



Changing Entertainment. Again.

User's Guide

Find Inside:

- *Connecting* page 5
- *Remote Control* page 13
- *Parental Controls* ... page 18
- *Menus* page 23
- *Favorite Channels* .. page 26
- *FAQs* page 29
- *Troubleshooting* page 30



Model 20F524T is pictured above.



www.rca.com/television

Important Information

CAUTION

RISK OF ELECTRIC SHOCK
DO NOT OPEN



This symbol indicates that this product incorporates double insulation between hazardous mains voltage and user accessible parts. When servicing use only identical replacement parts.

Caution: To reduce the risk of electric shock, do not remove cover (or back). No user serviceable parts inside. Refer servicing to qualified service personnel.



This symbol indicates "dangerous voltage" inside the product that presents a risk of electric shock or personal injury.



This symbol indicates important instructions accompanying the product.

WARNING

To reduce the risk of fire or electric shock, do not expose this product to rain or moisture.

The apparatus shall not be exposed to dripping or splashing and no objects filled with liquids, such as vases, should be placed on the apparatus.

Changing Entertainment. Again. is a trademark of THOMSON used under license to TTE CORPORATION.

Refer to the identification/rating label located on the back panel of your product for its proper operating voltage.

FCC Regulations state that unauthorized changes or modifications to this equipment may void the user's authority to operate it.

Caution: To prevent electric shock, match wide blade of plug to wide slot, fully insert.

Caution: Using video games or any external accessory with fixed images for extended periods of time can cause them to be permanently imprinted on the picture tube (or projection TV picture tubes). ALSO, some network/program logos, phone numbers, black borders (sides, top and bottom), etc. may cause similar damage. This damage is not covered by your warranty.

Cable TV Installer: This reminder is provided to call your attention to Article 820-40 of the National Electrical Code (Section 54 of the Canadian Electrical Code, Part 1) 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.

Important Stand and Base Safety Information

Choose the location for your TV carefully. Place the TV on a stand or base that is of adequate size and strength to prevent the TV from being accidentally tipped over, pushed off, or pulled off. This could cause personal injury and/or damage the TV. Refer to the Important Safety Instructions on page 1.

Product Registration

Please fill out the product registration card (packed separately) and return it immediately. For US customers: Your RCA Consumer Electronics product can also be registered at www.rca.com/television. Registering this product allows us to contact you if needed.

Product Information

Keep your sales receipt to obtain warranty parts and service and for proof of purchase. Attach it here and record the serial and model numbers in case you need them. These numbers are located on the product.

Model No. _____ Serial No. _____ Purchase Date: _____

Dealer/Address/Phone: _____

IMPORTANT SAFETY INSTRUCTIONS

Read before operating equipment

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.
7. Do not block any of the 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 third prong are provided for your safety. When 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 they exit from the apparatus.
11. Only use attachments/accessories specified by the manufacturer.
12. Use only with a 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 if the power-supply cord or plug is damaged, liquid has been spilled or objects have fallen into the apparatus, or if the apparatus has been exposed to rain or moisture, does not operate normally, or has been dropped.
15. This product may contain lead and mercury. Disposal of these materials may be regulated due to environmental considerations. For disposal or recycling information, please contact your local authorities or the Electronic Industries Alliance (www.eiae.org).
16. **Damage Requiring Service** - The appliance should be serviced by qualified service personnel when:
 - A. The power supply cord or the plug has been damaged;
 - B. Objects have fallen or liquid has been spilled into the appliance;
 - C. The appliance has been exposed to rain;
 - D. The appliance does not appear to operate normally or exhibits a marked change in performance;
 - E. The appliance has been dropped or the enclosure damaged.
17. **Tilt/Stability** - All televisions must comply with recommended international global safety standards for tilt and stability proper ties of its cabinet design.
 - Do not compromise these design standards by applying excessive pull force to the front, or top, of the cabinet, which could ultimately overturn the product.
 - Also, do not endanger yourself, or children, by placing electronic equipment/toys on the top of the cabinet. Such items could unsuspectingly fall from the top of the set and cause product damage and/or personal injury.
18. **Power Lines** - An outdoor antenna should be located away from power lines.
19. **Outdoor Antenna Grounding** - If an outside antenna is connected to the receiver, be sure the antenna system is grounded so as to provide some protection against voltage surges and built up static charges. Section 810 of the National Electrical Code, ANSI/NFPA No. 70- 1984, provides information with respect to proper grounding of the mast and supporting structure, grounding of the lead-in wire to an antenna discharge unit, size of grounding connectors, location of antenna-discharge unit, connection to grounding electrodes, and requirements for the grounding electrode. See Figure below.
20. **Object and Liquid Entry** - Care should be taken so that objects do not fall and liquids are not spilled into the enclosure through openings.
21. **Battery usage CAUTION** - To prevent battery leakage that may result in bodily injury, property damage, or damage to the unit:
 - Install all batteries correctly, with + and - aligned as marked on the unit.
 - Do not mix batteries (old and new or carbon and alkaline, etc.).
 - Remove batteries when the unit is not used for a long time.
22. Apparatus shall not be exposed to dripping or splashing and no objects filled with liquids, such as vases, shall be placed on the apparatus.

Note to the Cable TV system installer: This reminder is provided to call the Cable TV system installer's attention to Article 820-40 of the NEC (Section 54 of the Canadian Electrical Code, Part 1) that provides guidelines for proper grounding and, in particular, specifies that the cable ground shall be connected to the grounding system of the building, as close to the point of cable entry as practical.

Example of Antenna Grounding as per NEC - National Electrical Code

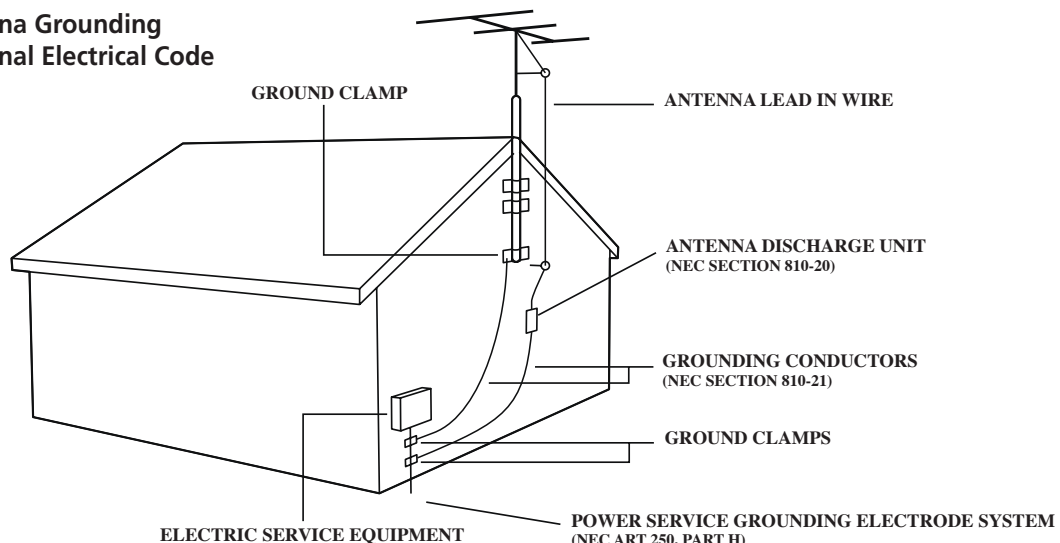


Table of Contents

Chapter 1: Connections & Setup

Things to Consider Before You Connect	4
Protect Against Power Surges.....	4
Protect Devices from Overheating	4
Position Cables Properly to Avoid Audio Interference.....	4
Use Indirect Light.....	4
Plug in the TV and Turn It On.....	5
Put Batteries in the Remote	5
Get the Picture	5
Receiving Cable Channels	5
What You Need.....	5
What You Need to Know	5
Receiving Channels with an Antenna.....	6
What You Need.....	6
What You Need to Know	6
Choose Your Connection	7
Y Pb Pr (Component Video) Connection	8
Using the Front/Side Jacks	10
How to Use the Remote Control to Complete the Initial Setup.....	11
Complete the Initial Setup	11
Auto Channel Search.....	11
Tuning to a Channel	12
What to Expect.....	12
Watching TV.....	12
Remote Buttons	13
Using the INPUT Button.....	14
Using the SOUND Button	14
Using the GUIDE Button	14
Explanation of Jacks	15
Front/Side Input Jacks	16
Front Buttons	16

Chapter 2: Using the TV's Features

Channel Banner.....	17
Parental Controls and V-Chip	18
How V-Chip Works.....	18
Activate Parental Control	18
Resetting the Password	18
Set V-Chip TV Programming Limits.....	19
Downloadable V-chip	19
Content Ratings.....	19
Blocking Specific Content Themes.....	19
Blocking USA V-Chip Movie Ratings.....	20
Blocking Canadian V-Chip Movie Ratings	21

Table of Contents

Unrated Programs	21
Front Panel	22
Change Your Password	22

Chapter 3: Using the TV's Menu System

Picture Menu	23
Setup Menu	23
Parental Control Menu	26
Time Menu	27
Notepad Menu	28

Chapter 4: Other Information

Frequently Asked Questions (FAQs)	29
Troubleshooting	30
USA V-Chip Rating System	32
Canadian English V-Chip Rating System	32
Canadian French V-Chip Rating System	33
Limited Warranty	34
Care and Cleaning	36
FCC Information	36

Chapter 1: Connections & Setup

Things to Consider Before You Connect

Protect Against Power Surges

- Connect all devices before you plug any of their power cords into the wall outlet.
- Turn off the TV and/or device before you connect or disconnect any cables.
- Using a surge protector can help prevent damage to your TV from electrical power surges. In case of lightning, unplug your TV.
- Make sure all antennas and cables are properly grounded. Refer to the Important Safety Instructions on page 1.

Protect Devices from Overheating

- Don't block ventilation holes on any of the devices. Arrange the devices so that air can circulate freely.
- Don't stack devices.
- If you place devices in a stand, make sure you allow adequate ventilation.
- If you connect an audio receiver or amplifier, place it on the top shelf so the heated air from it won't flow around other devices.

Position Cables Properly to Avoid Audio Interference

- Insert each cable firmly into the designated jack.
- If you place devices above the TV, route all cables down the side of the back of the TV instead of straight down the middle of the TV.
- If your antenna uses 300-ohm twin lead cables, do not coil the cables. Also, keep the twin lead cables away from audio/video cables.

Use Indirect Light

Don't place the TV where sunlight or room lighting will be directed toward the screen. Use soft or indirect lighting.

Plug in the TV and Turn It On

Plug the end of the power cord into a grounded wall outlet. Insert the plug completely into the outlet. Press ON•OFF on the remote, or press POWER on the TV's front panel.

Put Batteries in the Remote

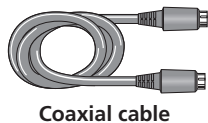
- Remove the battery compartment cover from the back of the remote by pushing down and sliding off the cover.
- Insert 2 fresh "AA" batteries. Make sure the polarities (+ and -) are aligned correctly to the diagram inside the battery compartment.
- Replace the cover.

Note: *If you won't need to use your remote for a long period of time, remove the batteries to avoid damage due to possible leakage.*

Get the Picture

The first part of connecting your TV is to get the picture, also known as a signal. The back panel of your TV allows you to receive analog and digital channels by using the ANTENNA/CABLE INPUT.

Receiving Cable Channels



Coaxial cable

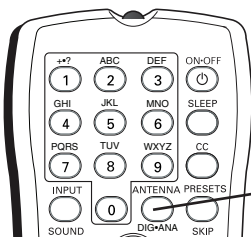
What You Need

- Coaxial cable from a cable outlet. Plug the coaxial cable into the ANTENNA/CABLE INPUT to receive your analog and digital cable channels.
- When you get to the *Auto Channel Search* screen in the *Setup* menu, choose *Cable*.

What You Need to Know

- This television is equipped with a QAM (Quadrature Amplitude Modulation) tuner that enables reception of unscrambled digital cable content. Check with your cable provider for information about content availability in your area. Your TV also receives analog cable TV channels.
- The *Auto Channel Search* screen in the *Setup* menu searches for both analog and digital channels. Choose *Cable* as your source type. To complete a channel search now, go to page 11.
- When you are ready to watch digital channels, make sure you are tuned to a digital channel. Digital stations typically have a dash in their channel number because they may contain subchannels, for example, 8-3.

When you are ready to watch an analog channel, make sure you are tuned to an analog channel. Analog stations contain no more than three digits. Refer to page 13 for information on analog and digital stations.



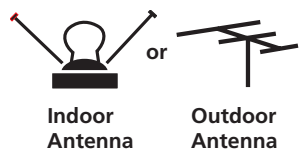
When using the input described above, press the ANTENNA (DIG•ANA) button on the remote to toggle between the digital and analog channels. Refer to page 13.

**ANTENNA
(DIG•ANA)
button**

Continues on next page...

Connections & Setup

Receiving Channels with an Antenna



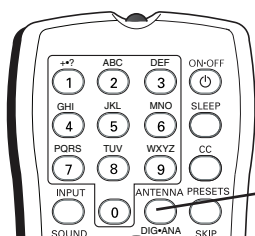
What You Need

- Antenna (“rabbit ears”) or outdoor antenna with a coaxial cable. Plug the antenna or coaxial cable from the wall outlet into the ANTENNA/CABLE INPUT to receive free off-air local analog and digital channels (where available).

What You Need to Know

- Visit www.antennaweb.org to get help deciding what type of antenna to use to receive the off-air local digital channels available to you. By entering where you live, this mapping program tells you what local analog and digital stations are available using a certain antenna.
- The *Auto Channel Search* screen in the *Setup* menu searches for both analog and digital channels. Choose *Antenna* as your source type. To complete a channel search now, go to page 11.
- When you are ready to watch digital channels, make sure you are tuned to a digital channel. Digital stations typically have a dash in them because they may contain subchannels, for example, 8-3.

When you are ready to watch an analog channel, make sure you are tuned to an analog channel. Analog stations typically are no longer than three digits. Refer to page 12 for information on analog and digital stations.



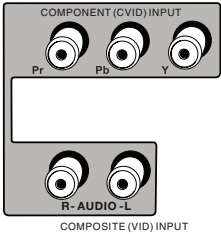
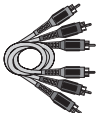
When using the input described above, use the ANTENNA (DIG•ANA) button on the remote to toggle between the digital and analog channels. Refer to page 13.

**ANTENNA
(DIG•ANA)
button**

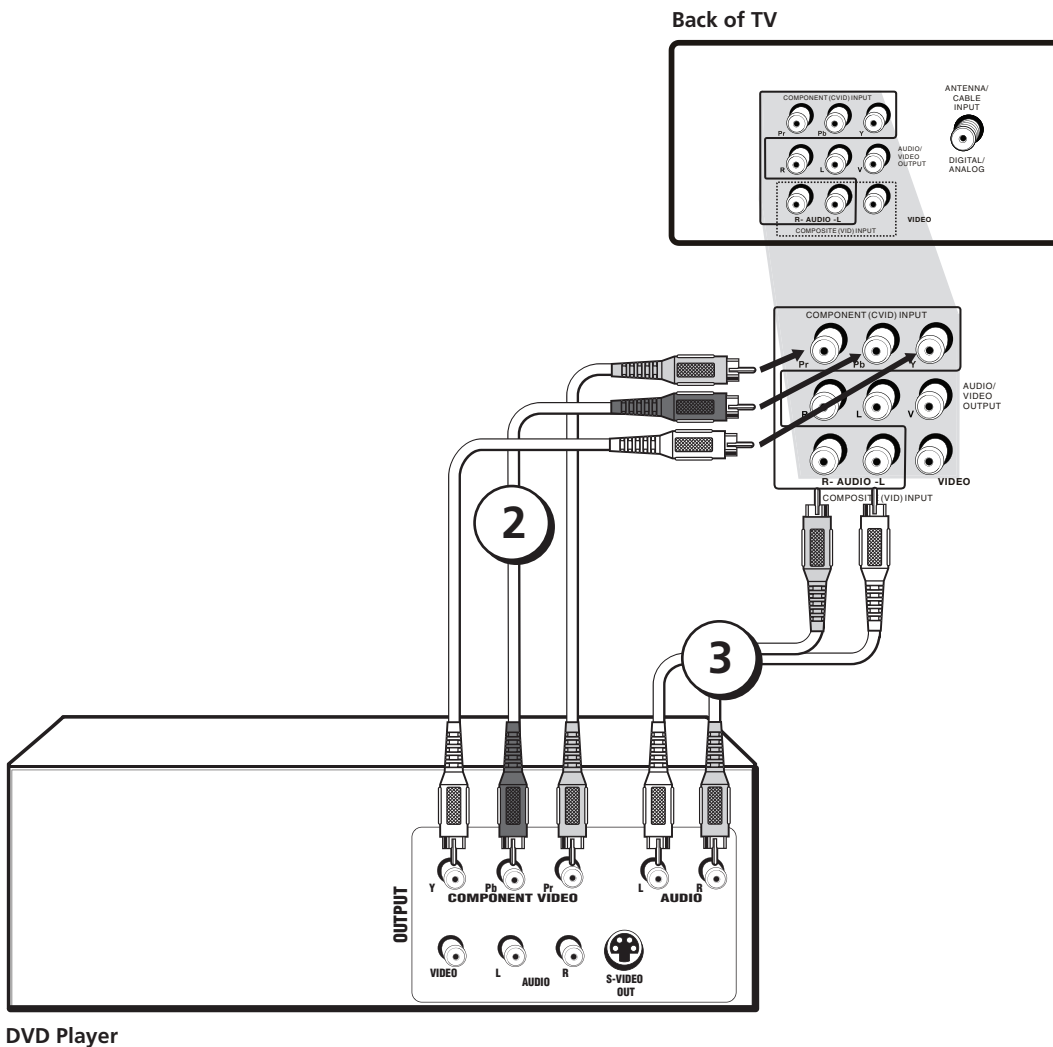
Choose Your Connection

There are several ways to connect your TV, depending on the devices you want to connect and the quality of the signal you want to achieve. A connection using Y Pb Pr (component) jacks is excellent, video is good and antenna or cable input is fair. Connections will vary according to the types of outputs jacks each external device can accommodate.

Please use the following chart to determine which connection is best for you. Then proceed to the page listed below and to make the connection.

Jacks Used	Cables Needed	Go to...
 Y Pb Pr Audio R and L	Component Video Cables Audio Cables	page 8-9
 Video Input Audio R and L	Audio/Video Cables	page 10
 Video Input (front or side location) Audio R and L	Audio/Video Cables	page 10
 Important: Model 13V424T has two jacks on the front/side panel (pictured) and an ANTENNA/CABLE INPUT jack on the back panel. Go to the connection on page 10.		

Connections & Setup



DVD Player

Y Pb Pr (Component Video) Connection

IMPORTANT - If you aren't receiving a picture with this connection, the problem might be with your DVD player. If the DVD player is a "progressive scan" DVD player, you need to change the setting from progressive to interlace. The procedure for changing this on a DVD player varies. Look for a button on the front of the DVD player (it might be called Resolution or Display), or see if there is a switch on the back (it might be labeled "int/prog" or something similar), or the item might be in the menu system of the DVD player. Consult your DVD player owner's manual for instructions.

Connecting the Device

This connection allows you to connect a device that has Y Pb Pr jacks (Component Video), for example, a DVD player. If the device you are connecting also has S-Video or composite video, we recommend you use the component video input for better quality.

The illustration shows how to connect a DVD to your TV using component video (Y Pb Pr) and audio cables.

Using the example of a DVD player:

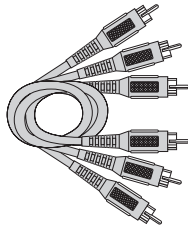
1. **Connect your cable and/or antenna as described on page 5.**
2. **Connect your Y Pb Pr component video cables.**

Connect three video grade cables to the Y Pb Pr jacks on the back of the TV and to the Y Pb Pr outputs on the DVD player. Y Pb Pr cables are colored green, blue and red. Just match the colors on the cables to the Y Pb Pr jacks.

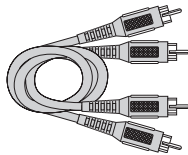
3. **Connect your audio cables.**

Connect the audio (red and white) cables to the AUDIO R and L (COMPOSITE INPUT) jacks on the back of the TV and to the audio output jacks on the DVD player. Just match the colors.

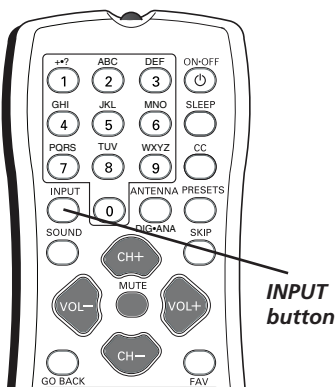
Important - Y Pb Pr cables can only be used with the audio jacks from the COMPOSITE INPUT located on the back of the TV. You cannot use any other audio input jacks on this TV for this connection.



Component Video cables (Y Pb Pr) are color coded- Green (Y), Blue (Pb) and Red (Pr).



Audio cables are color coded- Red= right audio; white= left audio



Viewing the Picture from the Connected Device

The device in this example, a DVD player, is connected to the TV's Y Pb Pr jacks. To view the DVD player:

1. Turn on the TV and the DVD player.
2. Press the INPUT button on the remote control to toggle through the Video Input Channels until you see *CVID* displayed in the channel banner.

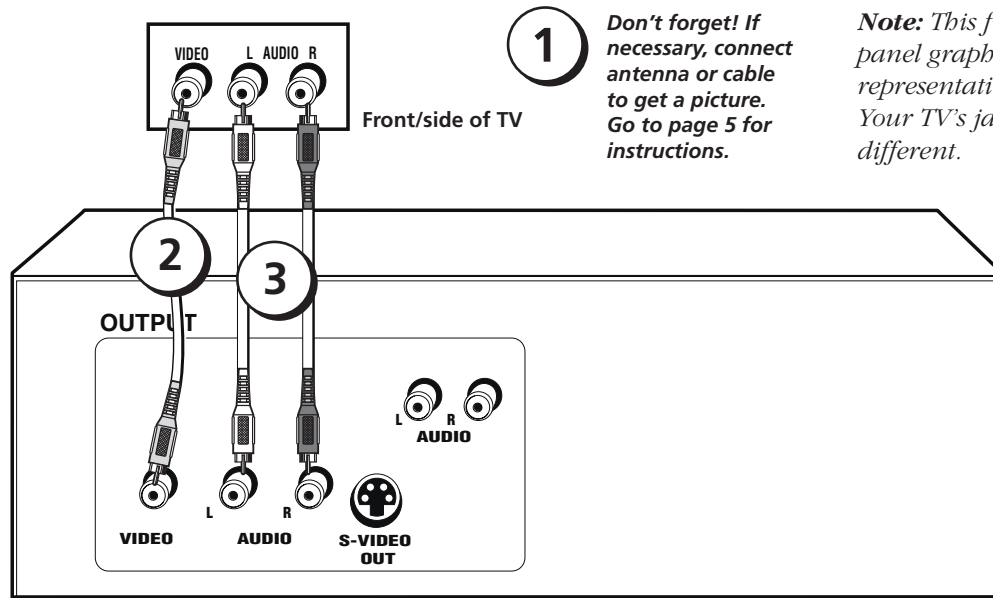
• To review other connections, go to the next page.

• If you are done connecting devices to your TV, go to page 11 to complete the Initial Setup.

• If you want more details of the jacks on your TV, go to page 15.

Connections & Setup

Using the Front/Side Jacks

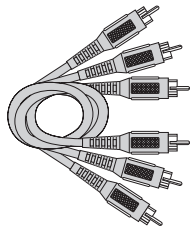


Video Game Console

1

Don't forget! If necessary, connect antenna or cable to get a picture. Go to page 5 for instructions.

Note: This front/side panel graphic is for representation only. Your TV's jacks might be different.



Audio/Video cables

Connecting the Device

This connection allows you to connect a device such as a video game console, that has Audio/Video output jacks. Refer to the illustration which uses audio and video cables.

Using the example of a video game console:

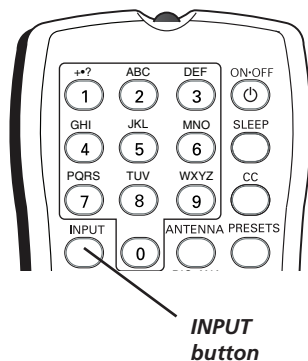
1. **Connect your cable and/or antenna as described on page 5.**
2. **Connect your video cable.**

Video cables are usually yellow. Connect the Video cable to the VIDEO jack on the front/side of the TV and the VIDEO jack on the video game console.

3. **Connect your audio cables.**

Connect the audio (red and white) cables to the R and L AUDIO jacks on the front/side of the TV and to the audio output jacks on the video game console. Just match the colors.

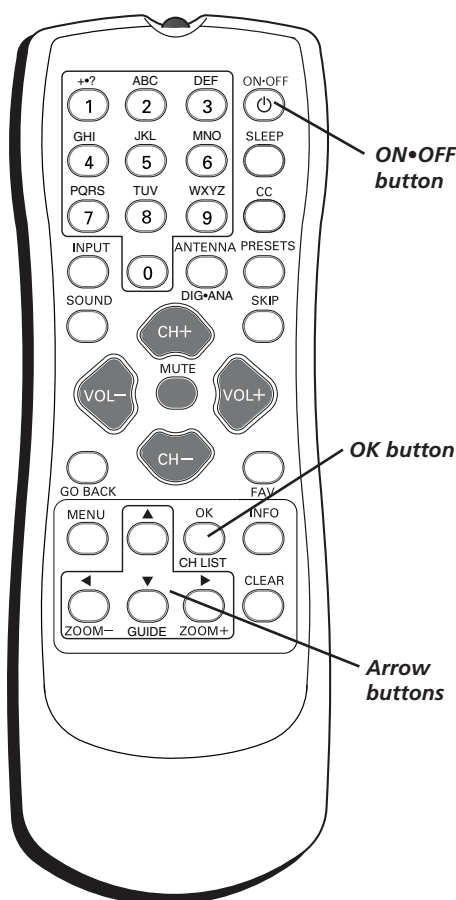
Note: Model 13V424T has VIDEO and L AUDIO jacks.



Viewing the Picture from the Connected Device

The device in this example, a video game console, is connected to the TV's video and audio jacks located on the front/side of the TV. To view the video game console:

1. Turn on the TV and the video game console.
2. Press the INPUT button on the remote control to toggle through the Video Input Channels until you see *FRNT* displayed in the channel banner (on-screen display).



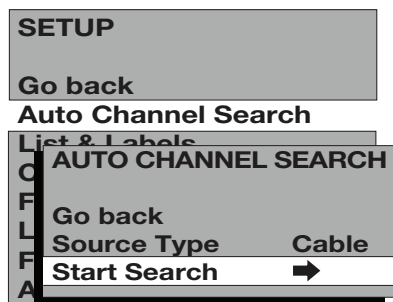
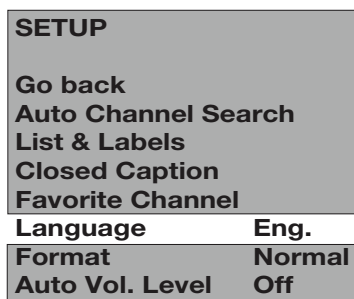
How to Use the Remote Control to Complete the Initial Setup

The technical term is “Navigation”- how you move through the on-screen menus. The method is the same throughout the menu screens: highlight your choice and select it.

To highlight a menu item, press the arrow buttons on the remote to highlight one of the items listed on the screen. Use the up or down arrow button to move up or down. Use the right or left arrow button to move right or left.

To select the item that you’ve highlighted, press OK.

Note: Highlighted means that the menu item stands out from other menu items on the list (appears darker, brighter or a different color).



Complete the Initial Setup

To set the language, use the arrow buttons to highlight *Language*. The default language is *English*. To choose another language, press the right arrow button on the remote, choose the language.

Auto Channel Search

Auto Channel Search is located from this path *Main Menu/Setup/Auto Channel Search*. It allows the TV to search for all channels available through your ANTENNA/CABLE INPUT jack. This is sometimes called auto programming.

1. From the Auto Channel Search menu press the right arrow button to choose the *Source Type* (*Cable* or *Antenna*). The default is *Cable*.
2. With the *Signal Source* chosen, highlight *Start Search* and press OK. Auto Channel Search runs as it finds all the available channels. (This step might take 10-15 minutes depending on your content provider). The channel search finds both analog and digital channels.
3. Once the search is complete, your TV tunes to a channel. For information on customizing your channels or menu options, go to Chapter 3.

Continues on next page...

Connections & Setup

_12

Analog channel entry

012-1 _ _

Digital channel entry

Tuning to a Channel

The DIG•ANA button toggles between analog and digital modes. Analog station numbers display on your TV in a rectangle as you enter the numbers. In the example to the left, you can enter 12 or 012 to get the same channel. To enter a one-digit channel, such as channel 8, just press 8. After entering the channel, press OK. The CLEAR button on the remote clears all entries.

Press the DIG•ANA button to toggle to digital mode. Digital channels can have both primary channels (like the analog channel number) and subchannels. Digital station numbers display in a larger rectangle that can contain up to six numbers. Numbers to the left of the - (dash) are the main channel number; numbers to the right are the subchannel numbers for stations that broadcast more than one signal.

In the example to the left, press “1”, press “2” (although 012 is shown in the example, pressing “0” isn’t required) and then press the right arrow button to move to the subchannel. Press “1” and then “OK.” The TV tunes to channel 12-1. If channel 12 is broadcasting subchannel signals, you would enter numbers that would access the other signals. (Example: 12-1, 12-2, 12-3). If the selection times out, you must start over. Once you’ve made all entries, press OK. The CLEAR button on the remote clears all entries.

Notes: *You may experience a delay of several seconds before digital channels appear, both when you first go to digital mode and when you change channels. This is normal. Digital channels sometimes take longer to tune.*

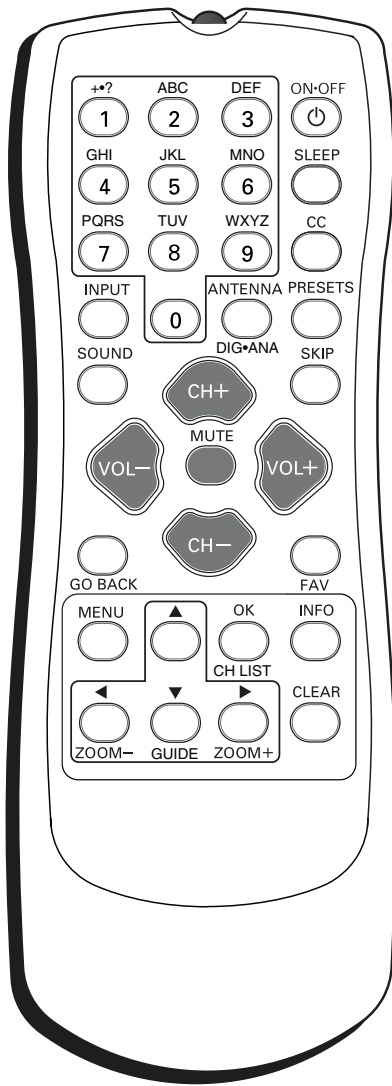
Some channels might have been found during the Auto Channel Search that are unavailable to view and you might want to get rid of these so they don’t appear as you change channels. To do this go to *Main Menu/Setup Menu/List & Labels*. Note that removing channels from your channel list may be time consuming, so you might want to do it later. Go to page 24 for details on editing your channel list.

What to Expect

Watching TV

- Remember: If you are tuned to the analog mode then you’ll view analog channels. The ANTENNA (DIG•ANA) button on the remote switches between analog or digital channels. Analog channels are sent in a 4:3 format. Go to page 26 for examples of screen formats.
- Remember: If you are in digital mode then you’ll view digital channels. Many digital channels are sent in a 16:9 (widescreen) format. If so, you’ll see gray or black bars at the top and bottom of the screen; it depends on how the station is formatting the video. You can press the left arrow/ZOOM- and right arrow/ZOOM+ buttons to choose different screen formats (*Normal, Crop, Letterbox or Squeeze*). 4:3 and 16:9 are also known as the aspect ratio.

Note: *Digital stations in native 4:3 format might not be able to have their format changed. (You’ll see black or gray bars on the sides of the picture sent as part of the signal from the broadcaster).*



Note: If you need to replace your remote, call 1-800-338-0376. A shipping and handling fee will be charged upon ordering, and the appropriate sales tax. Have your Visa, MasterCard or Discover Card ready. Your remote part number is R130C1.

Remote Buttons

ANTENNA, DIG/ANA Toggles to digital or analog channel sources. Refer to page 5 for a full description.

Arrow buttons (▲, ▼, ◀, ▶) Use to highlight different items in the TV menu.

(◀/ZOOM-, ▶/ZOOM+) Adjusts the menu controls. During normal TV viewing, changes the screen format (aspect ratio). *Zoom* appears momentarily. Refer to page 26 for more information about different screen formats.

(0-9) Number buttons Enter channel numbers (refer to the previous page), time settings (refer to page 27), labels (refer to page 24) and notepad messages (refer to page 28).

CC Toggles closed captioning on and off.

CH + or CH - Scans up or down through all the available stations on analog and/or digital mode. Press once to change the channel up or down; press and hold to continuously change channels.

CLEAR Removes any menu or display from the screen and returns you to normal TV viewing.

FAV (Favorite) Press to browse the channels in your *Favorite List*. Refer to page 26 for more information.

GO BACK Returns you to the previous channel or menu.

GUIDE Provides upcoming program information in digital mode only for the selected channel, when available.

INFO Brings up the channel banner. Press INFO or CLEAR to remove. Refer to page 17 for more information.

INPUT Toggles through the available Video Input Channels (*FRNT*, *VID*, *CVID*, last digital channel or the last analog channel).

MENU Brings up the *MAIN MENU*. Also takes you one menu backward in the menu system.

MUTE Reduces the TV's volume to its minimum level. Press again to restore the volume.

OK/CH LIST When in the menu system, selects highlighted items. Also brings up a list of channels found in the channel search.

ON•OFF Turns the TV on and off.

PRESETS Brings up the Picture Preset menu. Allows you to set custom picture settings. Choose from *Normal*, *Bright*, *Personal* or *Theater*.

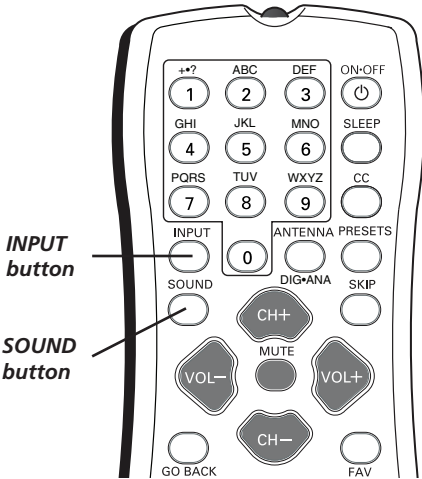
SKIP Press once before changing channels; watch the screen for the *SKIP* box (*SKIP 00:30*) to appear. Press the SKIP button again - 30 seconds will appear. Enter the new channel number. The TV will change to the new channel and return to the original channel in 30 seconds. Press repeatedly to add more time.

SLEEP Allows you to activate/deactivate when the TV turns off by taking you to the *Off Time* menu. Refer to page 27.

SOUND When a digital channel is being viewed, selects the *Current Language* and *Default Language* options. Refer to page 14 for more information.

VOL - or VOL + Decreases or increases the TV's volume.

Connections & Setup



Using the INPUT Button

Use the INPUT button to scroll through the available Video Input Channels to view components you have connected to the TV.

1. Make sure the component you want to view (e.g. DVD player) is turned ON.
2. Press INPUT to tune to an available Video Input Channel and view the component.
3. Press the INPUT button until you return to the previous channel.

DIGITAL AUDIO	
Go back	
Cur. Language	English1
Def. Language	English

Using the SOUND Button

The following items are available for digital channels only:

Cur. Language (Current Digital Channel Audio Language) Press the right arrow button to choose the audio language available for the program you're watching. The language you choose becomes your preferred audio language for all channels on the digital tuner until you turn the TV off. If the language you choose here is not being broadcast with a program, then the TV will play the default audio for the program (usually English in the U.S.).

Def. Language (Default Digital Channel Audio Language) Press the right arrow button to choose the language you prefer for dialog on digital channels. If your preferred language is being broadcast with a program, the TV will play it. If not, then the TV will play the default audio for the program (usually English in the U.S.). The default digital channel audio language options are *English, Spanish, German, Italian, Japanese, Chinese* and *Korean*.

Guide
9:00 AM-12:00 AM WGBH-SD
Clifford "LuLu"
3:00 PM-6:00 PM WGBH-SD
Clifford "Dog's Rule"
12:00 PM-3:00 PM WGBH-SD
Spiderman
6:00 PM-8:00 PM WGBH-SD
The Sound of Music
Page 1 of 3

Using the GUIDE Button

The following feature is available for digital broadcasts only. Use the GUIDE button to view upcoming TV programming if available. While the guide screen is shown, content cannot be updated. If there is no program information available, you'll see the screen "No program information available for this program."

Use the following remote buttons to navigate the Guide menu.

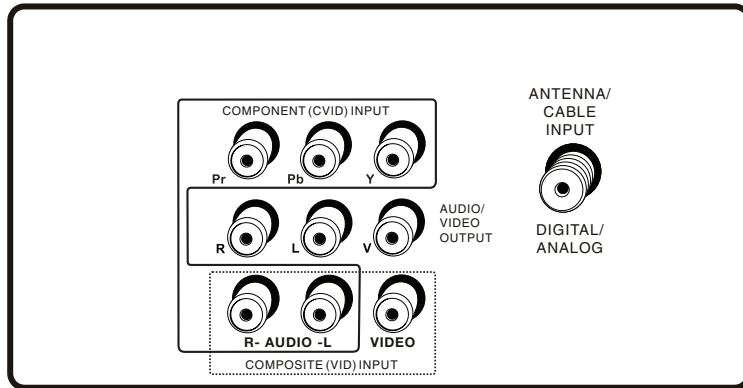
Right arrow button (▶) Goes to the next guide page with the first program highlighted.

Left arrow button (◀) Goes to the previous guide page with the first program highlighted.

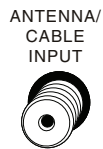
Arrow buttons (▲, ▼,) Use to highlight different programs.

Explanation of Jacks

This section describes the jacks you can use to make connections. There are several combinations available to connect devices to your TV.



Note: This back panel graphic is for representation only. Your TV's back panel might be different.



ANTENNA/CABLE INPUT Lets you connect a coaxial (RF) cable to receive analog and digital programming through your cable provider. Receive off-air analog and digital programming via an antenna. Connect either antenna or cable. Refer to page 5 for more details.

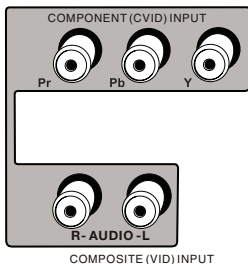


COMPOSITE (VID) INPUT Lets you connect devices which have Audio/Video (composite) outputs such as VCRs, DVD players, satellite receivers, cable boxes, camcorders and video game consoles. Connect the left and right audio jacks for sound.

- **VIDEO** Provides composite video connection. The video connector is usually yellow.
- **AUDIO-L** Provides left audio connection. The left audio connector is usually white.
- **AUDIO-R** Provides right audio connection. The right audio connector is usually red.

To access the device when using these jacks, press the INPUT button on your remote until **VID** appears.

Remember: You cannot use the composite and component connections at the same time. They share the same AUDIO R/L input jacks.



COMPONENT (CVID) INPUT Lets you connect devices which have component (Y Pb Pr) outputs such as VCRs, DVD players, DVRs, DVD recorders, satellite receivers, cable boxes and video game consoles. This connection provides optimum picture quality because the video is separated into three signals. Use the AUDIO L and R jacks from the COMPOSITE INPUT to connect for sound.

To access the device when using these jacks, press the INPUT button on your remote until **CVID** appears.

Refer to page 8 for a detailed explanation of how to connect Y Pb Pr cables to your TV.

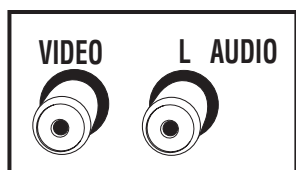
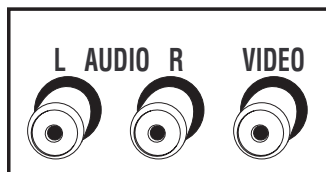


AUDIO/VIDEO OUTPUT (Models 24F512T, 20F512T, 20V412T and 20V500T only) Lets you connect your TV to external devices with inputs such as VCRs, digital recorders or secondary monitors. Audio/video (composite) cables are used for this connection.

Connections & Setup

Front/Side Input Jacks

You can use the jacks on the front/side of your TV to make additional connections. Jack placement might vary per model. Your model has buttons located either on the front or side of the TV.



Note: If you have model 13V424T, you'll have two jacks here (Video and L Audio).

Front/Side (Input) (Models 14F514T, 20V414T, 20V504T, 20F424T, 20F524T, 24V414T and 24V504T only) These jacks are located on the side/front of the TV. Lets you connect devices that have composite outputs such as VCRs, DVD players, satellite receivers, cable boxes, video game consoles and camcorders.

- **AUDIO-L** Provides left audio connection. The left audio connector is usually white.
- **AUDIO-R** Provides right audio connection. The right audio connector is usually red.
- **VIDEO** Provides composite video connection. The video connector is usually yellow.

To access the device when using these jacks, press the INPUT button on your remote until *FRNT* appears.

Front Buttons

These buttons operate many of the TV's features. Button placement per model may vary. Your model has buttons located either on the front or top of the TV.

POWER Turns the TV on and off.

SENSOR Receives infrared signals from the remote.

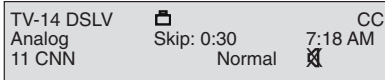
CHANNEL -/+ Scans up and down through the current channel list. In the menu system, acts like the down/up arrow button on the remote control. Use to highlight items.

VOLUME -/+ Decreases/increases the volume. In the menu system, acts like the left/right arrow button on the remote control and adjusts menu controls.

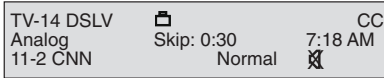
MENU Brings up the *MAIN MENU*. Also takes you one menu backward in the menu system.

TV/VIDEO (Models 13V424T, 14F514T, 20V414T, 20V504T, 20F524T, 24V414T and 24V504T only) Choose between TV programming and the AV input.

Chapter 2: Using the TV's Features



Channel Banner menu for an analog channel.



Channel Banner menu for a digital channel.

Channel Banner

There are several items that might appear on-screen when you press the INFO button on the remote. This display is called the Channel Banner. The following list describes the items on the Channel Banner screen.

TV-14 Displayed when parental controls are active. Shows which age-based rating and content themes are being used. Refer to page 19 for more information.

Parental Controls Master Enable shows either a lock or unlock icon. (Refer to page 20).

- The lock icon is displayed when the *Parental Control* (Master Enable) setting is active.
- The unlock icon is displayed when the *Parental Control* (Master Enable) setting is deactivated.

CC Displayed when Closed Captioning is turned on and available on the current channel.

Analog/Digital Indicates whether the current signal is analog or digital.

Skip: 0:30 Corresponds to the SKIP button. Shows the amount of time left before the TV switches back to the previous channel. (Refer to page 13).

7:18 AM Displays the current time.

11 CNN/11-2 CNN Displays the current channel and label assigned to the channel. Digital channels also have a subchannel (e.g. -2) listing. Refer to page 24 for more information.

Normal Displays the current screen format from the Setup menu or when the /ZOOM-, /ZOOM+ buttons are used.

Displayed when you MUTE the sound.

Using the TV's Features

Parental Controls and V-Chip

The choices in the *USA V-CHIP* menu involve software inside your TV (referred to as V-Chip) which allows you to block TV programs and movies based on violence, sex or other content you may believe children should not view.

Once you set Parental Controls to block programs, you can unblock programs by entering a password.

By default, the software inside your TV is turned “off.” For instructions to turn on V-Chip, refer to *Activate Parental Control* below.

How V-Chip Works

V-Chip reads the program's age-based rating (*TV-MA*, *TV-14*, etc.) and content themes (*Violence (V)*, *Adult Language (L)*, etc.). Broadcasters are not required to provide content themes, so programs received with no content themes will only be blocked if you block their age-based rating. You can also block out programs that have been given a rating of Not Rated and programs that are considered “unrated.”

The TV age-based ratings and content themes you can block are identified and explained in detail in Chapter 4.

The following sections give you more details about how to change the status of TV program limits.

Go back
Create Password _ _ _ _
Confirm Password _ _ _ _

Activate Parental Control

This feature lets you activate and deactivate parental control features. Follow the on-screen instructions to create your PASSWORD using the number buttons on the remote. If you forget your password, refer to the bottom of this page for instructions on how to change the password.

Note: If you don't activate Master Enable (🔒) and set the password, then none of the Parental Control features will take effect.

Go back
Password _ _ _ _

Resetting the Password

If you forget your password, you can reset it. Here is how to do it:

1. Make sure the TV is off.
2. Press VOL- on the TV's front panel and then CLEAR on the remote for approximately 5 seconds. The TV will turn back on.
3. Enter a new password the next time you access the *PARENTAL CONTROL* or the *TIME* menu.

Using the TV's Features

PARENTAL CONTROL

Go back

V-chip Setting

Master Enable 

Front Panel 

Change Password

Parental Control menu for an analog signal.

Set V-Chip TV Programming Limits

1. Choose *Parental Control* from the *Main Menu* and press the OK button.
2. Enter your password.
3. Highlight *V-chip Setting*, then press the right arrow button.
4. Highlight *USA TV Content Ratings* and press the right arrow button.
5. Use the arrow buttons to navigate and the OK button to change the status of a TV content theme from unlock () to lock ()

PARENTAL CONTROL

Go back

V-chip Setting

Downloadable V-chip

Master Enable 

Front Panel 

Change Password

Parental Control menu for a digital signal.

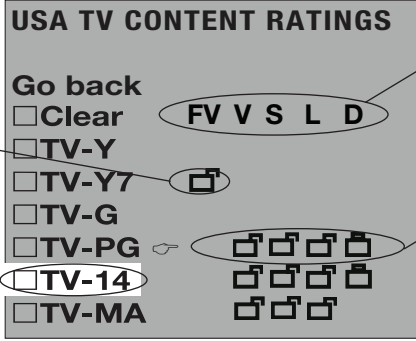
Downloadable V-chip

Since broadcasters have the ability to add new ratings for TV programs, this option lets you define more parameters for your TV viewing, like parental controls. This option and its name are dependent on content from the broadcaster.

Note: Once acquired from a broadcaster, these ratings will be available.

Content Ratings

The following is an example of where items are located within the *USA Content Ratings* screen.



Rating Status Field
Lets you select whether to view or block.

Rating Field
Lets you select from a list of age-based ratings you can block or view.

Content Themes
Lists the content themes you can block or view. Refer to chart below.

Content Status Fields
Lets you select which content themes to view for the selected rating and whether the status of the content theme is currently View or Block.

Content Themes	
D	Sexually explicit dialogue
L	Adult language
S	Sexual situations
V	Violence
FV	Fantasy Violence

Blocking Specific Content Themes

You can lock programs based on their content. (Content is represented by the *D*, *L*, *S*, *V* and *FV* on your screen). When you lock a content theme for a particular rating, you automatically lock that content theme for higher rated programs as well.

To lock program content:

1. Determine the content themes you want to lock ()
2. Press the down arrow button to scroll to the rating whose content theme you want to change.
3. Press the right arrow button to move the highlight to a particular content theme status.

Continues on next page...

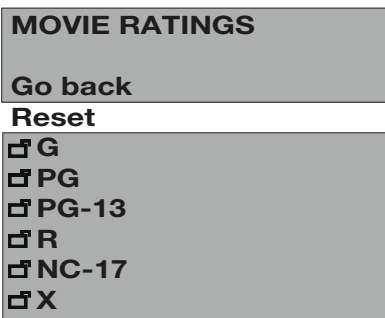
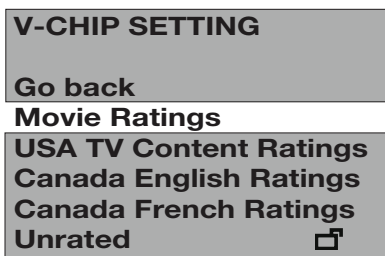
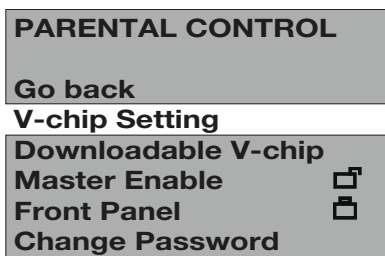
Using the TV's Features

Tip:

Broadcasters are not required to provide content themes or age-based ratings.

4. Press the OK button to change its status to lock (🔒). (In the example on the previous page, you lock the language (D) corresponding with TV-PG. The dialog for TV-14 is locked as well).
5. After you lock specific content themes, you can change some of the content themes back to unlock (🔓).

Note: You must remember to set Master Enable to lock (🔒) in Parental Controls for rating limits to take effect.



Blocking USA V-Chip Movie Ratings

The *Movie Ratings* menu lets you decide which Movies on TV can and cannot be viewed.

To set Movie programming limits:

1. Choose *Parental Control* from the *Main Menu* and press the OK button.
2. Enter your password.
3. Highlight *V-chip Setting* then, press the right arrow or OK button.
4. Highlight *Movie Ratings* and press the right arrow button.
5. Use the arrow buttons to navigate. Press the OK button to change the status of a TV program rating from unlock (🔓) to lock (🔒).
6. All ratings below the one you selected change to lock.

Note: You must remember to set Master Enable to lock (🔒) in Parental Controls for rating limits to take effect.

If you forget your password, you can reset it. Make sure the TV is off. Press VOL- on the TV's front panel and then CLEAR on the remote for approximately 5 seconds. The TV will turn on. Enter a new password the next time you access the PARENTAL CONTROL menu or the TIME menu.

PARENTAL CONTROL
Go back

V-chip Setting

D
M
F
C
V-CHIP SETTING
Go back
Movie Ratings
USA TV Content Ratings
Canada English Ratings
Canada French Ratings
Unrated

CANADA ENGLISH RATINGS
Go back

Reset

C
C8+
G
PG
14+
18+

CANADA FRENCH RATINGS
Go back

Reset

G
8 ans+
13 ans+
16 ans+
18 ans+

PARENTAL CONTROL
Go back

V-chip Setting

D
M
F
C
V-CHIP SETTING
Go back
Movie Ratings
USA TV Content Ratings
Canada English Ratings
Canada French Ratings
Unrated

Blocking Canadian V-Chip Movie Ratings

If you receive Canadian programs you can lock *Canadian English* and *Canadian French* ratings. When you lock a particular rating, you automatically lock the higher rated programs as well.

To lock Canadian English and French program ratings:

1. Choose *Parental Control* from the *Main Menu* and press the OK button.
2. Enter your password.
3. Highlight *V-chip Setting*, then press the right arrow button.
4. Highlight *Canada English Ratings* (or *Canada French Ratings*) and press the right arrow button.
5. Determine the rating you want to lock.
6. Use the arrow and OK buttons on your remote to change the status of a TV program rating from unlock (□) to lock (■).
7. Press the OK button to change the status to lock (■) and all ratings below the one you selected change to lock.

Note: You must remember to set *Master Enable* to lock (■) in *Parental Controls* for rating limits to take effect. Refer to page 20.

When a channel is locked, you can temporarily deactivate parental control settings. A menu screen appears when you try to change the channel, press OK and the password screen appears. Now you can reset your password.

Unrated Programs

The *Unrated* option lets you decide if programs that the V-Chip recognizes as unrated can be viewed. Unrated TV programs may include news, sports, political, religious, local and weather programs, emergency bulletins, public announcements and programs without ratings. The *Unrated* option applies to both USA and Canadian unrated programs, and Canadian programs rated E (Exempt).

Unlocked (□) All unrated programs are available.

Locked (■) All unrated programs are not available.

Go to the *Parental Control* screen and choose *V-chip Setting* and press OK. In the *Unrated* screen press the right arrow button to toggle between the lock (■) and unlock (□) icon.

Note: You must remember to set *Master Enable* to lock (■) in *Parental Controls* for rating limits to take effect. Refer to page 20.

Using the TV's Features

PARENTAL CONTROL

Go back

V-chip Setting

Downloadable V-chip

Master Enable 

Front Panel 

Change Password

Front Panel

Selecting this option lets you *lock* (disable) or *unlock* (enable) the TV's front panel buttons. The remote still tunes to any channel; so, remember to remove access to any remote that can operate the television.

1. Choose *Parental Control* from the *Main Menu* and press the OK button.
2. Enter your password.
3. Press the down arrow to highlight *Front Panel*.
4. Press the right or left arrow button to choose unlock () or lock ().

Go back

New Password _ _ _ _

Confirm Password _ _ _ _

Change Your Password

Selecting this option lets you simply create a new password at any time. Once you enter a new password from *Change Password* in the *Parental Control* menu, it is the password you use until you change it again.

Chapter 3: Using the TV's Menu System

PICTURE	
Go back	
Color	45
Brightness	50
Contrast	50
Sharpness	50
Tint	±00
Blue Background	On
C. Temp	Cool

Picture Menu

The *PICTURE* menu options apply to the video for the main TV and Video Input Channels. As you scroll through the options available, the background image will change to fit that choice. Choose the setting that is best for your programs.

Press the left or right arrow button to toggle among the choices listed below:

Color Adjusts the richness of the color.

Brightness Adjusts the brightness of the picture.

Contrast Adjusts the difference between the light and dark areas of the picture.

Sharpness Adjusts the crispness of the edges in the picture.

Tint Adjusts the balance between the red and green levels.

Blue Background Choose *On* and a solid blue background will appear when the TV is on a weak channel (for example, if the reception is very poor or if the station has gone off the air for the night). After being on such a channel for 15 minutes, the TV will turn itself off automatically.

Color Temperature Press the right arrow button to scroll through the color adjustments:

Cool For a more blue palette of colors.

Normal Standard picture color.

Warm For a more red palette of colors.

When you change any of these picture settings, the *Picture Preset* changes to *Personal*. Use the left or right arrow button to make adjustments.

SETUP	
Go back	
Auto Channel Search	
List & Labels	
Closed Caption	
Favorite Channel	
Language	Eng.
Format	Normal
Auto Vol. Level	Off

AUTO CHANNEL SEARCH	
Go back	
Source Type	Cable
Start Search	➡

Setup Menu

Auto Channel Search Allows you to choose your signal type and begin automatically searching for available channels.

Press the left or right arrow button to choose among the signal sources below:

Antenna If you have connected an antenna to the ANTENNA/CABLE INPUT, choose *Antenna*. Refer to page 6 for a complete explanation of these connections.

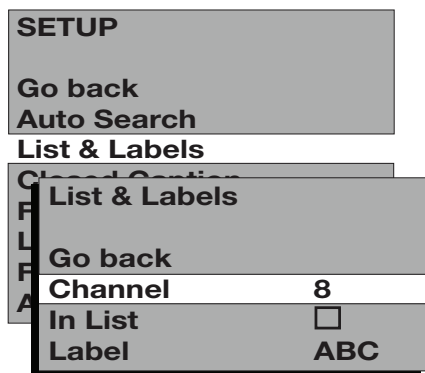
Cable If you have connected cable to the ANTENNA/CABLE INPUT, choose *Cable*. Depending on which package you have you could receive analog, digital or both kinds of stations. Refer to page 5 for a complete explanation of these connections.

After you have made the selections above, use the down arrow button to highlight *Start Search*.

Start Search Press the right arrow button to start the search. Searches for channels the TV is receiving and stores them in the channel list. Shows the percent of channels being searched. After the search is complete, shows the total percent of stations that have been found. Go to page 11 (*Auto Channel Search*) for more information.

Continues on next page...

Using the TV's Menu System



LIST & LABELS menu for analog signals.

List & Labels Edit the channels in the list or choose labels for each channel. Select *Lists & Labels* from the *SETUP* menu and press the right or left arrow button.

Channel Press the right or left arrow button to select the channel number that you want to label. Press the down arrow button to highlight *Label*.

In List This option allows you to keep or delete a channel from the channel list. Follow the procedure for *Channel* (see above) to select the channel. Then highlight *In List* and press the right arrow button to add the check mark. The channel is added to the list. To delete the channel use the right arrow button to turn the check mark off. Use the up arrow button to highlight *Go Back* and press *OK* to exit.

Label For example, if channel 12 has the call letters *ABC*, you can use this feature to label it *ABC* so it appears on-screen as part of the Channel Banner.

1. Press the right arrow button to highlight the first space.
2. Use the number buttons on your remote to enter your new label. For example, above the number button 7 is the label **PQRS**. The letter **P** is typed by pressing the number 7 button one time; the letter **Q** is typed by pressing the number 7 two times; the letter **R** is three times and the letter **S** is four times.
3. Move spaces with the right and left arrow buttons.
4. Use the up arrow button to highlight *Go Back* and press *OK* to exit this menu when you have finished.

Closed Caption Many programs are encoded with closed-captioning information, which lets you display the audio portion of a program as text on the TV screen. Closed captioning is not available on all channels at all times. Only specific programs encoded with closed-captioning information are applicable. When a program is closed-captioned, *CC* is displayed in the Channel Banner. Refer to page 24 for more information. Press the left or right arrow button to toggle among the choices below:

The following *Closed Caption* options are available for analog signals:

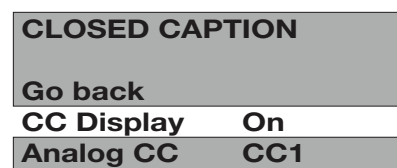
CC Display Lets you choose the way closed-captioning information is shown on the screen.

Off No captioning information displayed.

On Captioning information appears, when available.

Muted=On When the TV's sound is muted, displays captioning information when available, by pressing the MUTE button. The captioning information is not displayed when the sound is not muted.

Analog Closed Caption Choose which captioning mode is used for displaying captioning information. If you are unsure of the differences among the modes, you may prefer to leave the closed-captioned mode set to *CC1*, which displays text of the program in the primary language in your area.



CLOSED CAPTION menu for analog signals.

Using the TV's Menu System

CLOSED CAPTION

Go back

CC Display On

CC Type Service1

CC Mode Broadcast

CC Size Standard

CC Font Font 1

CC Opacity Solid

CC Color White

CC Bkgrnd. Black

CLOSED CAPTION menu for digital signals.

The following *Closed Caption* options are available for digital signals:

CC Display Lets you choose the way closed captioning information is shown on the screen.

Off No captioning information displayed.

On Captioning information always appears, when available.

Muted=On Displays captioning information, when available, whenever the TV's sound is muted by pressing the MUTE button. The captioning information is not displayed when the sound is not muted.

CC Type (Digital Closed-Caption Type) Lets you select a closed caption service mode (1-6) for digital channels.

Service 1 and Service 2 These choices are for the primary and secondary languages, respectively

Service 3 and Services 4, 5, 6 These choices are additional caption sources that may be available.

CC Mode Lets you select between the *Broadcast* and *Customer* options.

Broadcast Captioning information displays using settings sent with the broadcaster's signals (e.g., size, color, font).

Customer Lets you customize the settings below.

CC Size Lets you set the size of the digital closed-caption text - *Standard, Large* or *Small*.

CC Font Lets you select a character design for the digital closed-caption text. A font is a complete assortment of type of a given design.

CC Opacity Lets you set the appearance of the space behind the digital closed-caption text: *Solid, Translucent, Transparent* or *Flashing*.

CC Color Lets you choose the color of the digital closed-captioned text: *White, Black, Red, Green, Blue, Yellow, Magenta* or *Cyan*.

CC Background Lets you choose the color of the area of the screen behind the digital closed-captioned text: *White, Black, Red, Green, Blue, Yellow, Magenta* or *Cyan*.

You have many choices available to customize the digital closed-caption display. In order to help you decide which view you like, try this:

1. In the Setup Menu for *Closed Caption*, turn your *CC Display* to *On*.
2. In the same menu, change any setting.
3. Press CLEAR or MENU until you have cleared the menu system.
4. If you do not have a signal with closed-captioning on the TV screen at this time, change to another digital station that does have closed-caption display.
5. If you want to make changes to the style of closed captioning, return to the *Setup/Closed Caption* menu. Use the up arrow button to highlight *Go Back* and press OK to exit.
6. Now your TV screen displays custom closed-captioning. As you change size, font, opacity, caption color or background color, you will be able to see the change in the closed-caption display by waiting for new text to scroll onto the screen. Not all digital stations carry digital closed captioning. If your digital station doesn't carry digital closed captioning, you won't see these changes. You'll see the station's default style for analog closed captioning.

Using the TV's Menu System

FAVORITE CHANNELS	
Go back	
Favorite 1	70 HGTV
Favorite 2	26 WTHR
Favorite 3	75 CNN
Favorite 4	36 WSNB
Favorite 5	28 NICK

Example of FAVORITE CHANNELS menu for analog signals.

Favorite Channels Lets you store up to five of your preferred channels for each signal source into a favorite list. Find your favorites easily by pressing the FAV button on the remote. There is one list for the analog channels and a separate list for the digital channels. Depending on which mode you're in, that list will be created.

To set your favorite channels, go to the *Favorite Channels* option under the *SETUP* menu and press OK. Use the down arrow button to select *Favorite 1* and use the right and left arrow buttons to scroll through the channel numbers to find your favorite. Set as many favorites as you would like (up to five). If you have entered channel labels for a channel, it will appear to the right.

As you watch TV, you can now press the FAV button on your remote to go to your favorite channels in the *Favorite Channels* menu.

This feature can be very helpful for persons with limited finger dexterity or young children, since it avoids the need to remember the channel numbers and press multiple number combinations.

Language Lets you select your preferred language for the menus, which you should have set in the Initial Setup. (Refer to page 11 for more information about setup). You can change the language at any time by using the right or left arrow buttons to scroll through the languages (*English*, *Spanish* and *French*).

Format This feature is designed to alter the digital screen size of certain formats.

Normal This is a full TV screen display which is for Standard (4:3) TV programs.

Letterbox This is for digital signals, DVD or video programs that are in 16:9 screen size. There are gray or black bars on the top and bottom of the screen.

Crop Digital DVD or video programs that are in 16:9 (Letterbox) screen size normally have gray or black bars on the top and bottom on the screen. This feature takes them off.

Squeeze A 16:9 (Letterbox) image is squeezed to fit a 4:3 format (for digital channels only).

Note: The right arrow/Zoom+ and left arrow/Zoom- buttons on the remote change the TV's screen format.

Auto Volume Level This feature reduces annoying blasts in volume during commercial breaks. Eliminates the need to constantly adjust the volume. Press the right arrow button to turn it *On* or *Off*.



gray or
black
bars

Letterbox Format



Crop format (stretched vertically to fill the 4:3 screen)

Parental Control Menu

The *PARENTAL CONTROL* menu was explained in Chapter 2. Go to page 18 for more information.

Using the TV's Menu System

TIME	
Go back	
Clock	7:25 AM
Calendar	
Time Zone	Eastern
Daylight Sav.	On
Time Setting	

Example of TIME menu for analog and digital signals.

CALENDAR	
Go back	
Month	June
Year	2006
SU MO TU WE TH FR SA	
	1 2 3
4 5 6 7 8 9 10	
11 12 13 14 15 16 17	
18 19 20 21 22 23 24	
25 26 27 28 29 30 31	

TIME SETTING	
Go back	
Today's Date	10/28/06
Clock	7:25 AM
Cur. CH Time	8:00 AM
Update Clock	...
Off Time	Off
	8:00 AM
On Time	Off
	8:30 AM

Example of TIME SETTING menu for digital signals.

Time Menu

This menu lets you control several time related functions. Scroll to the item you want to set. Use the right or left arrow button to change the setting.

Note: Unless the time is set, time related items are unavailable.

Clock Displays the current time.

Calendar Enables you to set the date easily.

Time Zone Lets you select the time zone you live in. Choose from 9 selections: *Central, Eastern, Mountain, Atlantic, Pacific, Alaska, Hawaii, Newfoundland and Samoa.*

Daylight Saving Lets you set the TV to operate with Daylight Saving Time. Choose *On* or *Off*. Select *On* and you won't have to remember to reset the time when Daylight Saving Time occurs.

Time Setting Lets you select more time related functions.

Today's Date Use the number buttons on the remote to set the current date.

Clock To set the time, enter it manually. If it is 7:25, for example, you must first press the number 0 on the remote, then number 7, then 2 and then 5. Use the OK button to choose between *AM* and *PM*.

You can also use the right and left arrow buttons to change the time. Press once to change the time in one minute increments. Press and hold to change in 10 minute increments.

Note: The INFO button on the remote displays the Clock setting (time) in the Channel Banner.

Current Channel Time (digital channels only) Acquires the time, if reported, from the current channel.

Update Clock Makes the *Current Channel Time* your default time. The Current Channel Time appears under the *Clock* selection.

Off Time Lets you set the TV to turn off automatically. Select from *Off*, *Once* and *Daily*. The default is *Off*. You can change the time by using the number or arrow buttons. The SLEEP button on the remote takes you to this preference.

On Time Lets you set the TV to turn on automatically. Select from *Off*, *Once* and *Daily*. The default is *Off*. You can change the time by using the number or arrow buttons.

Using the TV's Menu System

MAIN MENU

Exit
Picture
Setup
Parental Control
Time
Notepad

NOTEPAD

Go back
Edit note
Delete note ...
Display note ☒
At switch on ☐
On time 10:30AM
On date ☒
Date 07/24/06

Notepad Menu

Lets you enter messages that will appear on you TV screen at times you select. From the *MAIN MENU* select *Notepad* and press OK.

Edit note Follow the procedure below to enter a message into the notepad:

1. Use the number buttons to enter your new label.
For example, above the number button 7 is the label PQRS. The letter P is typed by pressing the number 7 button one time; the letter Q is typed by pressing the number 7 two times; the letter R is three times and the letter S is four times.
2. The left arrow button is used to delete the unwanted text and the right arrow button inserts a blank space.
3. The up arrow button is pressed to toggle the entry mode between uppercase or lowercase letters.
4. When completed, press the OK button to save the note.

Delete note Lets you delete the whole message.

Display note Enables you to display (the box has check mark) or not to display (the box doesn't have check mark) the message on the screen.

At switch on If the box is checked, the stored message will be displayed on the screen the next time the TV is turned on.

On time Enables you to display the message at a time you specify. The right and left arrow buttons increase/decrease the time. Press and hold these buttons to increase/decrease the time by 10 minute increments. The OK button toggles between *AM* and *PM*.

On date Allows you to display the message on a date you specify.

Date Lets you set the date when the message will be displayed.

Chapter 4: Other Information

Frequently Asked Questions (FAQs)

How do I tell an analog channel from a digital channel?

There are several ways to tell if your channel is digital or not. Press the INFO button to display the channel banner. Look at the left side for a channel number. Channels with a primary channel and a subchannel are digital channels. Remember that not all digital channels have subchannels. Look at the left side of the Channel banner, it will show *Analog* for an analog channel or a *Digital* for a digital channel. Go to page 12 for more information on the difference between analog and digital channels and page 17 for the Channel banner.

Why does the channel search take a long time?

Depending on your connections, when the TV searches for digital channels it is also searching for each sub-channel of that digital channel. This sometimes takes longer, but once you have your channel list setup, you only have to do it once.

Why does channel search find a lot of channels, but when I try to tune to them there's nothing there?

Some channels are enabled by the cable company and don't carry programming, such as video-on-demand. When channels are unavailable, your TV's screen displays *Unusable Signal*. You probably want to get rid of these so they no longer appear in your channel list. Remove these in the *List & Labels* menu. Go to page 26 for more information.

Why are there black bars on my screen and can I get rid of them?

Your TV has a 4:3 screen so most digital channels are displayed with gray or black bars at the top and bottom of the screen because most are sent in a 16:9 format. It depends on how the station is formatting the video. Aspect ratios are determined by the broadcaster and may change from one program to another. Use the ◀/ZOOM- and ▶/ZOOM+ buttons on the remote to see the different formats available that may eliminate the bars. Go to pages 13 for more information.

No other options are possible aside from those you see by cycling through this button. You can however change the default settings for both analog and digital programming through the menu. Go to page 26 for more details.

Other Information

Troubleshooting

Most problems you encounter with your TV can be corrected by consulting the following troubleshooting list.

TV Problems

TV won't turn on

- Make sure the TV is plugged in.
- Check the wall receptacle (or extension cord) to make sure it is “live” by plugging in something else.
- Something might be wrong with your remote control. Press the POWER button on the front of the TV. If the TV turns on, check the remote control.
- The Front Panel might be locked. Go to page 22 for more information.

Buttons don't work

- The Front Panel might be locked. Go to page 22 for more information.

TV turns off unexpectedly

- *Off Time* might have been activated. Go to page 27 for instructions.
- Electronic protection circuit may have been activated because of a power surge. If this happens frequently, the voltage in your house may be abnormally high or low.

TV turns on unexpectedly

- *On Time* might have been set. Go to page 27 for instructions.

Blank screen

- You may be on an inactive channel. Try another channel.
- Make sure devices connected to the TV are turned on.
- If you've connected another device (such as a camcorder or DVD player) make sure you select the Video Input Channel that is used for that device. Use the INPUT button to toggle through the available Video Input Channels.

Digital tuning delayed

- You may experience a delay of several seconds before digital pictures appear. This can happen when you first tune to a digital channel and when you change channels. This is normal.

No sound, picture okay

- Maybe the sound is muted. Try pressing the volume up button to restore sound.
- If using the Y, Pb, Pr jacks, remember to connect the device's left and right audio output jacks to the TV's AUDIO input jacks.

Can't select certain channel

- Channel may be blocked or not approved through Parental Controls.
- Try pressing the DIG/ANA button on the remote. This button toggles between digital and analog channel sources.
- If using a VCR, check to make sure the TV/VCR button on the VCR is in the correct mode (press the TV/VCR button on your VCR).

No picture, no sound but TV is on

- Maybe the *Source Type* is set wrong. Go to page 23 for more instructions.
- You may have the wrong video input channel selected. Use the INPUT button to toggle through the available video input channels.
- If the device you're connected to has “progressive scan” and you aren't receiving a picture using a component (Y Pb Pr) connection, you need to change the setting from progressive to interlace. The procedure for changing this varies. Look for a button on the front of the device (it might be called resolution or display), or see if there is a switch on the back (it might be labeled “int/prog” or something similar), or the item might be in the menu system. Consult the user's guide for instructions.

Sound okay, picture poor (analog channels only)

- Check your connections. Make sure all of the cables are firmly connected to the jacks.
- Try adjusting the *Sharpness* menu item to improve weak signals. Go to page 23 for more instructions.

Black box appears on the screen

- Closed caption might be on. Check this setting in the *SETUP* menu. Go to page 24 for more instructions.

The Remote Control Doesn't Work

- Something might be between the remote and the remote sensor on the device. Make sure there is a clear path and point directly at the TV.
- Maybe batteries in the remote are weak, dead or installed incorrectly. Put new batteries in the remote.

Problems with Parental Controls

Can't select a certain channel

- The channel may be blocked or not approved through parental control settings.

The rating limits don't work

- You must set *Master Enable* to lock (🔒). Go to page 20 for instructions.

I don't remember my password and I want to unlock the TV

- If you forget your password, you can reset it. Make sure the TV is off. Press VOL- on the TV's front panel and then CLEAR on the remote for approximately 5 seconds. The TV turns on. Enter a new password next time you access the *PARENTAL CONTROL* menu or the *TIME* menu.

The Parental Controls won't let me watch a program even though it's not rated as violent

- Maybe the movie is unrated. Check to see if the *Unrated* option is set to lock (🔒). Refer to page 21 for instructions.

Connection Problems with a DVD Player, Set-top Box etc.

- If the device you're connected to has "progressive scan" and you aren't receiving a picture using a component (Y Pb Pr) connection, you need to change the setting from progressive to interlace. The procedure for changing this varies. Look for a button on the front of the device (it might be called resolution or display), or see if there is a switch on the back (it might be labeled "int/prog" or something similar), or the item might be in the menu system. Consult the user's guide for instructions.

What Else Can I Do?

- If you've been through the Troubleshooting section and nothing has fixed your problem, try rebooting your TV. Note that after a reboot you may need to run your TV through the setup process again. To do a reboot, unplug the power cord from the wall outlet, power strip, etc. Keep your TV unplugged for about 5 minutes. Then plug the TV back in, turn on the TV, and see if the problem is fixed. If the problem remains, then please visit www.rca.com/television for updated FAQs or contact RCA Customer Support at the support number provided in your Warranty under How To Get Service.

How Do I Replace My Remote?

- If you need to replace your remote, call 1-800-338-0376. Your remote part number is R130C1. A shipping and handling fee will be charged upon ordering, and the appropriate sales tax. Have your Visa, MasterCard or Discover Card ready.

Other Information

USA V-Chip Rating System

TV-MA	(Mature Audience Only) Specifically designed to be viewed by adults and may be unsuitable for children under 17. It contains one or more of the following content themes: crude indecent language (L), explicit sexual activity (S), or graphic violence (V).
TV-14	(Parents Strongly Cautioned) Contains some material that many parents would find unsuitable for children under 14. Parents are strongly urged to exercise greater care in monitoring this program and are cautioned against letting children under the age of 14 watch unattended. This program contains one or more of the following content themes: intensely suggestive dialogue (D), strong coarse language (L), intense sexual situations (S), or intense violence (V).
TV-PG	(Parental Guidance Suggested) Contains material that parents may find unsuitable for younger children. Many parents may want to watch it with their younger children. The program contains one or more of the following content themes: some suggestive dialogue (D), infrequent coarse language (L), some sexual situations (S), or moderate violence (V).
TV-G	(General Audience) Most parents would find this program suitable for all ages. It contains little or no sexual dialogue (D) or situations (S), no strong language (L), and little or no violence (V).
TV-Y7	(Directed to Children 7 years and older) Designed for children ages 7 and above. It may be more appropriate for children who have acquired the developmental skills needed to distinguish between make-believe and reality. Themes and elements in this program may include mild fantasy violence (FV) or comedic violence, or may frighten children under the age of 7.
TV-Y	(All Children) Themes and elements in this program are designed for a young audience, including children from ages 2-6. It is not expected to frighten younger children.

Canadian English V-Chip Rating System

18+	(Adults) Programming intended for adults 18 and older. It may contain elements of violence, language, and sexual content which could make it unsuitable for viewers under 18. Violence Guidelines: May contain violence integral to the development of the plot, character or theme, intended for adult audiences. Other Content Guidelines: May contain graphic language and explicit portrayals of nudity and/or sex.
14+	(Viewers 14 and over) Programming contains themes or content which may not be suitable for viewers under the age of 14. Parents are strongly cautioned to exercise discretion in permitting viewing by pre-teens and early teens. Violence Guidelines: May contain intense scenes of violence. Could deal with mature themes and societal issues in a realistic fashion. Other Content Guidelines: May contain scenes of nudity and/or sexual activity. There could be frequent use of profanity.
PG	(Parental Guidance) Programming intended for a general audience but which may not be suitable for younger children (under the age of 8). Parents may consider some content inappropriate for unsupervised viewing by children aged 8-13. Violence Guidelines: Depictions of conflict and/or aggression will be limited and moderate; may include physical, fantasy, or supernatural violence. Other Content Guidelines: May contain infrequent mild profanity, or mildly suggestive language. Could also contain brief scenes of nudity.

Canadian English V-Chip Rating System (continued)

G	(General Audience) Programming considered acceptable for all age groups. While not designed specifically for children, it is understood younger viewers may be part of the audience. Violence Guidelines: Will contain very little violence, either physical or verbal or emotional. Will be sensitive to themes which could frighten a younger child, will not depict realistic scenes of violence which minimize or gloss over the effects of violent acts. Other Content Guidelines: There may be some inoffensive slang, no profanity and no nudity.
CG+	(Children 8 and Older) Programming generally considered acceptable for children 8 years and over to watch on their own. Violence Guidelines: Violence will not be portrayed as the preferred, acceptable, or only way to resolve conflict or encourage children to imitate dangerous acts which they may see on television. Any realistic depictions of violence will be infrequent, discreet, of low intensity and will show the consequences of the acts. Other Content Guidelines: There will be no profanity, nudity or sexual content.
C	(Children) Programming intended for children under age 8. Violence Guidelines: Careful attention is paid to themes which could threaten children's sense of security and well being. There will be no realistic scenes of violence. Depictions of aggressive behavior will be infrequent and limited to portrayals that are clearly imaginary, comedic or unrealistic in nature. Other Content Guidelines: There will be no offensive language, nudity or sexual content.

Canadian French V-Chip Rating System

18+	(Adults) Programming is for adults only. This program contains sustained violence or extremely violent scenes. 16+ (Viewers 16 and over) Programming is not suitable for those under age 16. This program contains frequent scenes of violence or intensely violent scenes.
13+	(Viewers 13 and over) Programming may not be suitable for children under the age of 13. This program either contains several violent scenes or one or more scenes that are violent enough to affect them. Viewing in the company of an adult is therefore strongly recommended for children under the age of 13.
8+	(Viewers 8 and over) Not recommended for young children. This program is suitable for most audiences, but it contains mild or occasional violence that could upset young children. Viewing in the company of an adult is therefore recommended for young children (under the age of 8) who do not distinguish between reality and imagination.
G	(General Audience) This program is suitable for audiences of all ages. It contains no violence, or any violence that it does contain is either minimal or is presented in a humorous manner, as a caricature, or in an unrealistic way.

Other Information

Limited Warranty

What your warranty covers:

- Defects in materials or workmanship.

For how long after your purchase:

- 90 days from date of purchase for labor charges.
- One year from date of purchase for parts.
- One year from date of purchase for the picture tube.

What your warranty does not cover:

- Customer instruction. (Your Owner's Manual describes how to install, adjust, and operate your television. Any additional information should be obtained from your dealer).
- Installation and related adjustments.
- Signal reception problems not caused by your television.
- Damage from misuse or neglect.
- Batteries.
- Customer replacement fuses.
- Damage from images burnt onto the screen.
- Special, incidental or consequential damages.
- A television that has been modified or incorporated into other products or is used for institutional or other commercial purposes.
- A television purchased or serviced outside the U.S.A.
- Acts of nature, such as but not limited to lightning damage.

How you get service:

- Proof of purchase in the form of a bill of sale or receipted invoice which is evidence that the product is within the warranty period must be presented to obtain warranty service. For rental firms, proof of first rental is also required.
- Call 1800-336-1900 and have your unit's date of purchase and model/serial number ready. The model/serial number information can be found on the back of your unit.

Product registration:

- Please complete and mail the Product Registration Card packed with your TV. It will make it easier to contact you should it ever be necessary. The return of the card is not required for warranty coverage.

Limitation of Warranty:

- THE WARRANTY STATED ABOVE IS THE ONLY WARRANTY APPLICABLE TO THIS PRODUCT. NO VERBAL OR WRITTEN INFORMATION GIVEN BY TTE TECHNOLOGY, INC., ITS AGENTS OR EMPLOYEES SHALL CREATE A GUARANTY OR IN ANY WAY INCREASE OR MODIFY THE SCOPE OF THIS WARRANTY.

Continues on next page...

- REPAIR OR REPLACEMENT AS PROVIDED UNDER THIS WARRANTY IS THE EXCLUSIVE REMEDY OF THE CONSUMER. TTE TECHNOLOGY, INC. SHALL NOT BE LIABLE FOR SPECIAL, INCIDENTAL OR CONSEQUENTIAL DAMAGES RESULTING FROM THE USE OF THIS PRODUCT OR ARISING OUT OF ANY BREACH OF ANY EXPRESS OR IMPLIED WARRANTY ON THIS PRODUCT. THIS DISCLAIMER OF WARRANTIES AND LIMITED WARRANTY ARE GOVERNED BY THE LAWS OF THE STATE OF INDIANA. EXCEPT TO THE EXTENT PROHIBITED BY APPLICABLE LAW, ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE ON THIS PRODUCT IS LIMITED TO THE APPLICABLE WARRANTY AND WARRANTY PERIOD SET FORTH ABOVE.

How state law relates to this warranty:

- Some states do not allow the exclusion nor limitation of incidental or consequential damages, or limitations on how long an implied warranty lasts, so the above limitations or exclusions may not apply to you.
- This warranty gives you specific legal rights, and you also may have other rights that vary from state to state.

If you purchased your unit outside the United States or seek warranty coverage outside the United States:

- This warranty does not apply. Contact your dealer for warranty information.

Service calls which do not involve defective materials or workmanship are not covered by this warranty. Costs of such service calls are the sole responsibility of the purchaser.

Other Information

Care and Cleaning

CAUTION: Turn OFF your TV before cleaning.

You can clean the TV as required, using a soft lint-free cloth. Be sure to occasionally dust the ventilation slots in the cabinet to help assure adequate ventilation.

The TV's screen may be cleaned with a soft, lint-free cloth as well. Take care not to scratch or mar the screen. If necessary, you may use a cloth dampened with warm water. Never use strong cleaning agents, such as ammonia-based cleaners, or abrasive powder. These types of cleaners will damage the TV.

While cleaning do not spray liquid directly on the screen, or allow liquid to run down the screen and inside the TV. Also, never place drinks or vases with water on top of the TV. This could increase the risk of fire or shock hazard or damage to the TV.

Caution: Using video games or any external accessory with fixed images for extended periods of time can cause them to be permanently imprinted on the picture tube (or projection TV picture tubes). ALSO, some network/program logos, phone numbers, etc. may cause similar damage. This damage is not covered by your warranty.

FCC Information

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

1. Reorient or relocate the receiving antenna.
2. Increase the separation between the equipment and receiver.
3. Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
4. Consult the dealer or an experienced radio/TV technician for help.

This Class B digital apparatus complies with Canadian ICES-003.

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Visit the RCA website at www.rca.com/television

Please do not send any products to the Indianapolis address listed in this manual or on the carton. This will only add delays in service for your product.

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