Avoid displaying stationary images on your TV screen for extended periods of time. Fixed (non-moving) images (such as still PIP/POP windows or black/gray bars in wide-screen picture or PIP/POP formats) can become permanently engrained in the picture tube. This type of damage is NOT COVERED BY YOUR WARRANTY because it is the result of misuse. See item 33 on page 4.

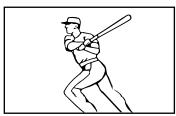
Note:

If you select a Theater Wide picture size for a conventional picture signal (4:3 aspect ratio), parts of the picture at the top and bottom of the screen may be hidden.

Receiving a 1080i signal source

Natural

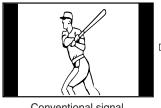
Select Natural size to view a conventional 1080i source in wide-screen format (16:9 aspect ratio).



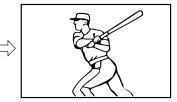
1080i conventional picture on your wide-screen TV

Theater Wide 1

Select Theater Wide 1 to view a conventional signal without the bars at left and right.



Conventional signal



Theater Wide 1

NOTICE OF POSSIBLE ADVERSE EFFECTS ON TV PICTURE TUBE

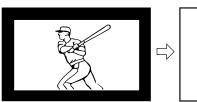
Avoid displaying stationary images on your TV screen for extended periods of time. Fixed (non-moving) images (such as still PIP/POP windows or black/gray bars in wide-screen picture or PIP/POP formats) can become permanently engrained in the picture tube. This type of damage is NOT COVERED BY YOUR WARRANTY because it is the result of misuse. See item 33 on page 4.

Note:

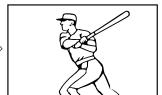
When the TV is turned on or the TV/VIDEO button is pressed, the Natural mode will be selected automatically.

Theater Wide 2

Select Theater Wide 2 to view a poster frame signal.



Poster frame signal



Theater Wide 2

Theater Wide 3

Select Theater Wide 3 to view a poster frame signal with subtitles.



Poster frame signal with subtitles



Theater Wide 3

Note: A 720p signal source can be viewed in Natural mode only.

Note:

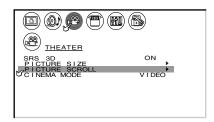
To view the hidden areas, see "Scrolling the Theater Wide picture" on page 32.

Note:

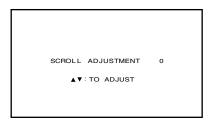
To view the hidden areas (for example, subtitles or captions), see "Scrolling the Theater Wide picture" on page 32.

Scrolling the Theater Wide picture (Theater Wide 2 and 3 only)

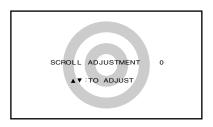
- 1. Press PIC SIZE to select the Theater Wide 2 or 3 mode.
- 2. Press MENU, and then press ◀ or ▶ until THEATER menu appears.
- 3. Press ▲ or ▼ to highlight PICTURE SCROLL.



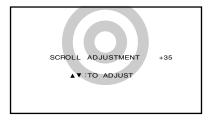
4. Press ◀ or ▶ to display the Scroll Adjustment mode.



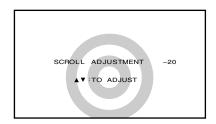
- 5. Press \triangle or ∇ to adjust the vertical position of the picture.
- Normal (center) position

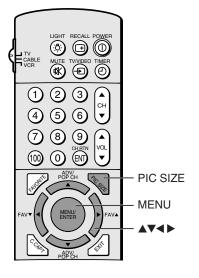


• To raise the picture, press ▲.



• To lower the picture, press **▼**.





Note:

You can scroll the picture in Theater Wide 2 and Theater Wide 3 only. The scroll amounts are as follows:

· 480i signal source:

Wide 1 : Not adjustable Wide 2 : +45 to -20 Wide 3 : +45 to -20

• 480p signal source:

Wide 1 : Not adjustable Wide 2 : +30 to -20 Wide 3 : +30 to -20

• 1080i signal source:

Wide 1 : Not adjustable Wide 2 : +30 to -20 Wide 3 : +30 to -20

NOTICE OF POSSIBLE ADVERSE EFFECTS ON TV PICTURE TUBE

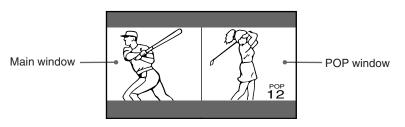
Avoid displaying stationary images on your TV screen for extended periods of time. Fixed (non-moving) images (such as still PIP/POP windows or black/gray bars in wide-screen picture or PIP/POP formats) can become permanently engrained in the picture tube. This type of damage is NOT COVERED BY YOUR WARRANTY because it is the result of misuse. See item 33 on page 4.

Using the POP double-window feature

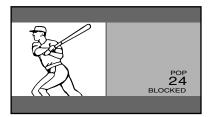
The POP (picture-out-picture) feature splits the screen into a double window that allows you to watch two programs at the same time. The POP program can come from a TV broadcast or an external source, such as a VCR.

To display a TV broadcast in the POP window:

1. Press POP to display the POP window.

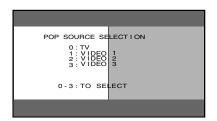


2. Press POP CH ▲▼ to change the channel of the POP window. If the V-CHIP feature is active and you try to watch a TV program that exceeds your set rating limits, the program will be blocked (see "Using the V-CHIP menu" on page 36).



To display a picture from an external source in the POP window:

- 1. Connect the external source equipment (see "Connecting your TV" on page 7).
- 2. Select the TV program you want to watch in the main window.
- 3. Press POP to display the POP window.
- 4. Repeatedly press SOURCE to select the signal source for the POP window (TV, VIDEO 1, VIDEO 2, or VIDEO 3 only; you cannot select ColorStream in POP mode). The current source will display in purple.



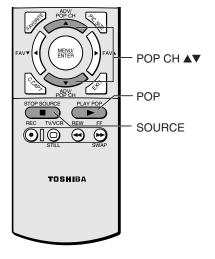
While the above menu is on the screen, you can select the desired signal source by pressing the corresponding number button (0–3).

To close the POP window:

Press POP again.

Note:

- You cannot access POP features when viewing ColorStream HD1 or HD2 input.
- You cannot display the ANT-2 signal source in the POP window.
- You can choose to output the sound of either the main or POP program from the AUDIO OUT jacks (see "Selecting the Audio OUT sound" on page 51). The TV speakers always output the main program sound.

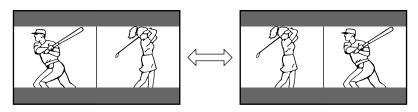


NOTICE OF POSSIBLE ADVERSE EFFECTS ON TV PICTURE TUBE

Avoid displaying stationary images on your TV screen for extended periods of time. Fixed (non-moving) images (such as still PIP/POP windows or black/gray bars in wide-screen picture or PIP/POP formats) can become permanently engrained in the picture tube. **This type of damage is NOT COVERED BY YOUR WARRANTY** because it is the result of misuse. See item 33 on page 4.

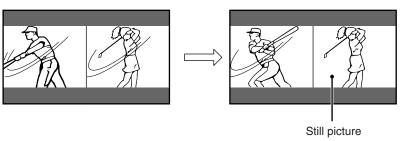
Switching the main and POP pictures

Press SWAP while you are using the POP feature to switch the main and POP pictures.



Freezing the POP picture

Press STILL while you are using the POP feature. The POP picture will become a still picture. To return to the moving picture, press STILL again.

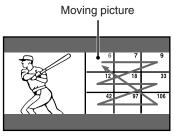


Using the favorite channel search function

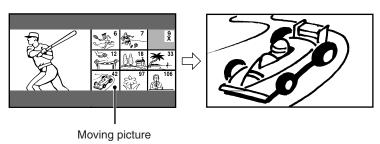
You can use the favorite channel search function to quickly scan your favorite channels (see "Programming your favorite channels" on page 26).

1. Press FAVORITE.

The TV automatically enters POP mode, and begins a ninepicture scan of your favorite channels in the POP window. The first of the nine windows will display as a moving picture.

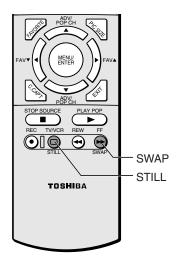


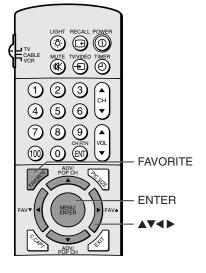
- 2. Press ▲▼◀▶ to select one of the nine pictures (becomes a moving picture).
- 3. Press ENTER to display the channel you selected in step 2 as a normal picture.



Every time you press FAVORITE, the POP window scans your favorite channels in the following order:

FAVORITE CH1 — FAVORITE CH2 — Off





NOTICE OF POSSIBLE ADVERSE EFFECTS ON TV PICTURE TUBE

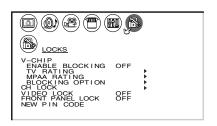
Avoid displaying stationary images on your TV screen for extended periods of time. Fixed (non-moving) images (such as still PIP/POP windows or black/gray bars in wide-screen picture or PIP/POP formats) can become permanently engrained in the picture tube. **This type of damage is NOT COVERED BY YOUR WARRANTY** because it is the result of misuse. See item 33 on page 4.

Using the LOCKS menu

The LOCKS menu includes the V-Chip, CH Lock, Video Lock, and New PIN Code functions. You can use these functions after entering the correct PIN code.

Entering the PIN code

1. Press MENU, and then press ◀ or ▶ until the LOCKS menu appears.



- 2. Press \triangle or ∇ to display the PIN code entering mode.
- Blocking Reset status: Set your 4-digit code by pressing the Number buttons (0–9), and then press ENTER.
- Blocking Active status (when the PIN code is already stored):
 Press the Number buttons (0–9) to enter the 4-digit PIN code used for blocking channels, and then press ENTER.

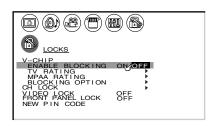




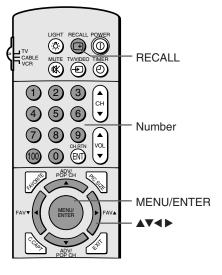
If the wrong PIN code is entered, the message "Incorrect" appears. Enter the code again, and then press ENTER.

If you cannot remember your PIN code

While the PIN code entering screen is displayed, press RECALL four times within five seconds. The PIN code will be released (Blocking Reset status restored).



Continue to set each item following the steps on the next page.



Using the V-CHIP menu

Some TV programs and movies include signals that classify the content of the program (violence, sex, dialog, language). The V-CHIP conrol feature in this TV detects the signals and blocks the programs according to your selections. To use this feature, perform the following setup.

ENABLE BLOCKING

- 1. From the LOCKS menu, select ENABLE BLOCKING.
- 2. Press ◀ or ▶ to select ON or OFF.

ON: To enable your setting (Lock)

OFF: To release your setting (Unlock)

Note: The CH LOCK function is not affected by the ENABLE BLOCKING

TV RATING (Independent rating system for broadcasters)

- 1. From the LOCKS menu, select TV RATING.
- 2. Press ◀ or ▶ to display the TV RATING menu.
- 3. Press ▼ or ▲ to select item.
- 4. Press ▶ to lock (display "X")
 Press ◀ to unlock (display "✓")
- 5. Repeat steps 3 and 4 to set the next item.



The TV age-based ratings and content themes you can be lock are listed in the table below.

Ratings	Description and Content themes
MA	Mature Audience Only (This program is specifically designed to be viewed by adults and therefore may be unsuitable for children under 17.) L) Crude or indecent language S) Explicit sexual activity V) Graphic violence
14	Parents Strongly Cautioned (This program contains some material that many parents would find unsuitable for children under 14 years of age.) D) Intensely suggestive dialog L) Strong, coarse language S) Intense sexual situations V) Intense violence
PG	Parental Guidances Suggested (This program contains material that parents may find unsuitable for younger children.) D) Some suggestive dialog L) Infrequent coarse language S) Some sexual situations V) Moderate violence
G	General Audience (Most parents would find this program suitable for all ages.)
Y7, Y7FV	Directed to Older Children (This program is designed for children age 7 and above. Note: Programs in which fantasy violence may be more intense or more combative than other programs in this category are designated Y7FV.)
Y	All Children (This program is designed to be appropriate for all children.)

note:

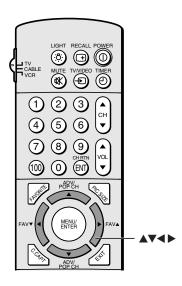
The V-Chip function is available only for the U.S. V-Chip system. The Canadian V-Chip system is not compatible.

LOCKS menu

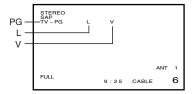


To select each item:

Press ▼ or ▲.



Press RECALL to display the rating of the TV program you are currently watching.



MPAA RATING (Independent rating system for movies)

- 1. From the LOCKS menu, select MPAA RATING.
- 2. Press ◀ or ▶ to display the MPAA RATING menu, then press ▼ or ▲ to highlight MPAA RATING.



3. Press ► to lock ("X") or press ◀ to unlock ("✓").

The movie ratings you can lock are described as follows:

X : X-rated (For adults only)

NC17: Not intended for anyone 17 and under

R : Restricted (Under 17 requires accompanying parent or adult guardian.)

PG13 : Parents Strongly Cautioned (Some material may be inappropriate for children under 13)

PG : Parental Guidance Suggested (Some material may not be suitable for children)

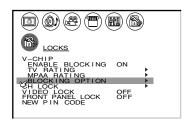
G : General Audience (Appropriate for all ages)

BLOCKING OPTION

- 1. From the LOCKS menu, select BLOCKING OPTION.
- 2. Press ◀ or ▶ to display the BLOCKING OPTION menu, then press ▲ or ▼ to select item.

MPAA UNRATED:

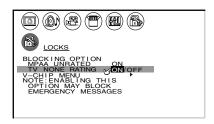
Press ◀ or ▶ to select ON (Lock) or OFF (Unlock) for unrated programs in the MPAA rating system.





TV NONE RATING

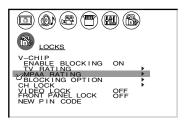
Press ◀ or ▶ to select ON (Lock) or OFF (Unlock) for programs rated NONE in the TV PARENTAL GUIDELINES.



V-CHIP MENU:

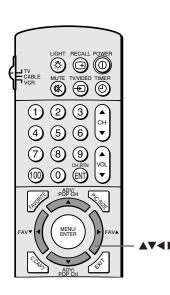
Press ◀ or ▶ to return to the LOCKS menu.

LOCKS menu



To select each item:

Press ∇ or \triangle .



Caution:

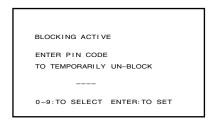
Setting the TV None Rating to ON may block the broadcast of emergency information. The menu will display the note, "Enabling this option may block emergency messages" to warn you of this possibility.

Unlocking programs temporarily

1. If you try to watch a TV program that exceeds the rating limits you set, the TV enters program lock mode. After 4 seconds, the TV starts the favorite channel search function (see page 34). You can either unlock the program temporarily (see steps 2–4) or select an unlocked program to watch.

THIS PROGRAM HAS BEEN BLOCKED!
TV-PG L V
EXCEEDS SET LIMITS
PUSH MUTE TO ENTER PIN
CABLE 9

- 2. To temporarily unlock the program, press MUTE.
- 3. Press the Number buttons (0–9) to enter your 4-digit PIN code.



4. Press ENTER.

If the correct code is entered, the program lock mode is released and the normal picture appears.

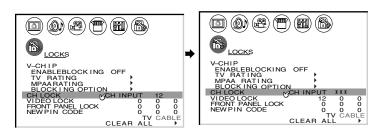
All locking is disabled until the TV is turned off, and will be enabled when the TV is turned on again.

Locking channels

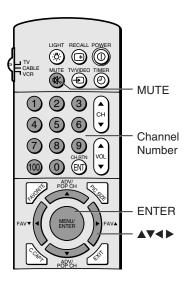
With the CH LOCK feature, you can lock specific channels. The TV will not be able to tune locked channels with the Channel ▲ ▼ buttons or Channel Number buttons, unless you clear the setting. You can lock a maximum of nine channels.

To lock channels:

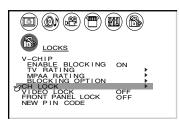
- 1. From the LOCKS menu, select CH LOCK.
- 2. Press ◀ or ▶ to display the CH LOCK menu. CH INPUT will be highlighted.
- Press the Channel Number buttons to enter the channel you want to lock. (The channel you are currently watching cannot be locked.)
- 4. Press ENTER.



5. Repeat steps 3 and 4 for other channels.



LOCKS menu

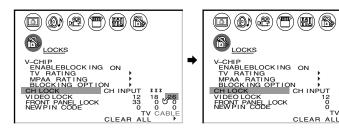


To select each item:

Press ▼ or ▲ .

To unlock individual channels:

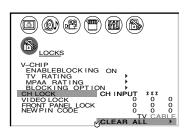
- 1. From the LOCKS menu, select CH LOCK.
- 2. Press ◀ or ▶ to display the CH LOCK menu.
- 3. Press ▲▼◀▶ to highlight the channel you want to unlock, then press ENTER.



4. Repeat step 3 for other channels.

To unlock all locked channels at once:

Press ▲ or ▼ to highlight CLEAR ALL, and then press ◀ or ▶.



Locking video inputs

With the VIDEO LOCK feature, you can lock out the input sources (Video 1, Video 2, Video 3, ColorStream HD1, ColorStream HD2) and channels 3 and 4.

You will not be able to select the input sources with the TV/VIDEO button or Channel buttons unless you clear the setting.

To set up the video lock:

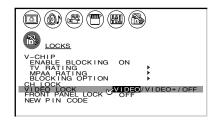
- 1. From the LOCKS menu, select VIDEO LOCK.
- 2. Press ◀ or ▶ to highlight the level of video locking you want (Video, Video+, or Off), as follows:

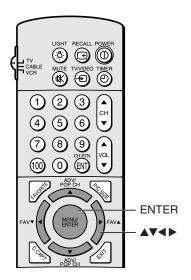
VIDEO: Locks Video 1, Video 2, Video 3, ColorStream HD1 and HD2.

VIDEO+: Locks Video 1, Video 2, Video 3, ColorStream, HD1/HD2, and channels 3 and 4. This option should be used if you use the antenna terminal to play a video tape.

Note: Make sure the POP is not on channel 3 or 4.

OFF : Unlocks all video input sources.





Using the front panel lock feature

You can lock the front panel buttons to prevent your settings from being changed accidentally (by children, for example). When the front panel lock is ON, all control buttons on the TV front panel (except POWER) do not operate.

To lock the front panel:

- 1. From the LOCKS menu, select FRONT PANEL LOCK.
- 2. Press ◀ or ▶ to highlight ON.



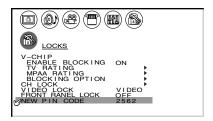
If a button on the front panel is pressed, the message "Not Available" appears.

To unlock the front panel:

Highlight OFF in step 2 above, or press and hold the VOL ◀ button on the TV for about 10 seconds until the message "Front Panel Lock: Off" appears on-screen.

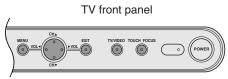
Changing the PIN code

- 1. From the LOCKS menu, select NEW PIN CODE.
- 2. Press the Number buttons (0–9) to enter a 4-digit code. The numbers you enter will replace the dashes in the display.

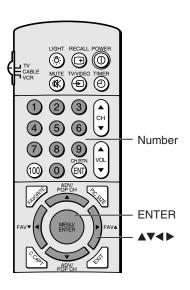


3. Press ENTER.

The new PIN code is now active.



Buttons to be locked



Adjusting the picture

Selecting the picture mode

You can select your desired picture type from four picture modes: Sports, Standard, Movie, and Preference.

Mode	Picture Quality
Sports	Bright and dynamic picture (factory setting)
Standard	Standard picture setting (factory setting)
Movie	Movie-like picture setting (factory setting)
Preference	Your personal preferences*

^{*(}see "Saving your new preferences" on page 42.)

To select the picture mode:

- 1. Press MENU, and then press ◀ or ▶ until the PICTURE menu appears.
- 2. Press ▼ or ▲ to select MODE.
- 3. Press ◀ or ▶ to highlight the mode you prefer.



Note:

If you select one of the factory-set picture modes (SPORTS, STANDARDS, or MOVIE) and then change a picture quality setting (for example, increase the contrast), the picture mode automatically changes to PREFERENCE in the Picture menu.

To save your new picture quality settings, you must select SAVE NEW PREFERENCE (see page 42) before closing the Picture menu or the TV will return to the previous picture mode.

TV front panel



Adjusting the picture quality

You can adjust the picture quality to your personal preferences, including the contrast, brightness, color, tint, sharpness, flesh tone, noise reduction and color temperature.

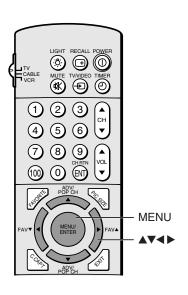
Selection	◄ Pressing ▶	
contrast	lower	higher
brightness	darker	lighter
color	paler	deeper
tint	reddish	greenish
sharpness	softer	sharper

To adjust the picture quality:

- 1. Press MENU, and then press ◀ or ▶ until the PICTURE menu appears.
- 2. Press ▼ or ▲ until the item you want to adjust is highlighted.
- 3. Press ◀ or ▶ to adjust the level.



The PICTURE quality adjustments you made can be saved in the TV's memory with the SAVE NEW PREFERENCE feature (see page 42). You can keep these settings or choose factory set options, as described under "Selecting the picture mode" above.

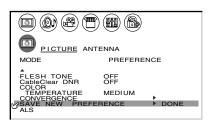


Saving your new preferences

You can save the PICTURE qualities you adjusted (contrast, brightness, color, tint, and sharpness) in the picture PREFERENCE mode.

To save your new preferences:

- 1. Press MENU, and then press ◀ or ▶ until the PICTURE menu appears.
- 2. Press ▲ or ▼ to highlight SAVE NEW PREFERENCE.
- 3. Press ◀ or ▶. When complete, the menu displays "DONE."



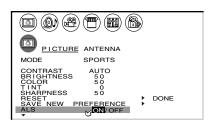
The mode automatically changes to PREFERENCE. You can choose your saved preferences any time by selecting PREFERENCE mode in the PICTURE menu (see "Selecting the picture mode" on page 41).

Using the ALS (Automatic Light Sensor) feature

The ALS automatically adjusts the picture contrast according to the room's lighting conditions. For example, when the room is dark, the ALS will automatically reduce the contrast (which reduces eye strain). The ALS is activated when the ALS menu is set to ON.

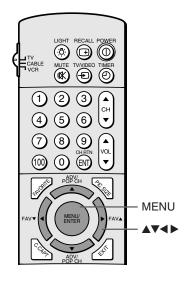
To activate the ALS:

- 1. Press MENU, and then press ◀ or ▶ until the PICTURE menu appears.
- 2. Press \triangle or ∇ to highlight ALS.
- 3. Press ◀ or ▶ to highlight ON. The CONTRAST setting changes to AUTO, and is not adjustable while the ALS feature is on.



To deactivate the ALS:

Highlight OFF in step 3 above.



Note:

The CONTRAST adjustment in the PICTURE menu is not available when ALS is ON.

Do not cover the ALS sensor on the TV front panel.

TV front panel

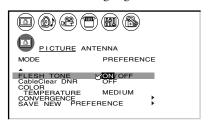


Using the flesh tone feature

This feature automatically adjusts the tint to display more natural flesh tones.

To turn on the flesh tone feature:

- 1. Press MENU, and then press ◀ or ▶ until the PICTURE menu appears.
- 2. Press ▲ or ▼ to highlight FLESH TONE.
- 3. Press ◀ or ▶ to highlight ON.

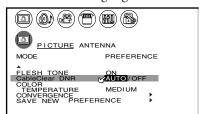


Using the CableClear™ DNR (digital noise reduction) feature

This feature allows you to reduce visible interference in your TV picture. This is useful when receiving a broadcast with a weak signal (especially cable channels) or playing back a video cassette or disc damaged by repeated use.

To turn on the CableClear[™] DNR feature:

- 1. Press MENU, and then press ◀ or ▶ until the PICTURE menu appears.
- 2. Press ▲ or ▼ to highlight CableClear DNR.
- 3. Press ◀ or ▶ to highlight AUTO.



To turn off the CableClear[™] DNR feature:

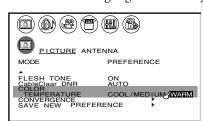
Highlight OFF in step 3 above.

Selecting the color temperature

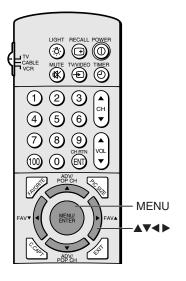
You can change the quality of the picture by selecting from three preset color temperatures: cool, medium, and warm.

To select the color temperature:

- 1. Press MENU, and then press ◀ or ▶ until the PICTURE menu appears.
- 2. Press ▲ or ▼ to highlight COLOR TEMPERATURE.
- 3. Press ◀ or ▶ to highlight the mode you prefer.



Mode	Picture Quality
cool	blueish
medium	neutral
warm	reddish
warm	reaaisn



Note:

The "CableClear DNR" menu display will change to "DNR" in video mode.

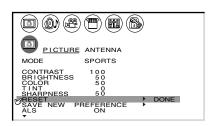
Resetting your picture adjustments

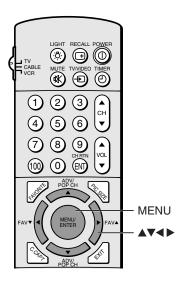
The RESET function adjusts the picture qualities to the following factory settings:

Contrast max (100)	Color temperatureCool
Brightness center (50)	CableClear DNR Auto
Color center (50)	ModeSports
Tint center (0)	
Sharpness center (50)	

To reset the picture adjustments:

- 1. Press MENU, and then press ◀ or ▶ until the PICTURE menu appears.
- 2. Press ▲ or ▼ to highlight RESET.
- 3. Press ◀ or ▶. The menu displays "DONE."





Selecting the cinema mode

When you view a DVD movie (3:2 pulldown processed) from a DVD player connected to the ColorStream (component video) inputs on the TV, smoother and more natural motion can be obtained by setting the CINEMA MODE to FILM.

To set the CINEMA MODE to FILM:

- 1. Press MENU, and then press ◀ or ▶ until the THEATER menu appears.
- 2. Press ▲ or ▼ to highlight CINEMA MODE.
- 3. Press ◀ or ▶ to select FILM.



To turn off the CINEMA MODE: Select VIDEO in step 3 above.

Selecting the video input source

Press TV/VIDEO on the remote control or TV to view a signal from another device connected to your TV, such as a VCR or DVD player. You can select ANT 1, VIDEO 1, VIDEO 2, VIDEO 3, ColorStream HD1, ColorStream HD2, or ANT 2 depending on which input jacks are used for connecting the devices (see "Connecting your TV" on page 7.)



Pressing TV/VIDEO on the remote

control displays the current signal

source (press TV/VIDEO again or

0-6 to change)



Pressing TV/VIDEO on the TV <u>changes</u> the current signal source

Note:

- When ColorStream HD 1 or HD 2 is selected, the video OUT jack does not output a signal. To receive a video OUT signal, use a standard video or S-video IN connection instead of the ColorStream connection.
- If you select ColorStream HD1 or HD2 while the POP window is open, the POP window will close.

Labeling the video input sources

The video label feature allows you to label each input source for your TV from the following preset list of labels:

: Uses the default label nameVCR : Video cassette recorder

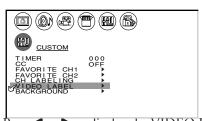
DVD : DVD video

DTV : Digital TV set-top box

SAT : Satellite box CBL : Cable box

To label the video input sources:

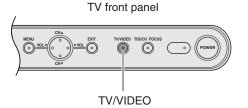
- 1. Press MENU, and then press ◀ or ▶ until the CUSTOM menu appears.
- 2. Press ▲ or ▼ to highlight VIDEO LABEL.

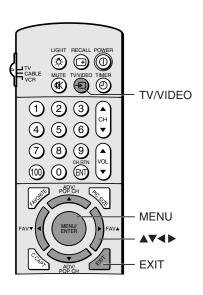


- 3. Press ◀ or ▶ to display the VIDEO LABEL menu.
- 4. Press \triangle or ∇ to highlight the video source you want to label.
- 5. Press ◀ or ▶ to select the desired label for that input source.



- 6. Finish labeling the other video sources as desired. To return to the previous menu, press ▲ or ▼ to highlight CUSTOM MENU, and then press ◀ or ▶.
- 7. To exit the menu, press EXIT.





Using the closed caption feature

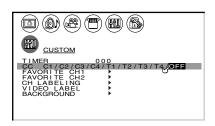
The closed caption feature has two options:

- Captions—An on-screen display of the dialogue, narration, and sound effects of TV programs and videos that are closed captioned (usually marked as "CC" in TV listings).
- Text—An on-screen display of information not related to the current program, such as weather or stock data (when provided by individual stations).

To view captions or text:

- 1. Tune the TV to the desired program.
- Press C.CAPT (or MENU then ▲▼) to display CUSTOM menu. CC will be highlighted.

Note: Each time you press C.CAPT, the closed caption mode will change.



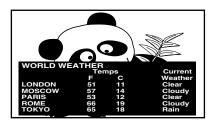
- Press C.CAPT (or ◀►) to highlight the desired closed caption mode, as follows:
- To view captions, highlight C1, C2, C3, or C4 (C1 displays translation of the primary language in your area).

Note: If the program or video you selected is not closed captioned, no captions will display on the screen.

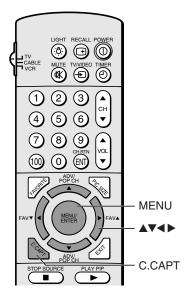


• To view text, highlight T1, T2, T3, or T4.

Note: If text is not available in your area, a black rectangle may appear on your screen. If this happens, turn the Closed Caption feature OFF.



To turn off the Closed Caption feature: Highlight OFF in step 3.



Note:

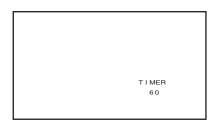
A closed caption signal may not display in the following situations:

- · when a videotape has been dubbed
- · when the signal reception is weak
- · when the signal reception is nonstandard

Setting the sleep timer

To set the sleep timer to turn off the TV automatically:

 Repeatedly press TIMER to set the length of time until the TV turns off.



Every time you press the button, the time will increase by 10 minutes to a maximum of 180.

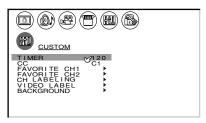
$$0 \rightarrow 10 \rightarrow 20 --- \rightarrow 170 \rightarrow 180 \rightarrow 0 \rightarrow 10 \text{ MIN}.$$

To cancel the sleep timer:

Press TIMER until it is set to 0.

The timer also can be set using the on-screen menu:

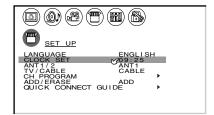
- 1. Press MENU, and then press ◀ or ▶ until the CUSTOM menu appears.
- 2. Press ▲ or ▼ to highlight TIMER.
- 3. After the number position starts to blink, press the Number buttons (0–9) to enter the length of time until the TV turns off automatically.
- 4. Press ENTER to start the timer.



Setting the clock

To set the clock:

- 1. Press MENU, and then press ◀ or ▶ until the SET UP menu appears.
- 2. Press ▲ or ▼ to highlight CLOCK SET.
- 3. After the number position starts to blink, press the Number buttons (0–9) to enter the correct time. The clock operates on a 12-hour cycle.
- 4. Press ENTER to start the clock.

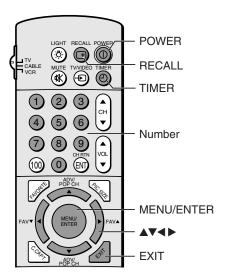


To display the time on-screen:

Press RECALL.

Note:

To display the amount of time left until the TV turns off automatically, press TIMER once.



Note:

If the TV's power source is interrupted (the power cord is unplugged or a power failure occurs), the clock must be reset.

Adjusting the sound

Muting the sound

Press MUTE to temporarily reduce (1/2 MUTE) or turn off (MUTE) the sound. While the sound is off, the screen will display "1/2 MUTE" or "MUTE" in the lower right corner. Each time you press MUTE, the mute mode will change in the following order:

$$\rightarrow$$
 Normal \rightarrow 1/2 MUTE \rightarrow MUTE $-$

When you press MUTE, the closed caption feature is automatically activated. To deactivate this feature, press MUTE again. This feature works only when the closed caption mode is set to OFF. See "Using the closed caption feature" on page 46 for more information.

Selecting stereo/SAP broadcasts

The multi-channel TV sound (MTS) feature allows you to listen to high-fidelity stereo sound while watching TV. MTS can also transmit a second audio program (SAP) containing a second language, music, or other audio information (when provided by individual stations).

When the TV receives a stereo or SAP broadcast, the word STEREO or SAP appears on-screen every time the TV is turned on, the channel is changed, or the RECALL button is pressed.

The MTS feature is not available when the TV is in VIDEO mode. To listen to stereo sound:

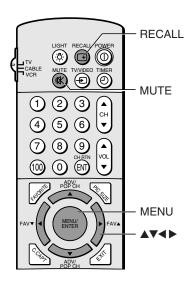
- 1. Press MENU, and then press ◀ or ▶ until the AUDIO menu appears.
- 2. Press \triangle or ∇ to highlight MTS.
- 3. Press ◀ or ▶ to highlight STEREO.



You can leave your TV in STEREO mode because it will automatically output the type of sound being broadcast (stereo or monaural). The word "STEREO" or "SAP" displays in yellow in the menu when the TV receives the signal.

If the stereo sound is noisy, select MONO to reduce the noise. To listen to SAP (if available):

- 1. Press MENU, and then press ◀ or ▶ until the AUDIO menu appears.
- 2. Press \triangle or ∇ to highlight MTS.
- 3. Press ◀ or ▶ to highlight SAP. You will hear the station's second audio program (if available) from the speakers, while viewing the original program's picture (see note at right).







Note:

A second audio program (SAP) can be heard only on those TV stations that offer it.

For example, a station might broadcast music as a second audio program. If you have SAP on, you will see the current program on the screen but hear music instead of the program's normal audio.

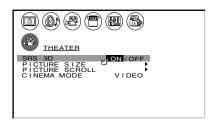
However, if you have SAP on, and the station you are watching is not currently broadcasting a second audio program, the station's normal audio will be output. However, occasionally there is no sound at all. If this happens, set the MTS feature to STEREO mode.

Using the SRS 3D surround sound feature

The SRS 3D surround sound feature expands the audio listening field wider and deeper to create exceptional sound quality from the TV's speakers. The feature uses stereo signals from a TV broadcast or video input.

To turn on the SRS 3D surround:

- 1. Select STEREO mode (See "Selecting stereo/SAP broadcasts" on page 48).
- 2. Press MENU, and then press ◀ or ▶ until the THEATER menu appears.
- 3. Press ▲ or ▼ to highlight SRS 3D.
- 4. Press ◀ or ▶ to highlight ON.



To turn off the SRS 3D surround:

Highlight OFF in step 4 above.

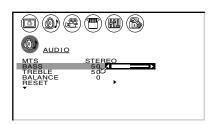
In general, you can leave SRS 3D in the ON mode because it will automatically produce the type of sound being broadcast (surround stereo or monaural).

Adjusting the sound quality

You can change the quality of your TV's sound by adjusting the bass, treble, and balance.

To adjust the sound quality:

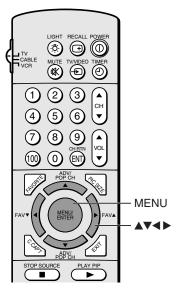
- 1. Press MENU, and then press ◀ or ▶ until the AUDIO menu appears.
- 2. Press \triangle or ∇ to highlight the item you want to adjust.



- 3. Press ◀ or ▶ to adjust the level.
- makes the sound quality weaker or decreases the balance in the right channel, depending on the item selected.
- makes the sound quality stronger or decreases the balance in the left channel, depending on the item selected.

Note:

If the broadcast is monaural, the SRS 3D effect does not work.



SRS and the () symbol are trademarks of SRS Labs, Inc.

Resetting your audio adjustments

The RESET function returns the audio adjustments to the following factory settings:

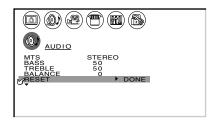
Bass center (50)

Treble center (50)

Balance center (0)

To reset the audio adjustments:

- 1. Press MENU, and then press ◀ or ▶ until the AUDIO menu appears.
- 2. Press ▲ or ▼ to highlight RESET.
- 3. Press ◀ or ▶. The menu displays "DONE."

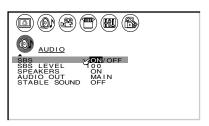


Using the sub-bass system (SBS)

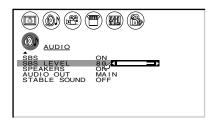
The sub-bass system enhances bass performance, even when the volume is low.

To turn on the SBS and adjust the SBS level:

- 1. Press MENU, and then press ◀ or ▶ until the AUDIO menu appears.
- 2. Press \triangle or ∇ to highlight SBS.
- 3. Press ◀ or ▶ to highlight ON.

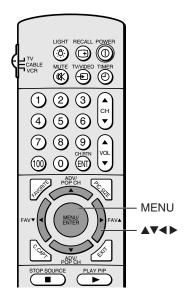


- 4. Press ▲ or ▼ to highlight SBS LEVEL.
- 5. Press ◀ or ▶ to adjust the SBS level.



To turn off the SBS:

Highlight OFF in step 3 above.



Note:

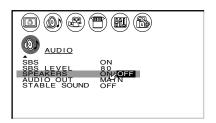
- The SBS signal does not pass through the "Variable Audio OUT" jacks (See "Connecting an audio system" on page 13); however, the AUDIO menu will appear when the buttons are pressed.
- While SBS is OFF, if the SBS level is adjusted, SBS is automatically set to ON.

Turning off the built-in speakers

Use this feature to turn off the TV speakers when you connect an audio system (See "Connecting an audio system" on page 14).

To turn off the built-in speakers:

- 1. Press MENU, then press ◀ or ▶ until AUDIO menu appears.
- 2. Press ▲ or ▼ to highlight SPEAKERS.
- 3. Press ◀ or ▶ to highlight OFF.



To turn on the built-in speakers:

Highlight ON in step 3 above.

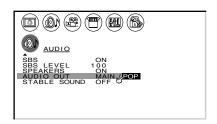
Selecting the Audio OUT sound

This feature allows you to select the sound source (MAIN or POP) that is output from the Audio OUT jacks.

This is useful when amplifying or recording the POP sound with external equipment while hearing the sound of the main picture through the built-in speakers. Also see "Connecting two VCRs" on page 12.

To select the Audio OUT sound:

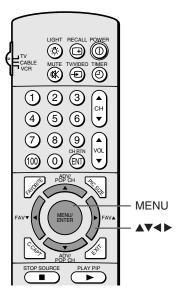
- 1. Press MENU, and then press ◀ or ▶ until the AUDIO menu appears.
- 2. Press ▲ or ▼ to highlight AUDIO OUT.
- 3. Press ◀ or ▶ to select MAIN or POP.



- MAIN: Outputs the sound of the main program from the audio OUT jacks.
- POP: Outputs the sound of the POP program from the audio OUT jacks.

Note:

Make sure the volume control of your audio amplifier is set to a moderate level.



Note:

When the POP window is on-screen, the sond of the main program is output to the AUDIO OUT jacks, even if POP is selected in the AUDIO OUT menu.

The sound of the main program is always output from the TV's speakers, regardless of the AUDIO OUT setting.

Using the StableSound® feature

When the signal source is changed, the StableSound feature limits the highest volume level to prevent extreme changes in volume (for example, to prevent the sudden increase in volume that often happens when a TV program switches to a commercial).

To turn on the StableSound feature:

- 1. Press MENU, and then press ◀ or ▶ until the AUDIO menu appears.
- 2. Press \triangle or ∇ to highlight STABLE SOUND.
- 3. Press ◀ or ▶ to select ON.



To turn off the StableSound feature:

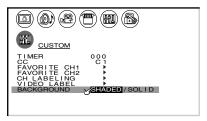
Highlight OFF in step 3 above.



You can change the background of the menu display by selecting from two preset types: shaded and solid (gray).

To select the background:

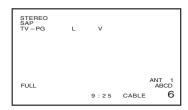
- 1. Press MENU, and then press ◀ or ▶ until the CUSTOM menu appears.
- 2. Press ▲ or ▼ to highlight BACKGROUND.
- 3. Press ◀ or ▶ to select either a SHADED or SOLID background.



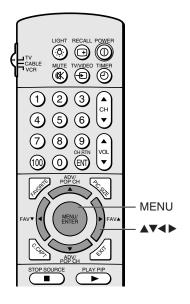
Displaying on-screen information

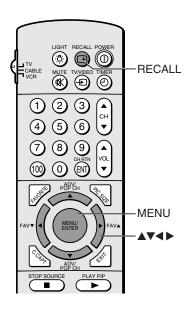
Press RECALL to display the following information on-screen:

- Antenna mode (when in TV mode)
- Channel number or VIDEO mode selected
- Time (if set)
- Channel label (if set)
- Stereo or SAP audio status
- V-CHIP rating status
- Picture size (when in ColorStream mode)









Viewing the demo mode

The demo mode automatically demonstrates several of your TV's features.

To start the demo:

Press and hold MENU on the TV front panel for 4 seconds.

To stop the demo:

Press RECALL, EXIT, or POWER.

Understanding the auto power off feature

The TV will automatically turn itself off after approximately 15 minutes if it is tuned to a vacant channel or a station that completes its broadcast for the day. This feature does not work in VIDEO mode.

Understanding the last mode memory feature

If the power is cut off while you are viewing the TV, the Last Mode Memory feature automatically turns on the TV when the power is resupplied.

If the power is going to be off for a long time and you are going to be away from your TV, unplug the power cord to prevent the TV from turning on in your absence.

Appendix

Specifications

Television System NTSC standard

Channel Coverage

VHF: 2 through 13 UHF: 14 through 69

Cable TV: Mid band (A-8 through A-1, A through I)

Super band (J through W)

Hyper band (AA through ZZ, AAA, BBB) Ultra band (65 through 94, 100 through 125)

Power Source

120 V AC, 60 Hz

Power Consumption 180 W (average)

Audio Power

15 W + 15 W

Speaker Type

Two 6-1/2 inches (16.7 cm) round

Video/Audio Terminals

S-VIDEO INPUT

Y: 1 V(p-p), 75 ohm, negative sync. C: 0.286 V(p-p) (burst signal), 75 ohm

VIDEO/AUDIO INPUT

VIDEO: 1 V(p-p), 75 ohm, negative sync.

AUDIO: 150 mV(rms) (30% modulation equivalent, 47 k ohm)

ColorStream® (component video) INPUT

Y: 1V(p-p), 75 ohm PR: 0.7 V(p-p), 75 ohm PB: 0.7 V(p-p), 75 ohm AUDIO: 150 mV(rms), 47 k ohm

VIDEO/AUDIO OUTPUT

VIDEO: 1 V(p-p), 75 ohm, negative sync.

AUDIO: 150 mV(rms) (30% modulation equivalent, 4.7 k ohm)

VARIABLE AUDIO OUTPUT

0-300 mV(rms) (30% modulation equivalent, 4.7 k ohm)

AUDIO CENTER CHANNEL INPUT

300 mV(rms) (30% modulation equivalent, 10 k ohm)

DVI/HDCP INPUT

HDCP compliant

E-EDID* 1.3 compliant

DVI-D uncompressed, high-speed, digital single-link

connection

Suggested scan rates: 1080i, 480p, 480i

Dimensions

Width 46-1/8 inches (1,172 mm) Height 50-3/8 inches (1,270 mm) Depth 21-11/16 inches (551 mm)

Mass

193 lbs (87.54 kg)

Supplied Accessories

Remote Control with 2 size "AA" alkaline batteries

Design and specifications are subject to change without notice.

^{*} E-EDID = Enhanced-Extended Display Identification

Troubleshooting

Channels 3 and 4.

Before calling a service technician, please check the following table for a possible cause of the problem and some solutions.

Problem	Solution	
TV will not turn on	 Make sure the power cord is plugged in, then press POWER. The remote control batteries may be dead. Replace the batteries. 	
No picture, no sound	Check the antenna/cable connections.	
No sound, picture OK	 The sound may be muted. Press VOLUME. The station may have broadcast difficulties. Try another channel. Check that the SPEAKERS function in AUDIO menu is set properly. Check that the AUDIO CENTER CHANNEL switch is set properly. 	
Poor picture, sound OK	 Check the antenna connections. The station may have broadcast difficulties. Try another channel. Adjust the PICTURE menu. 	
Poor reception of broadcast channels	 The station may have broadcast difficulties. Try another channel. Check the antenna connections. If you are using a VCR, make sure the TV/VCR button is set correctly. 	
Cannot receive above channel 13	 Make sure the TV/CABLE switch is set to the mode that corresponds with the signal source type (cable company or outside antenna). 	
Black box appears on the screen	• The closed caption feature may be set to one of the Text modes (T1, T2, T3, or T4). Turn closed captioning OFF.	
Unable to select a certain channel	The channel may be locked out with the CH LOCK feature, or erased with the ADD/ERASE feature.	
Multiple images	 The station may have broadcast difficulties. Try another channel. Antenna reception may be poor. Use a highly directional outdoor antenna. 	
Poor color or no color	 The station may have broadcast difficulties. Try another channel. Adjust the TINT and/or COLOR in the PICTURE menu. 	
No stereo or SAP sound from a known MTS broadcast	Make sure the MTS feature is set properly.	
The front panel buttons do not operate	Check the FRONT PANEL LOCK feature.	
The remote control does not operate	 Check whether the appropriate device mode is selected. Remove all obstructions between the remote control and the remote control sensor in the TV. The remote control batteries may be dead. Replace the batteries. 	
Cannot access signal input sources (Video1, Video2, Video3, ColorStream HD1/HD2) and/or	Check the VIDEO LOCK feature.	

Limited United States Warranty

for 27" FST PURE® and All Larger Television Models

Toshiba America Consumer Products, Inc. ("TACP") and Toshiba Hawaii, Inc. ("THI") make the following limited warranties to original consumers in the United States. THESE LIMITED WARRANTIES EXTEND TO THE ORIGINAL CONSUMER PURCHASER OR ANY PERSON RECEIVING THIS TELEVISION AS A GIFT FROM THE ORIGINAL CONSUMER PURCHASER AND TO NO OTHER PURCHASER OR TRANSFEREE.

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PRODUCTS PURCHASED IN CANADA AND USED IN THE U.S.A. ARE NOT COVERED BY THESE WARRANTIES.

Limited One (1) Year Warranty on Parts and Labor*

TACP/THI warrant this television and its parts against defects in materials or workmanship for a period of one (1) year after the date of original retail purchase. DURING THIS PERIOD, TACP/THI WILL, AT TACP/THI'S OPTION, REPAIR OR REPLACE A DEFECTIVE PART WITH A NEW OR REFURBISHED PART WITHOUT CHARGE TO YOU FOR PARTS OR LABOR. TACP/THI Authorized Service Station personnel will come to your home when warranty service is required. Depending on the type of repair required, either the service will be performed in your home or the set will be taken to the TACP/THI Authorized Service Station for repair and returned to your home at no cost to you.

Limited Two (2) Year Warranty on Picture Tube*

TACP/THI further warrant the picture tube in this television against defects in materials or workmanship for a period of two (2) years after the date of original retail purchase. DURING THIS PERIOD, TACP/THI WILL, AT TACP/THI'S OPTION, REPAIR OR REPLACE A DEFECTIVE PICTURE TUBE WITH A NEW OR REFURBISHED PICTURE TUBE WITHOUT CHARGE TO YOU, EXCEPT THAT, IF A DEFECTIVE PICTURE TUBE IS REPAIRED OR REPLACED AFTER ONE (1) YEAR FROM THE DATE OF THE ORIGINAL RETAIL PURCHASE, YOU PAY LABOR CHARGES INVOLVED IN THE REPAIR OR REPLACEMENT.

Rental Units

The warranty for rental units begins with the date of first rental or thirty (30) days from the date of shipment to the rental firm, whichever comes first.

*Commercial Units

Televisions sold and used for commercial purposes have a limited ninety (90) day warranty for all parts, labor, and picture tubes.

Owner's Manual and Product Registration Card

Read this owner's manual thoroughly before operating this television. Complete and mail the enclosed product registration card within ten days after you, or the person who has given you this product as a gift, purchased this television. Returning the product registration card will enable TACP/THI to provide you with better customer service and improved product support. Failure to return the product registration card will not affect your rights under this warranty.

Your Responsibility

THE ABOVE WARRANTIES ARE SUBJECT TO THE FOLLOWING CONDITIONS:

- (1) You must provide your bill of sale or other proof of purchase.
- (2) All warranty servicing of this television must be made by an Authorized TACP/THI Service Station.
- (3) The warranties from TACP and THI are effective only if the television is purchased and operated in the U.S.A. or Puerto Rico.
- (4) Labor service charges for set installation, setup, adjustment of customer controls, and installation or repair of antenna

- systems are not covered by these warranties. Reception problems caused by inadequate antenna systems are your responsibility.
- (5) Warranties extend only to defects in materials or workmanship as limited above and do not extend to any television or parts that have been lost or discarded by you or to damage to television or parts caused by misuse, accident, Acts of God (such as lightning or fluctuations in electric power), improper installation, improper maintenance, or use in violation of instructions furnished by TACP/THI; or to units that have been modified or had the serial number removed, altered, defaced, or rendered illegible.

How to Obtain Warranty Services

If, after following all of the operating instructions in this manual and checking the "Troubleshooting" section, you find that service is needed:

- To find the nearest TACP/THI Authorized Service Station:
 For televisions purchased in the United States, except Hawaii, visit TACP's web site at www.toshiba.com/tacp, or call toll free 1-800-631-3811.
 - For televisions purchased in Hawaii, contact Toshiba Hawaii, Inc., 327 Kamakee Street, Honolulu, HI 96814, (808) 591-9281.
- (2) Present your bill of sale or other proof of purchase to the Authorized Service Station. Authorized TACP/THI Service Station personnel will come to your home when warranty service is required. Depending on the type of repair required, either the service will be performed in your home or the set will be taken to the Authorized Service Station for repair and returned to your home at no cost to you.

For additional information, visit TACP's web site: www.toshiba.com/tacp.

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Limited Canada Warranty

for 27" FST PURE® and All Larger Television Models

Toshiba of Canada Limited ("TCL") makes the following limited warranties to original consumers in Canada.

THESE LIMITED WARRANTIES EXTEND TO THE ORIGINAL CONSUMER PURCHASER OR ANY PERSON RECEIVING THIS TELEVISION AS A GIFT FROM THE ORIGINAL CONSUMER PURCHASER AND TO NO OTHER PURCHASER OR TRANSFEREE.

PRODUCTS PURCHASED IN THE U.S.A. AND USED IN CANADA ARE NOT COVERED BY THESE WARRANTIES.

PRODUCTS PURCHASED IN CANADA AND USED IN THE U.S.A. ARE NOT COVERED BY THESE WARRANTIES.

Limited One (1) Year Warranty on Parts and Labor*

TCL warrants this television and its parts against defects in materials or workmanship for a period of one (1) year after the date of original retail purchase. DURING THIS PERIOD, TCL WILL, AT TCL'S OPTION, REPAIR OR REPLACE A DEFECTIVE PART WITH A NEW OR REFURBISHED PART WITHOUT CHARGE TO YOU FOR PARTS OR LABOR. TCL Authorized Service Depot personnel will come to your home when warranty service is required. Depending on the type of repair required, either the service will be performed in your home or the set will be taken to the TCL Authorized Service Depot for repair and returned to your home at no cost to you. IN-HOME SERVICE ONLY APPLIES WITHIN 100 KILOMETERS OF AN AUTHORIZED TCL SERVICE DEPOT.

Limited Two (2) Year Warranty on Picture Tube*

TCL further warrants the picture tube in this television against defects in materials or workmanship for a period of two (2) years after the date of original retail purchase. DURING THIS PERIOD, TCL WILL, AT TCL'S OPTION, REPAIR OR REPLACE A DEFECTIVE PICTURE TUBE WITH A NEW OR REFURBISHED PICTURE TUBE WITHOUT CHARGE TO YOU, EXCEPT THAT, IF A DEFECTIVE PICTURE TUBE IS REPAIRED OR REPLACED AFTER ONE (1) YEAR FROM THE DATE OF THE ORIGINAL RETAIL PURCHASE, YOU PAY LABOR CHARGES INVOLVED IN THE REPAIR OR REPLACEMENT.

Rental Units

The warranty for rental units begins with the date of first rental or thirty (30) days from the date of shipment to the rental firm, whichever comes first.

*Commercial Units

Televisions sold and used for commercial purposes have a limited ninety (90) day warranty for all parts, labor, and picture tubes.

Owner's Manual

Read this owner's manual thoroughly before operating this television.

Your Responsibility

THE ABOVE WARRANTIES ARE SUBJECT TO THE FOLLOWING CONDITIONS:

- (1) You must provide your bill of sale or other proof of purchase.
- (2) All warranty servicing of this television must be made by an Authorized TCL Service Depot.
- (3) The warranties from TCL are effective only if the television is purchased in Canada from an authorized TCL dealer and operated in Canada.
- (4) Labor service charges for set installation, setup, adjustment of customer controls, and installation or repair of antenna systems are not covered by these warranties. Reception problems caused by inadequate antenna systems are your responsibility.

(5) Warranties extend only to defects in materials or workmanship as limited above and do not extend to any television or parts that have been lost or discarded by you or to damage to television or parts caused by misuse, accident, Acts of God (such as lightning or fluctuations in electric power), improper installation, improper maintenance, or use in violation of instructions furnished by TCL; or to units that have been modified or had the serial number removed, altered, defaced, or rendered illegible.

How to Obtain Warranty Services

If, after following all of the operating instructions in this manual and checking the "Troubleshooting" section, you find that service is needed:

- To find the nearest TCL Authorized Service Depot, visit TCL's web site: www.toshiba.ca.
- (2) Present your bill of sale or other proof of purchase to the Authorized Service Depot. Authorized TCL Service Depot personnel will come to your home when warranty service is required. Depending on the type of repair required, either the service will be performed in your home or the set will be taken to the Authorized Service Depot for repair and returned to your home at no cost to you. IN-HOME SERVICE ONLY APPLIES WITHIN 100 KILOMETERS OF AN AUTHORIZED TCL SERVICE DEPOT.

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