





The lightning flash with arrowhead symbol, within an equilateral triangle, is intended to alert the user to the presence of uninsulated "dangerous voltage" within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock.



The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

► Warning: Don't leave stationary images, such as stock market reports, video games, station logos, or the TV's displays, on-screen for more than 10 minutes. Still patterns such as these can scar the picture tube, causing permanent damage to the TV.

WARNING:

TO PREVENT FIRE OR SHOCK HAZARD, DO NOT EXPOSE THIS APPLIANCE TO RAIN OR MOISTURE.

CAUTION:

TO PREVENT ELECTRIC SHOCK HAZARD, DO NOT USE THIS UNIT'S (POLARIZED) PLUG WITH AN EXTENSION CORD, RECEPTACLE OR OTHER OUTLET UNLESS THE BLADES CAN BE FULLY INSERTED TO PREVENT BLADE EXPOSURE.

NOTE TO CATV SYSTEM INSTALLER:

THIS REMINDER IS PROVIDED TO CALL THE CATV SYSTEM INSTALLER'S ATTENTION TO ARTICLE 820-40 OF THE NEC THAT PROVIDES GUIDELINES FOR PROPER GROUNDING AND, IN PARTICULAR, SPECIFIES THAT THE CABLE GROUND SHALL BE CONNECTED TO THE GROUNDING SYSTEM OF THE BUILDING, AS CLOSE TO THE POINT OF CABLE ENTRY AS PRACTICAL. د

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IMPORTANT SAFEGUARDS

PLEASE READ ALL THESE INSTRUCTIONS REGARDING YOUR TELEVISION SET AND RETAIN FOR FUTURE REFERENCE. FOLLOW ALL WARNINGS AND INSTRUCTIONS MARKED ON THE TV RECEIVER.

1. Read Instructions

Read all safety and operating instructions before operating the appliance.

2. Retain Instructions

Retain the safety and operating instructions for future reference.

3. Heed Warnings

Adhere to all warnings on the appliance and in the operating instructions.

4. Follow Instructions

Follow all operating and use instructions.

Warning:

5. Cleaning

Unplug this TV receiver from the wall outlet before cleaning. Do not use liquid or aerosol cleaners. Cleaners can permanently damage the cabinet or screen. Use a damp cloth for cleaning.

6. Attachments and Equipment

Never add any attachments and/or equipment without approval of the manufacturer as such additions may result in the risk of fire, electric shock or other personal injury.

7. Water and Moisture

Do not use this TV receiver where contact with or immersion in water is possible. Do not use near bath tubs, wash bowls, kitchen sinks, laundry tubs, swimming pools, etc.

8. Accessories

Do not place this TV receiver on an unstable cart, stand, tripod, bracket, or table. The TV receiver may fall, causing serious injury to a child or adult, and serious damage to the appliance. Use only with a cart, stand, tripod, bracket, or table recommended by the manufacturer, or sold with the TV receiver. Any mounting of the appliance should follow the manufacturer's instructions, and should use a mounting accessory recommended by the manufacturer.

An appliance and cart combination should be moved with care. Quick stops, excessive force, and uneven surfaces may cause the appliance and cart combination to overturn.



9. Ventilation

Slots and openings in the cabinet are provided for ventilation and to ensure reliable operation of the TV receiver and to protect it from overheating. Do not block these openings or allow them to be blocked by placing the TV receiver on a bed, sofa, rug, or other similar surface. Nor should it be placed over a radiator or heat register. If the TV receiver is to be placed in a rack or bookcase, ensure that there is adequate ventilation and that the manufacturer's instructions have been adhered to.

10. Power Sources

This TV receiver should be operated only from the type of power source indicated on the marking label. If you are not sure of the type of power supplied to your home, consult your appliance dealer or local power company.

11. Grounding or Polarization

This TV receiver is equipped with a polarized alternating current line plug having one blade wider than the other. This plug will fit into the power outlet only one way. If you are unable to insert the plug fully into the outlet, try reversing the plug. If the plug should still fail to fit, contact your electrician to replace your obsolete outlet. Do not defeat the safety purpose of the polarized plug.

12. Power-Cord Protection

Power-supply cords should be routed so that they are not likely to be walked on or pinched by items placed upon or against them, paying particular attention to cords at plugs, convenience receptacles, and the point where they exit from the appliance.

13. Lightning

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

Important Safeguards (cont.)

14. Power Lines

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

15. Overloading

Do not overload wall outlets and extension cords as this can result in a risk of fire or electric shock.

16. Object and Liquid Entry

Never push objects of any kind into this TV receiver through openings as they may touch dangerous voltage points or short-out parts that could result in a fire or electric shock. Never spill liquid of any kind on the TV receiver.

17. Outdoor Antenna Grounding

If an outside antenna or cable system is connected to the TV receiver, be sure the antenna or cable 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 conductors, location of antenna discharge unit, connection to grounding electrodes, and requirements for the grounding electrode.



EXAMPLE OF ANTENNA GROUNDING

18. Servicing

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

19. Damage Requiring Service

Unplug this TV receiver from the wall outlet and refer servicing to qualified service personnel under the following conditions:

- (a) When the power-supply cord or plug is damaged.
- (b) If liquid has been spilled, or objects have fallen into the TV receiver.
- (c) If the TV receiver has been exposed to rain or water.
- (d) If the TV receiver does not operate normally by following the operating instructions. Adjust only those controls that are covered by the operating instructions as an improper adjustment of other controls may result in damage and will often require extensive work by a qualified technician to restore the TV receiver to its normal operation.
- (e) If the TV receiver has been dropped or the cabinet has been damaged.
- (f) When the TV receiver exhibits a distinct change in performance — this indicates a need for service.

20. Replacement Parts

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

21. Safety Check

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

►Warning:

Do not leave stationary images, such as stock market reports, video games, station logos, or the TV's displays, on-screen for more than 10 minutes. Still patterns such as these can scar the picture tube, causing permanent damage to the TV.

Welcome to Mitsubishi

Congratulations on your purchase of this Mitsubishi TV. Your TV is designed for superb viewing pleasure as well as continued reliability.

To familiarize you with your TV and owner's guide, we suggest that you read through the preface, which provides the following important information:

- Summary of Special Features
- Unpacking Your TV
- What's in Each Chapter
- Some Conventions Used in this Guide

Mitsubishi has strived to create your TV so that it will bring you years of viewing enjoyment. Similarly, your owner's guide is designed with a "user friendly" philosophy that will help you take advantage of all of your equipment's features.

Once again, thank you for selecting our product and welcome to Mitsubishi!

♦ Summary of Special Features

Your top rated Mitsubishi TV delivers:

- 181-Channel Capacity --- programs up to 181 channels.
- **Two-Speaker Sound System** --- a special speaker system that produces clear stereo sound.
- **Expanded Sound Capability** --- allows you to connect the TV to an external audio system for enhanced listening pleasure.

In addition to the standard features found on most advanced TVs, Mitsubishi is proud to offer the following distinctive features:

- **Remote Control with TV/VCR/DVD/AUDIO Function** --uses a single remote control transmitter to operate the TV, certain Mitsubishi VCRs, DVD player, and audio components, as well as some VCRs, cable boxes, and DSS satellite receivers from other manufacturers.
- SuperQuickView[™] choices --- allows you to view up to 4 sets of frequently watched channels at the touch of one button.
- **On-Screen Displays** --- appear whenever you adjust your TV, showing you the status of its various functions.
- **On-Screen Operating System** --- simplifies the TV's features with easy-to-use menus.
- **Closed Caption Decoder** --- decodes hidden text information included with TV programs and displays the text on-screen.
- **Picture-in-Picture Mode (model CS-27309 only)** --- allows you to view two different live pictures at the same time .

Each of these features will be explained in more detail in Chapter 3, "Operating Your TV."

What you will find

As you unpack your new TV, please check to be sure that the following items are included:

- an owner's guide containing a warranty
- a registration card
- a remote control transmitter
- a set of two AAA size batteries for the remote control

A few suggestions

Before you hook up your new TV, please take a few minutes to:

- 1 Complete the registration card. The registration card asks for the TV's serial number, which you will find on the back of the unit.
- 2 Keep the box and packing materials for future use.
- 3 File your sales receipt.
- Place the TV on a stable surface with sufficient lighting to do the hook-up.

• What's in Each Chapter

Here's what you will find in this owner's guide:

Chapter 1, "Getting to Know Your TV," introduces you to the location and functions of the buttons and controls of your TV.

Chapter 2, "Connecting Your TV," explains how to connect a VCR, antenna, cable box and other equipment to your TV.

Chapter 3, "Operating Your TV," provides the step-by-step instructions you need in order to use your TV.

Chapter 4, "Troubleshooting," summarizes the problems you may have along with suggestions for remedying these problems.

You will also find a detailed index at the back of the book.

• Some Conventions Used in this Guide

Mitsubishi has gone to great effort to provide you with an easy-tofollow, useful owner's guide. You will find that different types of information are treated in different ways.

You should read information labeled **Important** and information that is boxed and labeled **Warning**. The owner's guide uses these terms sparingly, and you should carefully read all information highlighted in this manner.



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Getting to Know Your TV

Now that you've unpacked your TV, read through the safety information, and glanced at the overview explaining how this owner's guide is organized, it's time to become familiar with the buttons and controls you'll be using when you operate the TV. This chapter will introduce the range of options available when using the buttons on the remote control or on the front panel of the TV. It also offers some general guidelines for using the remote control.

Most functions can be controlled by using either the front panel or the remote control, but certain specialized functions require the use of one or the other. This chapter, which will familiarize you with the full range of button functions, contains the following sections:

- Overview of the Front Panel
- Overview of the Remote Control



- (1) **power button (POWER**) Use this button to turn the TV on or off.
- ② volume controls (VOLUME) Press the ^ button to turn up the volume and the ~ button to turn down the volume.
- (3) channel controls (CHANNEL)

Use the \wedge button to switch to a channel with a higher number and the \vee button to switch to a channel with a lower number.

- (4) video input terminal Use to connect the video output from a standard VCR or another component to the TV.
- 5 audio input terminals

Use to connect the audio output from a VCR or other equipment to the TV.

remote control sensor
Point your remote control to this area of the TV.

Chapter 1: Getting to Know Your TV

♦ Overview of the Remote Control

Getting ready to use the remote control

installing the batteries

- 1 Take the two AAA size batteries from the packing bag.
- Remove the back cover of the remote control by pushing in the direction of the arrow.
- 3 Load the batteries as indicated in the illustration, making sure that they are positioned correctly (+ to +, and to -).
- **4** Replace the back cover of the remote control.

For best results, use alkaline AAA batteries.



Overview of the Remote Control

Getting ready to use the remote control (cont.)

some do's and don'ts

To ensure that your remote control will continue working properly, follow these guidelines:

- Don't press two or more buttons at the same time, unless you are specifically instructed to do so in this owner's guide.
- Don't allow the remote control to get wet or become heated.
- Avoid dropping the remote control on a hard surface.
- When cleaning the remote control, don't use any harsh chemicals. Use only a soft, slightly moistened cloth.

general instructions

When using the remote control to operate the TV, VCR or cable box, follow these procedures:

- 1 Be within 20 feet of the desired equipment.
- 2 Point the tip of the remote control toward the equipment.
- **3** Press the appropriate button or sequence of buttons.

guidelines for using batteries

- Don't use a new battery with an old one.
- Don't heat, take apart, or throw batteries into a fire.

Remote control buttons and functions



This illustration shows the CS-27309 remote control. The CS-27209 remote control includes the VCR-CH button but does not include the PIP controls (number 17 above).

Overview of the Remote Control

Remote control buttons and functions (cont.)

This section provides you with an overview of the remote control's buttons and the features that they control.

This section does not provide detailed explanations on the use of these buttons. To determine which buttons are used with a particular feature, refer to the instructions for that feature.

The instructions for individual features are found in Chapter 3, "Operating Your TV."

1 select switch

Your remote control has four control layers: the TV layer, the VCR layer, the DVD layer, and the AUDIO layer. You can set up each of these layers to operate a different piece of equipment. Use this switch to select the layer you want to set up or use.

2 power button (POWER)

Use to turn the TV on or off. (The select switch must be set to the TV layer.)

③ number buttons (0-9)

Use to select a channel number.

(d) channel control (CHANNEL)

Press the top part of the button to change to a channel with a higher number; press the bottom part to change to a channel with a lower number.

(5) volume control (VOLUME)

Press the top part of the button to turn up the volume; press the bottom part to turn down the volume.

6 100 button (100)

Use with number buttons when selecting cable channels 100 or greater.

⑦ QuickView[™] button (QV)

Use this button to recall the last channel viewed. See "Changing channels" in Chapter 3.

(8) input button (INPUT)

Use to select the input source you wish to watch; TV channels, or the component connected to Input 1 (rear) or Input 2 (front).

9 mute control (MUTE)

Use to turn off the sound completely and to restore it to original volume.

Chapter 1: Getting to Know Your TV

Remote control buttons and functions (cont.)

10 enter button (ENTER)

Use for some functions of VCRs and other equipment. Not used for TV control.

(1) adjust buttons (\blacktriangle , \forall , \triangleleft , \triangleright)

Use to select items in the menus. Also use these buttons to adjust audio and video settings.

⁽¹²⁾ SuperQuickView[™] buttons (A, B, C, D)

Press to view channels you have programmed into the SuperQuickView memories. See "Using SuperQuickView" in Chapter 3.

(13) menu button (MENU)

Use this button to display the on-screen menu system.

(14) display button (DISPLAY)

Use this button to view an on-screen summary of the current TV channel and audio selections.

(15) VCR channel button (VCR-CH)

Use to change channels up and down on the VCR regardless of the position of the select switch "①".

(16) audio and VCR buttons

Use these buttons to control VCRs, cassette decks, CD players, etc. These are pre-programmed to operate select Mitsubishi components.

(17) picture-in-picture controls (CS-27309 only)

Use to control the special picture-in-picture (PIP) function. See "Using the Picture-in-Picture (PIP) modes" in Chapter 3.

- **PIP button (PIP)** -- Press to turn on the PIP image and to cancel it.
- **PIP input button (PIP INPUT)** -- Press repeatedly to switch the source of the PIP image between the TV and the external inputs.
- freeze button (FREEZE) -- Press to freeze the PIP image, and to return to a "live" moving image.
- exchange button (EXCHANGE) -- Press to exchange the pictures of the PIP image and the main image.
- **position button (POSITION)** -- Press tc move the position of the PIP image on-screen.



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This chapter offers step-by-step instructions for completing the most common hook-ups. It contains the following sections:

- Overview of the Back Panel
- Basic Connections

♦ Overview of the Back Panel



1 antenna terminal

Use to connect cable or VHF/UHF antennas.

2 audio output terminals

Use to connect the audio of the TV to an audio system.

3 audio input terminals

Use to connect the audio output from a VCR or other equipment.

(4) video input terminal

Use to connect the video output from a standard VCR or another component to the TV.

(5) S-video input terminal (CS-27309 only)

Use to connect the video output from a Super-VHS (S-VHS) VCR to the TV.

▷Important: If you connect a S-video cable to the S-video input (⑤ above), you cannot use the video input (④ above).

Basic Connections

This section describes the equipment and procedures needed for basic hook-ups. For more complex hook-ups, contact your dealer or local cable company. The connections explained in this section are:

- TV+antenna or cable without a cable box
- TV+cable with a cable box
- TV+separate UHF and VHF antennas
- TV+VCR+antenna or cable without a cable box
- TV+VCR+cable with a cable box
- TV+stereo audio system
- ▷Important: You must connect a VCR to your TV to see two separate pictures when using the Picture-in-Picture (PIP) feature.

► Warning: You should unplug your TV and any other components before connecting them.

TV+antenna or cable without a cable box

equipment you will need

If you have a standard 75-ohm coaxial cable, you will not need additional equipment. If your antenna has two leads (called flat twin leads), you will need:

• one 75-300 ohm transformer





connecting a cable

• Push or screw the end of the cable onto the antenna terminal on the television.

connecting an antenna with flat twin leads

- **1** Use a screwdriver to connect the leads to the transformer.
- 2 Push or screw the transformer onto the antenna terminal on the television.

Chapter 2: Connecting Your TV

TV+cable with a cable box

equipment you will need

Use this hook-up if you need a cable box to descramble cable signals. After you complete this hook-up, you should set up your remote control to operate your cable box. See "Using the remote control" in Chapter 3.

To complete the hook-up, you'll need:

• one 75-ohm coaxial cable



procedure

- Connect the incoming cable to the IN terminal on the cable box.
- 2 Connect a coaxial cable to the OUT terminal on the cable box; connect the other end of this cable to the antenna terminal on the back of the TV.



Basic Connections

TV+ separate UHF and VHF antennas

equipment you will need

If UHF and VHF signals are brought into your home with two separate antennas, you'll need to combine the antennas before connecting them to the TV. To do this you will need a UHF/VHF combiner. (There are different combiners for different kinds of leads. Check with your local electronics store for the kind of combiner you need.)

Pictured below is a standard combiner.



To connect separate UHF and VHF antennas to your television:

• Connect the UHF and VHF antenna leads to the appropriate terminals on the UHF/VHF combiner.

2 Press the combiner onto the antenna terminal on the television.



Chapter 2: Connecting Your TV

TV+VCR+antenna or cable without a cable box

equipment you will need

You may want to connect a VCR along with your antennas or cable. To complete this hook-up, you may need the following equipment.

• one 75-ohm coaxial cable



• one set of RCA pin-type audio cables



• one RCA pin-type video cable



 one S-video cable
CS-27309 only
(If you are hooking up a S-VHS VCR)



Basic Connections

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TV+VCR+antenna or cable without a cable box (cont.)

procedure

- Connect the incoming cable or antenna to the ANTENNA IN terminal on the VCR.
- Connect one end of a coaxial cable to the ANTENNA OUT terminal on the VCR.
- 3 Connect the other end of the coaxial cable to the antenna terminal on the TV.
- Connect an RCA pin-type video cable to the VIDEO OUT terminal on the back of the VCR. Connect the other end of this cable to the VIDEO INPUT terminal on the back of the TV.

▷Important: (CS-27309 only) If you are connecting a Super VHS VCR, use an S-video cable instead of an RCA pin-type video cable. Connect one end of the S-video cable to the S-Video OUT terminal on the VCR. Connect the other end of the cable to the S-Video IN terminal on the TV.

G Connect a set of RCA pin-type audio cables to the AUDIO OUT terminals on the back of the VCR. Use the red cable to connect the right (R) channel and the white cable for connecting the left (L) channel.

Connect the other ends of this cable to the AUDIO INPUT terminals on the back of the television.

- ▷Important: If your VCR is monaural (non-stereo), you will only connect a single RCA pin-type audio cable. Connect the cable to the VCR, then connect the other end to the L (LEFT) audio input on the back of the television.
- ▷ Important: If your VCR has a video channel switch, set it to "OFF/AV." See your VCR's owner's guide for details.
 - **7** Begin playing a tape on the VCR.
 - **③** To view the VCR, select the external input source by using the INPUT button on the front control or on the remote control.



TV+VCR+antenna or cable without a cable box (cont.)

Basic Connections

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TV+VCR+cable with a cable box

equipment you will need

This hook-up will allow you to record scrambled channels and to view scrambled channels when the VCR is turned on. This connection will also allow you to view different channels when you use PIP.

To complete the hook-up, you will need:



• one two-way splitter





TV+VCR+cable with a cable box (cont.)

procedure

Please see the illustration on the following page.

- Connect the incoming cable to the IN terminal on the two-way splitter.
- Connect a coaxial cable to one of the OUT terminals on the splitter. Connect the other end of this cable to the ANT terminal on the back of the TV.
- 3 Connect the second coaxial cable to the other OUT terminal on the splitter. Connect the other end of this cable to the IN terminal on the back of the cable box.
- Connect the third coaxial cable to the OU'T terminal on the back of the cable box. Connect the other end of this cable to the ANTENNA-IN terminal on the back of the VCR.
- 6 Connect an RCA pin-type video cable to the VIDEO OUT terminal on the back of the VCR. Connect the other end of this cable to the VIDEO INPUT terminal on the back of the television.
- ▷Important: (CS-27309 only) If you are connecting a Super VHS VCR, use an S-video cable instead of an RCA pin-type video cable. Connect one end of the S-video cable to the S-Video OUT terminal on the VCR. Connect the other end of the cable to the S-Video IN terminal on the TV.
 - Connect a set of RCA pin-type audio cables to the AUDIO OUT terminals on the back of the VCR. Use the red cable to connect the right (R) channel and the white cable for connecting the left (L) channel.
 - Connect the other ends of this cable to the AUDIO INPUT terminals on the back of the television.
- ▷ Important: If your VCR is monaural (non-stereo), you will only connect a single RCA pin-type audio cable. Connect the cable to the VCR, then connect the other end to the L (LEFT) audio input on the back of the television.
- ▷Important: If your VCR has a video channel switch, set it to "OFF/AV." See your VCR's owner's guide for details.
 - 8 Begin playing a tape on your VCR.
 - 9 To view the VCR, select the external input source by using the INPUT button on the remote control.

Basic Connections

TV+VCR or cable with a cable box (cont.)



TV+stereo audio system

You may want to hear the sound from your TV and/or VCR through your home audio system. To do this, complete the necessary connections shown on previous pages of this chapter, then follow the procedure on this page.

equipment you will need

• 1 set of RCA pin-type audio cables



procedure

- Connect one end of RCA pin-type audio cables to the AUDIO OUTPUT terminals on the back of the television. Use the red cable to connect the right (R) channel and the white cable to connect the left (L) channel.
- 2 Connect the other ends of this cable to the AUX IN terminals on the back of the audio system.
- 3 Turn off the television's speakers. To do this, turn on the TV. Press the MENU button on the remote control. The Main Menu will appear on the screen. Press ADJUST ▼ to move the menu cursor next to "Audio Select." Press ADJUST ▶ and the Audio Select menu will appear. Press ADJUST ▼ to move the menu cursor next to "Speaker." Press ADJUST ▶ to select "OFF." Press MENU to return to normal TV viewing.
- Set the audio system's input to the AUX position. See your audio system's owner's guide.
- **Important:** For proper tone and volume balance, turn off the TV speakers when using an external audio system.



Basic Connections

(1,2,2)

CHAPTER 3 Operating Your TV

Now that your TV is connected to the cable, antennas, or external components, it's time to enjoy your equipment. This chapter will explain how to operate the TV, first focusing on functions that are basic and easy and then explaining some advanced features.

This chapter explains:

- ♦ Getting Started
- ♦ Using the Advanced Features

Getting Started

This section is designed to get you started enjoying your new TV. If you follow these procedures one by one, you will soon have a picture and can begin discovering everything your television can do.

You'll find information on:

- Setting up and using the remote control
- Turning the TV on/off
- Selecting the input source
- Changing channels
- Understanding the on-screen menus
- Using the menus
- Selecting the menu language
- Memorizing channels
- Adding / deleting channels
- Adjusting the picture
- Selecting the sound
- Using the closed caption decoder
- Understanding the on-screen displays
- Using the sleep timer
- Using SuperQuickView[™]
- Using One-Key Play
- Using video mute (CS-27309 only)
- Using the Picture-in-Picture (PIP) mode (CS-27309 only)

Chapter 3: Operating Your TV
Using the remote control to operate VCRs, cable boxes and other equipment

about your remote control

This TV's remote control has four "layers": the TV layer, the VCR layer, the DVD layer, and the AUDIO layer. Each layer can be used to operate a different component in your A/V system. You choose the layer you want to use by setting the "select" switch across the top of the remote control.

When you first receive your remote control, the TV layer is set up to operate your Mitsubishi TV and VCR. The VCR layer is set to operate your Mitsubishi VCR. The DVD layer is programmed to operate your Mitsubishi DVD player. The AUDIO layer is programmed for your Mitsubishi A/V receiver.

You can use the following to operate your TV:

- power button
- channel control
- volume control
- mute button
- number buttons
 - menu button
- QuickView[™] button
- adjust buttons PIP controls (CS-27309 only)

SuperQuickView[™] buttons

(A, B, C, and D buttons)

input button

play button

display button

If you have a cable box (including a digital satellite box), a non-Mitsubishi VCR, a Mitsubishi laserdisc player, a Mitsubishi A/V receiver, or a compact disc player, you can set up the layers in the remote control to operate these components.

The VCR layer can be set up to operate a non-Mitsubishi VCR. The DVD layer can be set up to operate a VCR, cable box, digital satellite box, or a Mitsubishi laserdisc player. The AUDIO layer can be set up to operate a cable box, a digital satellite box, a Mitsubishi laserdisc player, or a Mitsubishi A/V receiver. The TV layer can be set up to operate the volume control of a Mitsubishi A/V receiver.

setting up the remote control to operate your VCR

- **1** Turn off your VCR.
- 2 Set the select switch on the remote to choose the layer you want to set up: VCR or DVD.

3 <u>While holding in the POWER button on the remote control</u>, enter the code number listed in the chart on the next page for your brand of VCR. Be sure to enter both digits of the code number. If more than one number is listed, begin with the first code listed.

Getting Started

If your VCR is this brand	enter this code	If your VCR is this brand	enter this code	If your VCR is this brand	enter this code
Mitsubishi (A)	01	Magnavox	03, 10, 11	Scot	15
Mitsubishi (B)	02	Multitech	06	Sharp	16
Canon	03	NEC	12	Sony	17, 18
Emerson	04, 05	Panasonic	03, 21	Sylvania	03, 10, 11
Funai	06	Philco	03, 10	Symphonic	06
General Electric	03	Philips	03, 10, 11	Teknika	04,06
Goldstar	07	Quasar	03	Toshiba	15
Hitachi	08	RCA	08, 13, 20	Totevision	07
JAC 1	09	Sanyo	14	Zenith	19

4 Release the POWER button.

 Press the POWER button again. Your VCR should turn on. If the VCR turns on, your remote control is ready to operate your VCR. (See "Using Your Remote Control to Operate Your VCR" next for remote control VCR functions.)

If your VCR does not turn on, repeat the instructions, trying each code number listed for your brand of VCR. If none of these code numbers work, try each number (01 through 21) individually.

using your remote control to operate your VCR

After you have set up your remote control for your particular brand of VCR, you can use the remote to operate your VCR.

- Set the select switch on the remote control to the layer that you set up to operate your VCR: VCR or DVD.
- Point the remote control at the VCR and press the desired buttons.

If you are using a Mitsubishi VCR, you will be able to use all of the buttons on the remote control to operate your VCR except for MUTE, VOLUME and the PIP function buttons, which will always operate the TV itself.

If you are using another brand of VCR, you can use the POWER, CHANNEL, REC, STOP, PAUSE, REW, PLAY, and FF buttons to operate your VCR.

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setting up the remote control to operate your cable box or digital satellite box

- 1 Turn on your cable box or digital satellite box.
- 2 Set the select switch on the top of the remote to choose the layer you want to set up: AUDIO or DVD.
- While holding in the POWER button on the remote control, enter the code number listed in the chart below for your brand of cable or satellite box. Be sure to enter both digits of the code number. If more than one number is listed, begin with the first code listed.
- A Release the POWER button. (See "Using Your Remote Control to Operate Your Cable or Satellite Box" next for remote control functions.)

If your cable/satellite box is this brand	enter this code	If your cable/satellite box is this brand	enter this code	If your cable/satellite box is this brand	enter this code
ABC	57, 59, 62, 67, 89	Oak	61, 62, 82	Scientific Atlantic	66, 88, 89, 91, 92
Color Voice	73, 74, 98	Panasonic	63, 70	Signature	57
Comtronics	93	Paragon	51	Sony DSS	4,7
Gemini	55	Philips	73, 74, 75, 76, 77	Sprucar	63
General Electric	66		93, 94, 98, 99	Starcom	54, 55, 56, 87
General Instruments	55, 56, 57	Pioneer	64, 65, 84	Stargate	55
Hamlin	52, 53, 69	Prime Star	48	Tocom	67, 68, 72
Hitachi	57	Pulsar	51	Toshiba	51
Jerrold	54, 55, 56, 57, 58	RCA	63	Untied Artists	62
	59, 60, 85, 87	RCA DSS	49	United Cable	54
Macom	71	Regai	53	Viewstar	93, 94
Magnavox	94	Regency	79	Zenith	51
Memorex	51	Samsung	65, 84	1	

- Press the POWER button again. Your cable or satellite box should turn off. If the cable or satellite box turns off, your remote control is now set up to operate it. If your cable or satellite box does not turn off, repeat the instructions above, trying each code number listed for your brand of cable or satellite box. If none of these numbers work, try each number, 51 through 99.
- **Important:** Some of the cable boxes can be turned on with the CHANNEL buttons or the number buttons. If your box is this type, use the CHANNEL or number buttons to turn on your box.

using your remote control to operate your cable box or satellite box

After you have set up your remote control for your particular brand of cable or satellite box, you can use the remote to operate it.

- **1** Use the select switch on the remote control to choose the layer that you set up to operate your cable or satellite box: AUDIO or DVD.
- Point the remote control at the cable or satellite box and press the desired buttons.

You can use the POWER, CHANNEL, numbers (0-9), and ENTER buttons to operate your cable box. If you are using an RCA DSS or PRIMESTAR[®] receiver, you may be able to use additional buttons. Refer to the instructions for these devices.

setting up the remote control to operate your Mitsubishi disc player or A/V receiver

1 Turn off your audio component.

- 2 Set the select switch on the top of the remote to choose the layer you want to set up. For a laserdisc player, choose DVD or AUDIO. For an A/V receiver, choose AUDIO or TV.
- 3 <u>While holding in the POWER button on the remote control</u>, enter one of these code numbers:
 - For a Mitsubishi A/V receiver and compact disc player: 30, 31, 35 or 38
 - For a Mitsubishi and some Pioneer laserdisc players: 32 or 33
 - For a Yamaha A/V receiver and compact disc player: 36 or 37
- For a Mitsubishi DVD player: 34

Be sure to enter both digits of the code number. Start with the first code listed.

4 Release the POWER button.

S Press the POWER button again. Your disc player or audio component should turn on. If it does, your remote control is now set up to operate your audio component. If it does not turn on, repeat the instructions above, trying the next code number listed for your component.

See the next page for information on using the remote to operate your A/V components.

Chapter 3: Operating Your TV

notes about your remote control

- **Important:** Sometimes manufacturers will change their products, or they may use more than one code. If this is the case, your remote may not be able to operate your VCR or cable box.
- ▷Important: When you replace the batteries in your remote control, the remote will usually return to its initial setting. You may need to set up your remote again.

using your remote to operate your Mitsubishi laserdisc player

After you have set up your remote control for your laserdisc or DVD player, you can use the remote to operate it.

- Use the select switch on the remote control to choose the layer that you set up to operate your laserdisc player, DVD or AUDIO.
- Point the remote control at the laserdisc player and press the desired buttons.

You can use the POWER, numbers (0–9), INFO, MENU, CANCEL, STOP, PAUSE, REW, PLAY, ADJUST, and FF buttons to operate your disc player.

using your remote to operate your Mitsubishi A/V receiver

After you have set up your remote control for your A/V receiver, you can use the remote to operate it.

• Use the select switch on the remote control to choose the layer that you set up to operate your receiver: AUDIO or TV.

Point the remote control at the A/V receiver and press the desired buttons.

If you are using a Mitsubishi HTS-100 receiver; the POWER, VOLUME, and MUTE buttons will operate it.

If you are using a Mitsubishi HTS-300 receiver; the POWER, CHANNEL, INPUT, VOLUME, ENTER, number (0–9), INFO, MENU, CANCEL, AUDIO, VIDEO, ADJUST, and MUTE buttons will operate it.

If you are using a Mitsubishi M-VR400, M-VR600, M-VR800 or M-VR1000; the POWER, VOLUME, number (0-9), and MUTE buttons will operate the receiver. The ADJUST buttons will operate the M-VR800 and M-VR1000 menus.

If you are using a Mitsubishi M-CD500 CD player; the PLAY, PAUSE, STOP, FF, and REW buttons will operate it.

Getting Started

Turning the TV on/off

Important: Before using the remote control to operate the TV, set the select switch on the top of the remote control to TV.

Use the POWER button on either the control panel or the remote control to turn the TV on and off.

▷Important: There is always a small amount of current flowing into the TV, even when the power is turned off. This maintains any changes to the TV's settings. Unplugging the set will erase these settings, requiring you to set them again. Unplug the TV only when it won't be used for a long time.



Selecting the input source to watch your VCR or other equipment

If you connected components such as VCRs, camcorders, or laserdisc players to your TV, you will need to change the input source to view the signals from these components.

To select an input source, press the input button (INPUT) on the remote control.



You can choose between the following input sources:

- ANT (antennas or cable systems connected to the antenna terminals)
- INPUT1 (components connected to the terminals on the back of your TV)
- INPUT2 (a component connected to the terminals on the front panel of your TV)

When selected, the name of the input will display briefly in the upper right corner of the screen.

You may also use the CHANNEL $\wedge \vee$ button to reach INPUT1 and INPUT2. These will be found in the cycle of memorized channels between the highest and lowest channel numbers.

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Changing channels

Your TV offers you four ways of changing channels once their numbers have been programmed into channel memory:

- selecting channels one-by-one with the channel up \bigwedge and channel down \bigvee controls
- directly accessing a channel by pressing the number buttons
- using the SuperQuickView[™] function to alternate between channels on a user-chosen list
- ▷**Important:** To change channels faster, enter two digits for every channel number, using zeros where needed. For example, enter 0 4 to view channel 4 and 2 8 to view channel 28.
- ▷Important: If you memorized channels using the AIR option, your TV can receive antenna channels 2-13 (VHF) and 14-69 (UHF). If you memorized channels using one of the CABLE options, your TV can receive cable channels 1-125. CABLE STD option does not provide channel 1. If you select a channel outside of the memorized range, your TV will not change channels.



changing channels one-by-one

To change channels:

• Press one of the channel buttons (CHANNEL) on the control panel or on the remote control. The TV will automatically tune to the next memorized channel.





changing channels directly

To move directly to a particular channel without going through the memorized channels in-between:

- For single digit channels, press 0 and the channel number.
- For two digit channels, press the two numbers in sequence.
- For cable channels with three digits, press the 100 key, then press the next two numbers. For example, to select channel 120, press the 100 key, then 2 and 0. The TV must be in a cable mode. See "Selecting Air/ Cable" in this chapter.



using the QuickView[™] option

To alternate between the current channel and the last one viewed:

- Press the QV button on the remote control to switch to the last channel viewed.
- Press the QV button again to return to the original channel.



using the SuperQuickView[™] option

This feature can memorize 4 frequently used channels in 4 different memories (A, B, C, and D). For instance, the channels could be theme based or family member based. To view selected channels programmed into SuperQuickView memories:

- Enter the desired channels into a SuperQuickView memory.
 See "Using SuperQuickView" later in this chapter.
- Press the A button repeatedly to view the channels in the A memory. To view channels in the B memory, press the B button repeatedly. Buttons C and D will select the channels you programmed into the C and D memories.

Understanding the on-screen menus

One of the distinctive features of this TV is an on-screen menu system to use some of the TV's special capabilities.

When using any of the on-screen menus, please keep the following in mind:

- The on-screen menus will clear if the menus are left on too long before an item is selected.
- You can exit the on-screen menus any time by pressing the MENU button. You will then return to regular TV viewing.
- When making selections, both the ADJUST \blacktriangle or \checkmark and CHANNEL $\land \lor$ buttons will move the cursor \blacklozenge on the TV screen up and down. Both the ADJUST \triangleright or \blacktriangleleft and VOL-UME $\land \lor$ buttons will move the cursor \blacklozenge on the screen right and left, or adjust or set the selected feature.

Using the menus



Selecting the menu language



Memorizing channels

Your TV can automatically memorize the channels it can receive. Once channels are memorized, you can scan through them using the channel buttons on the remote control and front panel.

Selecting an antenna setting



Select "Air/Cable" and press ADJUST ▶.

Memorizing channels (cont.)



Getting Started

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Adding and deleting channels

AIR/CABLE MEMORIZE CH

\$ ADD/DELETE CH

ONE-KEY PLAY

ADD/DELETE CH

TO ADD :>

TO ERASE: <

STD 100

VIDEO MUTE

SUPERQUICKVIEW

After all available channels have been memorized, you can add weak channels or delete any unwanted channels by using the following procedure.

- 1 Press MENU. The Main Menu will appear on the screen.
- Press ADJUST ▲ or ▼ or CHANNEL ^ ∨ to move the cursor ♥ next to "Set up." Press ADJUST ►.
- 3 You will see the Set Up menu. Press ADJUST ▲ or ▼ or CHANNEL ^ ∨ to move the cursor ♥ next to "Add/Delete Ch."
- 4 Press ADJUST ► or VOLUME. The screen will show the Add/ Delete Channel Menu over the picture of the selected channel.
- S Press ADJUST ▲ or ▼ or CHANNEL ^ v to select the channel you want to add or delete.
- Press ADJUST ► to add a weak channel or ADJUST ◄ to delete an undesired channel.
- When you have added or deleted all of the channels you wish, press MENU to exit.



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Adjusting the picture

You can adjust all of your television's picture functions by using the menu feature called "Video Adjust." Each individual adjustment display will show over the picture of the currently selected channel so you can see how your adjustments will change the picture.

descriptions of video settings

COLOR provides a scale that determines the intensity of the color.

TINT provides a scale that adjusts the proportion of red to green in the picture. This determines the delicate tones of the color.

CONTRAST provides a scale that controls the level of white-toblack in the picture. When the contrast is low, you will be able to see the variety of shades in the darker images on the screen. When the contrast is high, the screen's dark images will appear more uniformly black, but this will also make the colors on the screen seem more vibrant.

BRIGHTNESS provides a scale that controls the overall brightness of the picture.

SHARPNESS provides a scale that adjusts the detail and clarity of the picture.

COLOR TEMP allows you to set how the TV will display white images. Your choices are "Low," "High," or "Medium."

With the "LOW" setting, white images on-screen will have a warm cast to them.

With the "HIGH" setting, white images on-screen will have a cool cast to them. This setting may be the most realistic picture under bright lighting.

With the "MEDIUM" setting, white images on-screen will be balanced between the above warm and cool settings.

A/V RESET will return all of the picture adjustments to the original factory settings.

Getting Started

Adjusting the picture (cont.)



- Important: While the video adjustment setting displays are showing onscreen, the CHANNEL and VOLUME buttons will not operate the normal channel or volume functions.
- ▷ **Important:** If no video adjustment is made within a few seconds, the TV will return to normal TV viewing automatically.

Chapter 3: Operating Your TV

Selecting the sound

You can select the sound and the speakers you will hear by using the menu feature called "Audio Select." The audio selection will be displayed over the picture each time you select a new channel or use the display button.

your audio selections are:

MTS: (multi-channel television sound)

STEREO

This setting allows you to receive stereo broadcasts automatically if the TV broadcaster is sending stereo sound. If the TV broadcaster is not sending stereo sound, the TV will automatically select the mono sound.

SAP (separate audio program)

This setting allows you to hear a different sound if the TV broadcaster is sending a secondary form of sound. Examples of the use of SAP are a foreign language sound track of the main program or news or weather reports from a local radio station. If the TV broadcaster is not sending SAP sound, the TV will automatically select the mono sound.

MONO

This setting allows you to listen only to the mono sound sent by the TV broadcaster even if the broadcaster is also sending stereo or SAP sound. Use this setting when there is unwanted background noise from a weak station.

SPEAKER:

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ON

You will hear the sound through the TV's built-in speakers.

OFF

When you have connected your TV to an audio system and wish to hear the sound through the speakers of the audio system.

▷ **Important:** To avoid a volume mis-match between the TV's built-in speakers and the speakers of your audio system, you should turn off the TV's speakers when listening to the sound through your audio system.

Selecting the sound (cont.)

SLEEP TIMER VIDEO ADJUST ‡ AUDIO SELECT CLOSED CAPTION LANGUAGE SET UP	 Press MENU. The Main Menu will appear on the screen. Press ADJUST ▲ or ▼ or CHANNEL ^ button to move the cursor ♦ next to "Audio Select."
	3 Press ADJUST ► or VOLUME The screen will show the Audio Selection menu.
AUDIO SELECT	4 Press ADJUST ▲ or ▼ or
<pre>\$ MTS :STEREO SPEAKER :ON</pre>	CHANNEL \sim to select the audio setting you would like to adjust (MTS or SPEAKER).
	S Press ADJUST ► or < or VOLUME VOLUME VOLUME VOLUME
	6 Press MENU to return to

normal TV viewing.

Important: The audio output of this TV will change when you adjust the TV's volume. When you use the TV with an audio system, turn the TV's volume all the way down, set the audio system's volume to an average setting and then increase the TV's volume until you can hear the sound at a normal level.

Using the closed caption decoder

Many broadcasters now supply closed captioning information along with their regular broadcasts. Your TV can decode that information and display it on the TV screen.

Closed captioning was initially designed so that those with hearing difficulties could more fully enjoy viewing television. However, closed captioning can also be used in other ways, such as:

- helping children learn to read
- learning a foreign language
- using the television without disturbing others

Chapter 3: Operating Your TV

Using the closed caption decoder (cont.)

There are two types (modes) of captioning that broadcasters can send:

Captions: standard captioning which is related to the program that is being shown. Standard captioning usually follows the dialog of the characters on-screen and only displays when the broadcaster is sending the closed captioning.

Text: text captioning can contain information such as weather or news that is not related to the program that is being shown. Text captioning blocks out your view of the program you are watching.

Your TV can decode two different types of signals, or data channels, for each type of captions (**Captions CH 1** or **CH 2** or **Text CH 1** or **CH 2**). However, each station may be broadcasting only one signal, or none at all.

adjusting the closed caption decoder

You can turn on or off the closed caption decoder by using the menu feature called "Closed Caption."

SLEEP TIMER	 1 Press MENU. The Main Menu will appear on the screen. 2 Use ADJUST ▲ or ▼ or
VIDEO ADJUST AUDIO SELECT ¢ CLOSED CAPTION LANGUAGE	CHANNEL \wedge to move the cursor \blacklozenge next to "Closed Caption."
	③ Press ADJUST ► or VOLUME. The screen will show the Closed Caption menu.
CLOSED CAPTION + MODE : OFF DATA : CH 1	 Press ADJUST ► or < or VOLUME ^ to select one of the caption modes; "Off," "Captions," or "Text," that you would like to view.
	 S Press ADJUST ▼ or CHAN- NEL ∨ to move the cursor next to "Data."

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Using the closed caption decoder (cont.)



- **Important:** If you have selected "Captions" and "CH 1" or "CH 2," and tune to a broadcaster that is not sending a caption signal, no captions will appear.
- **Important:** The contents of captions are determined by the broadcaster. If your captions show strange characters, misspellings or odd grammar, it is not a malfunction of the TV.
- ▷**Important:** If you have selected "Text" and "CH 1" or "CH 2," a large black box will appear over the lower portion of the picture. The text information will appear in this box; however, even if the broadcaster is not sending any text information, the black box will still block the lower portion of the picture.

Closed captions when muting

Your TV will automatically turn on "Captions CH 1" when you turn off the sound by pressing the MUTE button on the remote control. The captions will show only if the broadcaster is sending the closed caption signal. "Captions CH 1" will be turned off automatically when you restore the sound using the MUTE button again or if you turn off the TV.

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Understanding the on-screen displays

Your TV provides an on-screen summary of the current settings for TV or cable channels or the external inputs. This summary will also provide information about the type of sound that is being sent by the broadcaster and the type of sound you have set the TV to "listen to." In addition, the display system will provide information concerning the source of the main and sub PIP pictures, and the amount of time remaining on the sleep timer. This information is displayed automatically when you make a change such as selecting a new channel or activate the PIP. It can also be recalled by pressing DISPLAY on the remote control.



Using the Advanced Features

This section explains how to use some of the more advanced features. You'll learn about:

- Using the sleep timer
- Using SuperQuickView[™]
- Using One-Key Play
- Using video mute (CS-27309 only)
- Using the Picture-in-Picture (PIP) mode (CS-27309 only)

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Using the sleep timer

This advanced feature allows you to set the TV to turn off automatically. You can set the TV to turn off after a period of time ranging from 30 minutes to 120 minutes, in 30 minute intervals.

Setting the sleep timer

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You can verify the amount of remaining time later by pressing the DISPLAY button twice. The sleep timer remaining time will be shown in the upper right hand corner of the picture for 5 seconds.

Your TV will provide a warning display of "0 remaining" before turning off.

Changing or canceling the sleep timer

- 1 Press MENU. The Main Menu will appear on the screen. **\$ SLEEP TIMER** VIDEO ADJUST **2** Press ADJUST \blacktriangle or \blacktriangledown or CHANNEL $\land \lor$ to move the AUDIO SELECT CLOSED CAPTION cursor 💠 next to "Sleep Timer." LANGUAGE SET UP **3** Press ADJUST \triangleright or VOLUME. The Sleep Timer Menu will appear. 4 Press ADJUST \blacktriangleright or VOLUME \uparrow to increase the "Remaining
 - Press ADJUST ➤ or VOLUME × to increase the "Remaining time" or ADJUST < or VOL-UME × to decrease the "Remaining time." The remaining time will change in 30 minute intervals. When the "Remaining time" display shows "- -", the sleep timer is canceled.
 - 6 Press MENU to return to normal 'TV viewing.

Using SuperQuickView[™]

SLEEP TIMER

--- REMAIN

SuperQuickView allows you to set up four different channel memories (A, B, C and D) and to cycle through these channels by pressing the SuperQuickView button for that memory.

The use of these memories is flexible and can be used in different ways, for example:

Theme based -- program a memory for sports channels, movie channels, news channels or educational channels.

Family member based -- program a special memory of four favorite channels, one memory for each of four different family members.

Chapter 3: Operating Your TV

Using SuperQuickView[™] (cont.)

customizing the SuperQuickView memories:



Press MENU to return to normal TV viewing.

Using the Advanced Features

▶**Important:** You can set channel numbers 70 to 125 in the SuperQuickView memory only when the AIR/CABLE setting is one of the cable selections; that is Cable Std, Cable HRC, or Cable IRC.

scanning the SuperQuickView channels



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Press the A, B, C or D button on the remote control. The "A" button will scan the channels in the "SuperQuickView A" memory and the "B" button will scan the channels in the "SuperQuickView B" memory, etc.

The channels will be scanned in the order they were placed in the mercory. In the example at left, press the "A" button repeatedly to scan channel 120, channel 12, channel 104, and channel 4, in that order.

removing channels from the SuperQuickView memories



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Using SuperQuickView[™] (cont.)



Using One-Key Play

One-Key Play is a special feature that makes it easier to use your television with a Mitsubishi VCR. When you press the PLAY button on the remote control, the TV will automatically switch to the input or channel you use to watch the playback of a video tape.

before you begin

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You must have a Mitsubishi VCR. If this VCR has VCR A and VCR B remote control codes, the VCR must be set to VCR A. See your VCR's owner's guide for instructions on setting the VCR to VCR A.

If you have not reprogrammed the remote control and the remote is able to operate your VCR, then your VCR is already set to VCR A. The remote control that came with the TV was programmed at the factory to operate Mitsubishi VCRs set to VCR A remote codes.

You need to know which Input (INPUT1 or INPUT2) or channel (3 or 4) you use to watch a video tape.

Using One-Key Play (cont.)

setting the One-Key Play input or channel

• Press MENU. The Main Menu will appear on the screen. SLEEP TIMER **2** Use ADJUST \blacktriangle or \blacktriangledown or VIDEO ADJUST CHANNEL $\land \lor$ to move the AUDIO SELECT cursor \blacklozenge next to "Set up". CLOSED CAPTION LANGUAGE **③** Press ADJUST ► or VOLUME. \$ SET UP The Set Up menu will appear. **4** Use ADJUST \blacktriangle or \blacktriangledown or CHANNEL $\land \checkmark$ to move the cursor 🖨 next to "One-Key Play". **G** Press ADJUST \triangleright or VOLUME. The screen will show the One-**ONE-KEY PLAY** Key Play menu. **†** CH 3 **6** Press ADJUST \blacktriangle or \checkmark or CH 4 CHANNEL $\land \checkmark$ to move the cursor next to the input (INPUT 1 or INPUT 2) or INPUT1 INPUT2 channel number (CH 3 or CH 4) OFF you use to watch a video tape. If you do not have a Mitsubishi VCR, make sure the cursor 🖨 is next to "Off." **7** Press MENU to return to normal TV viewing. operating One-Key Play

- Make sure there is a tape in your VCR.
- Turn on your TV and press PLAY. The 'TV will automatically switch to the input or channel you use to watch a video tape and the VCR will begin playing the tape.
- **Important:** If there is no tape in your Mitsubishi VCR, the TV will still switch to the input or channel when you press PLAY, however this input or channel may remain blank.
- **Important:** One-Key Play will turn on selected models of Mitsubishi VCRs, but only if a tape is in the VCR. One-Key Play will not turn on the TV.

Using video mute (CS-27309 only)

When you use the video mute function, your TV will display a blue screen when it is receiving a very weak channel or is tuned to a channel that is not broadcasting in your area.

If you wish to watch a weak channel, you should have the video mute set to off.



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♦ Using the Picture-in-Picture (PIP) mode (CS-27309 only)

One of the special features of this TV is the Picture-in-Picture (PIP) mode, which allows you to view two different sources at the same time. In this section you'll learn:

- Activating the PIP image
- Selecting the input for the PIP image
- Exchanging the PIP image and the main image
- Changing the channel in the PIP image or main image
- Moving the PIP image
- Freezing the PIP image

Important: You must have a VCR connected to the TV to see two different live action pictures when using PIP.

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Activating the PIP image



- Select the number of the TV channel you want to view.
- Press the PIP button, the small PIP image will appear on the screen. The display SUB: and a channel number, or INPUT1, or INPUT2 will indicate which source the PIP picture is using (either the same channel as the main picture, or Input 1, or Input 2).
- Press PIP once again to cancel the PIP image.
- **Important:** When the main image is black and white, the PIP image may also appear in black and white.
- ▷Important: If you move the PIP image and then turn it off, it will appear in the new position the next time you activate the PIP image.

Selecting the input for the PIP image

By itself, your TV can show only the same picture in the PIP image as it is showing for the main picture. In order to see a different channel or picture in the PIP image, you will need to use your VCR (or other equipment) that is connected to either one of the inputs (INPUT1 or INPUT2). You must also select this input with the remote control.



Using the Advanced Features

Selecting the input for the PIP image (cont.)



Press the PIP INPUT button to change the PIP image to the input that shows your VCR's picture, INPUT1 or INPUT2. The display will show SUB: and the selected input to confirm your setting.

▷Important: If you select a new PIP input and then turn off the PIP image, the new input will show the next time you activate PIP.

Exchanging the PIP image and the main image

When the PIP image is coming from your VCR and the main image is the channel you selected on the TV, you may wish to exchange or swap these images.



Chapter 3: Operating Your TV

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Changing the channel in the PIP image or the main image



- Use the VCR CH button to change the channel of the image provided by the VCR.
- **2** Use the CHANNEL buttons to change the TV's channel.

Moving the PIP image



The PIP image can appear in any of the four corners of the screen. To move the PIP image, press the POSITION button repeatedly. The PIP image will move from corner to corner in a counter clockwise order.

Important: If you move the PIP image and then turn it off, it will appear in the new position the next time you activate the PIP image.

Freezing the PIP image



- When the PIP image has been activated, press the FREEZE button to show a frozen picture in the PIP box.
- Press the FREEZE button again to return the image to a "live" picture.

Using the Advanced Features

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Even though you're now familiar with the basic and advanced operations of the TV, you may run into trouble from time to time as you become accustomed to the TV. This chapter offers solutions to some of the common problems you may encounter. We suggest that you consult this chart before contacting a Mitsubishi service representative.

Problems	Possible Solutions	For More Information	
• The remote control doesn't work.	• Check that the batteries are fresh and installed correctly.	• See "Getting ready to use the remote control" in Chapter 1 for an explanation of how to install batteries in the remote control.	
	• Check that the select switch is set to "TV."	• See "Remote control buttons and functions" in Chapter 1, which explains where the select switch is located.	
	• Be sure that you are pointing the tip of the remote control toward the TV from a distance of no more than 20 feet.	• See "Getting ready to use the remote control" in Chapter 1, which contains pointers for using the remote control.	
• You can't access a channel or adjust the volume.	• If a menu or video adjust- ment display is showing, press MENU or wait to return to normal TV viewing.	• The CHANNEL $\uparrow \lor$ and VOLUME $\uparrow \lor$ functions are not available while the menu or video adjustment displays are showing.	
• You can't see a different channel in the reduced PIP image. (CS-27309 only)	• Use the PIP INPUT button to change the source of the PIP image.	• See "Using the Picture-in- Picture (PIP) modes" in Chapter 3.	
	• Make sure you have a second source, such as a VCR, turned on and connected to your TV.		
• You cannot see a picture when you play a tape in the VCR.	• If you connected your VCR with A/V cables, use the INPUT button to select the input source that the VCR is connected to.	• See "Selecting the input source" for an explanation about changing the input.	

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Troubleshooting (cont.)

Problems		Possible Solutions	For More Information	
•	On-screen displays appear each time you adjust a function.	• This is part of the normal operation of the TV.	• See "Understanding the On- Screen Displays" in Chapter 3 for a full explanation of the on-screen displays.	
•	There's no sound even when the volume is turned up.	 Check that MUTE isn't on. The TV may be set to "second audio program" (S.A.P.). Check that "Speaker" function is set to "On." 	 See "Remote control buttons and functions" in Chapter 1, which explains the location and function of the MUTE button. See "Selecting the sound" in Chapter 3. 	
•	The sound doesn't match the image on screen.	• The TV may be set to "second audio program" (S.A.P.).	• See "Selecting the sound" in Chapter 3.	
•	There is a large black rectangle on the screen.	• The TV has been set to "text" mode, but there is no text information being broadcast.	• See "Using the closed caption decoder" in Chapter 3.	

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Caution and care

►Warning:	Don't leave stationary images on-screen for more than 10 minutes.		
-	These images can scar the picture tube, causing permanent dam-		
	age to the TV. Some examples of stationary images are:		

- stock-market reports
- station logos (especially bright ones)
- video game displays
- shopping channel displays
- the television's own on-screen displays

▷**Important:** If you plan to place speakers next to the TV, make sure they are magnetically shielded. Ordinary speakers will cause distortion in the picture due to their strong magnets. This distortion, however, will not harm the picture tube.

> For maximum enjoyment and safe operation of your Mitsubishi Color TV, please read the "IMPORTANT SAFEGUARDS" carefully and apply them properly.

Cleaning

Normally, light dusting with a non-scratching duster will keep your TV clean.

If you want to wipe down your TV, turn it off and unplug it. Then, wipe it gently with a soft cloth slightly moistened with <u>water</u>. You can add a few drops of mild liquid detergent to the water for oily dirt.

DO NOT allow liquid to enter the TV through the ventilation slots.

DO NOT use strong or abrasive cleaners.

DO NOT use spray liquids or cleaners directly on the TV's surface.

DO NOT scrub or rub the TV harshly. Wipe gently.

Calling for service

If you have a problem with your TV that you cannot correct, consult your Mitsubishi dealer or Mitsubishi Authorized Warranty Service Center.

DO NOT adjust any controls not described in this owner's guide.

DO NOT remove the protective back cover of this unit.

If you see one of the following displays on your screen, you should not change any settings. These are special displays used by the factory.



If one of these displays appear, turn the TV off and then on again. If the display appears again when you turn on the TV, consult your Mitsubishi dealer or Mitsubishi Authorized Warranty Service Center.



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MITSUBISHI COLOR TELEVISION OR COLOR MONITOR LIMITED WARRANTY

MITSUBISHI CONSUMER ELECTRONICS AMERICA, INC. ("MCEA") warrants to the original purchaser of this television or monitor if purchased from an authorized MITSUBISHI Audio/Video Dealer that, should it prove defective by reason of improper workmanship and/or material:

a. Picture Tube. For two years from the date of purchase at retail, we will repair or replace, at our option, any defective picture tube without charge for the tube.

b. Other Parts. For one year from the date of original purchase at retail, we will repair or replace, at our option, any defective part without charge for the part.

c. All parts used for replacement are warranted for the remainder of the original warranty period.

d. Labor. For one year from the date of original purchase at retail, we will provide the labor for a warranty repair by an authorized MITSUBISHI service center without charge.

e. Notice. To obtain warranty service, you must notify an authorized MITSUBISHI service center of any defect within the applicable warranty time period.

1. TO OBTAIN WARRANTY SERVICE DURING THE FIRST YEAR:

a. Contact your nearest authorized MITSUBISHI service center, whose name and address can be obtained from your MITSUBISHI dealer or by writing or calling MCEA at the address and telephone number provided below.

b. Warranty service will be provided in your home or, if required, at an authorized service shop, provided that your television is located within the geographic territory customarily covered by an authorized MITSUBISHI service center. If not, you must either deliver your television to an authorized service location at your own expense, or pay for any travel and/or transportation costs the service center may charge to and from your home. Actual service labor will be provided without charge.

c. Proof of purchase date from an authorized MITSUBISHI Dealer is required when requesting warranty service. Present your sales receipt or other document which establishes proof and date of purchase. THE RETURN OF THE OWNER REGISTRATION CARD IS NOT A CONDITION OF WARRANTY COVERAGE. However, please return the Owner Registration Card so that we can contact you should a question of safety arise which could affect you.

2. AFTER THE FIRST YEAR, to obtain warranty service for a defective picture tube, you are responsible for delivering the television or monitor to an authorized MITSUBISHI service center at your own expense.

3. THIS WARRANTY DOES NOT COVER damage caused by: modification, alteration, repair or service of this product by anyone other than an authorized MITSUBISHI service center; physical abuse to, or misuse of, the product; operation in a manner contrary to the instructions which accompany the product; freight damage; or any damage caused by acts of God such as lightning or fluctuation in electrical power. This warranty also excludes all costs arising from installation, adjustment of user controls, external antenna systems, service of products purchased or serviced outside the U.S.A., initial technical adjustments (set-up) and user-required maintenance. Consult the operating instructions furnished with the product for information regarding user controls.

4. ANY EXPRESS WARRANTY NOT PROVIDED HEREIN, AND ANY REMEDY WHICH, BUT FOR THIS PROVISION, MIGHT ARISE BY IMPLICATION OR OPERATION OF LAW, IS HEREBY EXCLUDED AND DISCLAIMED. THE IMPLIED WARRANTIES OF MERCHANTABILITY AND OF FITNESS FOR ANY PARTICULAR PURPOSE ARE EXPRESSLY LIMITED TO A TERM OF ONE YEAR.

5. UNDER NO CIRCUMSTANCES SHALL MCEA BE LIABLE TO PURCHASER OR ANY OTHER PERSON FOR ANY INCIDENTAL, SPECIAL OR CONSEQUENTIAL DAMAGES, WHETHER ARISING OUT OF BREACH OF WARRANTY, BREACH OF CONTRACT, OR OTHERWISE.

6. Some states do not allow limitations on how long an implied warranty lasts, or the exclusion or limitation of incidental, special, or consequential damages, so the above limitations or exclusions may not apply to you.

7. This warranty gives you specific legal rights and you may also have other rights which vary from state to state.

8. BEFORE REQUESTING SERVICE, please review the instruction booklet to insure proper installation and correct customer control adjustment. If the problem persists, contact your nearest MITSUBISHI Dealer for name(s) of authorized MITSUBISHI Service Center(s). If you are unable to obtain this information, please call 1-800-332-2119, or write us at the address below.

MITSUBISHI CONSUMER ELECTRONICS AMERICA, INC.

P.O. Box 5025 Norcross, GA 30091-5025

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RETAIN THIS PORTION FOR YOUR RECORDS

SERIAL NO.

MITSUBISHI

CUSTOMER NAME				
CITY	STATE	ZIP		
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Norcross, GA 30071-1305

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