

HITACHI

27" PC READY COLOR TV

Reference Guide
Child Lock & Movie/TV Ratings

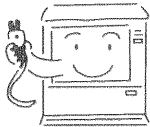
27MMV40B

OPERATING GUIDE



IMPORTANT SAFEGUARDS

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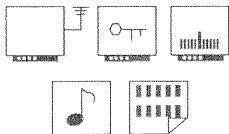
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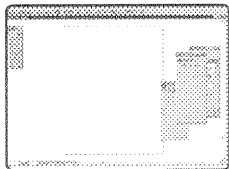
THE REMOTE CONTROL

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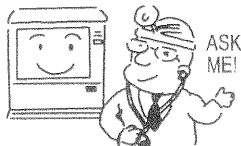
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Follow all warnings and instructions marked on this projection television.

	WARNING RISK OF ELECTRIC SHOCK DO NOT OPEN	
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.		



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 a sufficient magnitude to constitute a risk of electric shock to persons.



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

NOTE:

- There are no user serviceable parts inside the television.
- Model and serial numbers are indicated on back side of the television.
- This television is not intended for use in a computer room.

CAUTION: Adjust only those controls that are covered in the instructions, as improper changes or modifications not expressly approved by HITACHI could void the user's authority to operate the TV.

MODIFICATIONS: The FCC requires the user to be notified that any changes or modifications made to this device that are not expressly approved by Hitachi America, Ltd. Home Electronics Division may void the user's authority to operate the equipment.

POWER SOURCE

This projection television is designed to operate on 120 volts 60Hz, AC current.
Insert power cord into a 120 volt 60Hz outlet.

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

NEVER CONNECT THE TELEVISION TO 50HZ, DIRECT CURRENT, OR ANYTHING OTHER THAN THE SPECIFIED VOLTAGE.

NOTE: This television receiver will display television closed captioning, (or), in accordance with paragraph 15.119 of the FCC rules.



CAUTION: Never remove the back cover of the television as this can expose you to very high voltages and other hazards. If the television does not operate properly, unplug the television and call your authorized dealer or service shop.



IMPORTANT SAFEGUARDS

CAUTION:

- Read all of these instructions.
- Save these instructions for later use.
- Follow all warnings and instructions marked on the television receiver.

SAFETY POINTS YOU SHOULD KNOW ABOUT YOUR HITACHI TELEVISION RECEIVER

Our reputation has been built on the quality, performance, and ease of service of HITACHI television receivers.

Safety is also foremost in our minds in the design of these units. To help you operate these products properly, this section illustrates safety tips which will be of benefit to you. Please read it carefully and apply the knowledge you obtain from it to the proper operation of your HITACHI television receiver.

Please fill out your warranty card and mail it to HITACHI. This will enable HITACHI to notify you promptly in the improbable event that a safety problem should be discovered in your product model.

FOR YOUR PERSONAL SAFETY

1. This television set is equipped with a polarized alternating-current line plug (a plug having one blade wider than the other.) This plug will fit into the power outlet only one way. This is a safety feature. 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.



2. When the power cord or plug is damaged or frayed, unplug the television set from the wall outlet and refer servicing to qualified service personnel.



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



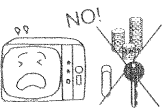
4. Do not allow anything to rest on or roll over the power cord, and do not place the TV where the power cord is subject to traffic or abuse. This may result in a shock or fire hazard.



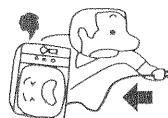
5. Do not attempt to service the television set yourself as opening or removing covers may expose you to dangerous voltage or other hazards. Refer all servicing to qualified service personnel.



6. Never push objects of any kind into the television's cabinet slots 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 television set.



7. If the television set has been dropped or the cabinet has been damaged, unplug the television set from the wall outlet and refer servicing to qualified service personnel.



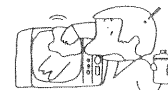
8. If liquid has been spilled into the television set, unplug it from the wall outlet and refer service to qualified service personnel.



9. Do not subject your television set to impact of any kind. Be careful not to damage the picture tube surface.



10. Unplug the television set from the wall outlet before cleaning. Use a damp cloth for cleaning. Do not use liquid or aerosol cleaners.



- 11-1. Do not place the television set on an unstable cart, stand, or table. The television set may fall, causing serious injury to a child or an adult, and serious damage to the appliance. Use only with a cart or stand recommended by the manufacturer, or sold with the television set. Wall or shelf mounting should follow the manufacturer's instructions, and should use a mounting kit approved by the manufacturer.



- 11-2. 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.



PROTECTION AND LOCATION OF YOUR SET

12. Do not use the television set near water, for example, near a bathtub, washbowl, kitchen sink, or laundry tub, in a wet basement, or near a swimming pool, etc.



- Never expose the set to rain or water. If the set has been exposed to rain or water, unplug set from wall outlet and refer to qualified service personnel.



13. Choose a place where light (artificial or sunlight) does not shine directly on the screen.



14. Avoid dusty places, since accumulated dust inside the chassis may cause failure of the set when high humidity persists.

15. The set has slots or openings in the cabinet for ventilation purposes which provide reliable operation of the receiver and protect the TV from overheating. These openings must not be blocked or covered.



- Never cover the slots or openings with cloth or other material.



- Never block the bottom ventilation slots of the set by placing it on a bed, sofa, rug, etc.



- Never place the set near or over a radiator or heat register.

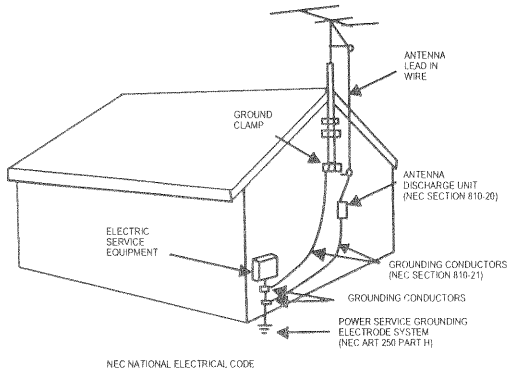


- Never place the set in a built-in enclosure, unless proper ventilation is provided.



PROTECTION AND LOCATION OF YOUR SET

- 16-1. If an outside antenna is connected to the television set, 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, NFPA No. 70-1975, 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 electrode, and requirements for the grounding electrode.

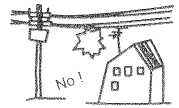


EXAMPLE OF ANTENNA GROUNDING AS PER NATIONAL ELECTRICAL CODE INSTRUCTIONS.

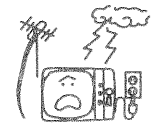
16-2. Note to CATV system installer:

(Only for television sets with CATV reception)
This reminder is provided to call CATV system installers 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.

17. An outside antenna system should not be located in the vicinity of overhead power lines or other electrical lights 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.

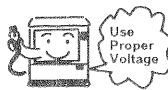


18. For added protection for the television set during a lightning storm, or when it is left unattended and unused for long periods of time, unplug it from the wall outlet and disconnect the antenna. This will prevent damage due to lightning and power-line surges.



OPERATION OF YOUR SET

19. The television set 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 supply at your home, consult your television dealer or local power company. For television sets designed to operate from battery power, refer to the operating instructions.



20. If the television set does not operate normally by following the operating instructions, unplug the television set from the wall outlet and refer servicing to qualified service personnel. Adjust only those controls that are covered in the operating instructions as improper adjustment of other controls may result in damage and will often require extensive work by a qualified technician to restore the television set to normal operation.

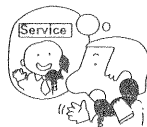


21. If your television set is to remain unused for a period of time, (such as when going on a holiday), turn the television set OFF and unplug it from the wall outlet.



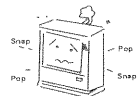
IF THE SET DOES NOT OPERATE PROPERLY

22. If you are unable to restore normal operation by following the detailed procedure in your operating instructions, do not attempt any further adjustments. Unplug the set and call your dealer or service technician.



23. Whenever the television set is damaged or fails, or if there is a distinct change in performance that indicates a need for service, unplug the set and have it checked by a professional service technician.

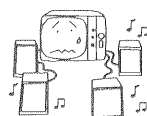
24. It is normal for some television sets to make occasional snapping or popping sounds, particularly when being turned on or off. If the snapping or popping is continuous or frequent, unplug the set and consult your dealer or service technician.



FOR SERVICING AND MODIFICATION

25. Do not use attachments not recommended by the television set manufacturer as they may cause hazards.

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



27. Upon completion of any service or repairs to the television set, ask the service technician to perform routine safety checks to determine that the television is in safe operating condition.





WARNING

Continuous On-Screen Displays such as video games, stock market quotations, computer generated graphics, and other fixed (non-moving) patterns can cause permanent damage to Color Television Receivers. Such "PATTERN BURNS" constitute misuse and are NOT COVERED by your HITACHI Factory Warranty.

This color television receiver was intended mainly for the private viewing of programs broadcast by TV stations, cable companies, and programs from other video sources. Public viewing may require prior authorization from the broadcaster or owner of the video program.

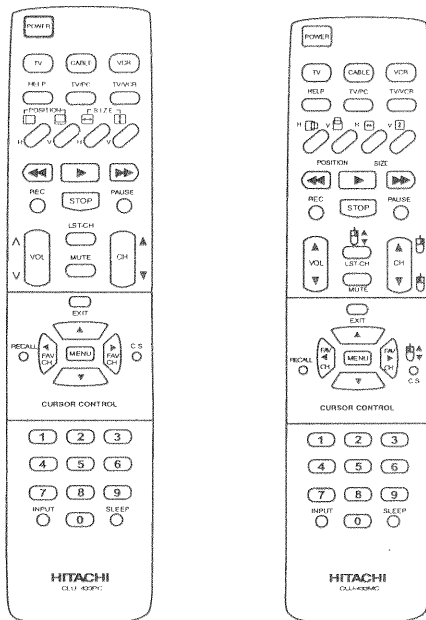
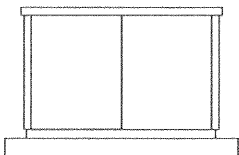


ACCESSORIES

Check that you have the following accessories before disposing of the packing material.

1. Remote Control Unit.
2. Two "AA" size, 1.5V batteries (For Remote Control Unit).

For information regarding how to obtain these accessories, please call TOLL FREE 1-800-448-2244 for your nearest HITACHI Authorized Parts Distributor in the continental United States. For Alaska and Hawaii, please contact your nearest HITACHI regional office.

PARTNAME	PARTNO.	ILLUSTRATION
27MMV40B CLU-433PC OR CLU-433MC REMOTE CONTROL	HL00723 HL00725	
27V TELEVISION STAND SP271B (Not included, order separately)	H530021	 CUSTOM HITACHI TELEVISION STAND Excellent for VCR and videotape storage. Special features include curved smoke glass doors and an adjustable shelf. Available in black.

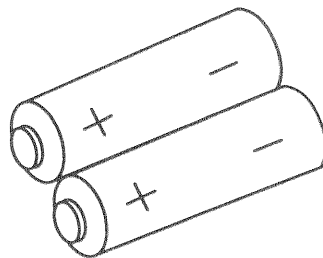


CAUTION: Television stand model SP271B is designed for use only with a 27 inch or smaller television set. Use of a smaller stand, a non Hitachi recommended stand or a generic stand may result in instability, causing possible injury.

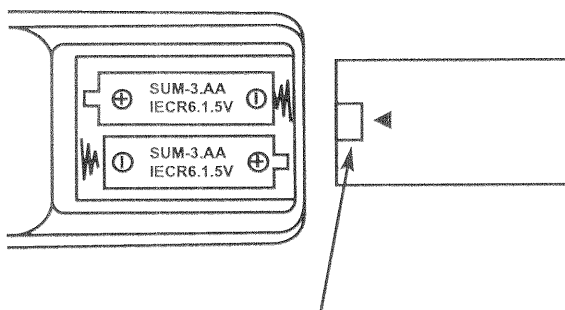
REMOTE CONTROL BATTERY INSTALLATION AND REPLACEMENT



1. Open the battery cover of the remote control by pushing the notched part of the cover with your fingers.
2. Insert two new "AA" size batteries in the remote. When replacing old batteries, push them towards the springs and lift them out.
3. Match the batteries to the (+) and (-) marks in the battery compartment.
4. Replace the cover.



BOTTOM VIEW



Lift up on tab to
remove back cover.

CAUTIONS

1. If your television set is to remain unused for a long period of time, for instance when you go on vacation, unplug the television from the wall outlet.
2. Do not subject the remote control to shocks such as dropping it on the floor, etc. Precision parts may be damaged.
3. Do not allow the remote control to become wet and avoid placing it in areas of high humidity. Do not leave it on or near a heater. Excess heat or moisture may cause the unit to cease operation.
4. If the batteries become exhausted, remote control operation may become erratic or stop altogether. Replace the old batteries with new "AA" types.



HOW TO SET UP YOUR NEW HITACHI COLOR TV

ANTENNA

Unless your TV is connected to a cable TV system or to a centralized antenna system, a good outdoor color TV antenna is recommended for best performance. However, if you are located in an exceptionally good signal area that is free from interference and multiple image ghosts, an indoor antenna may be sufficient.

LOCATION

Select an area where sunlight or bright indoor illumination will not fall directly on the picture screen. Also, be sure that the location selected allows a free flow of air to and from the back cover of the set.

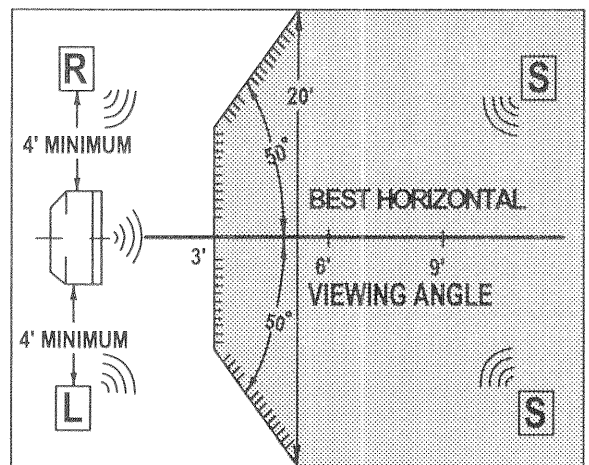
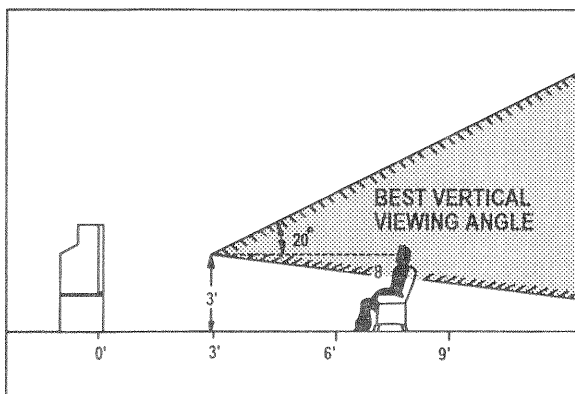
To avoid cabinet warping, cabinet color changes, and increased chance of set failure, do not place the TV where temperatures can become excessively hot, for example, in direct sunlight or near a heating appliance, etc.

VIEWING

To view the television screen at its best, test various locations in the room. The drawings below show several suggestions.

The best picture is seen by sitting directly in front of the TV and about 6 to 9 feet from the screen. During daylight hours, reflections from outside light may appear on the screen. If so, drapes or screens can be used to reduce the reflection or the TV can be located in a different section of the room.

If the TV's audio output will be connected to a Hi-Fi system's external speakers, the best audio performance will be obtained by placing the speakers equidistant from each side of the receiver cabinet and as close as possible to the height of the picture screen center. For best stereo separation, place the external speakers at least 4 feet from the side of the television. Place the surround speakers to the side or behind the viewing area. Differences in room sizes and acoustical environments will require some experimentation with speaker placement for best performance.

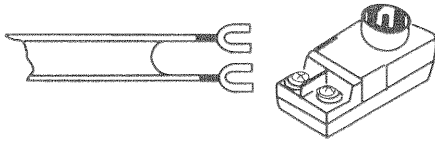


CAUTION: The magnetic field of external speakers may cause the picture to distort if the speakers are placed too close to the television. Move the speakers away from the TV until there is no picture distortion.

HOOKUP CABLES

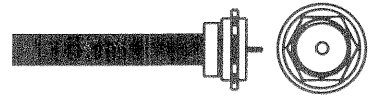


Most video/audio connections between components can be made with shielded video and audio cables that have phono connectors. For best performance, video cables should use 75-Ohm coaxial shielded wire. Cables can be purchased from most stores that sell audio/video products. Below are illustrations and names of common connectors. Before purchasing any cables, be sure of the output and input connector types required by the various components and the length of each cable.



300-Ohm Twin Lead Connector

This outdoor antenna cable must be connected to an antenna adapter (300-Ohm to 75-Ohm).



"F" Type 75-Ohm Coaxial Antenna Connector

For connecting RF signals (antenna or cable TV) to the antenna jack on the television.



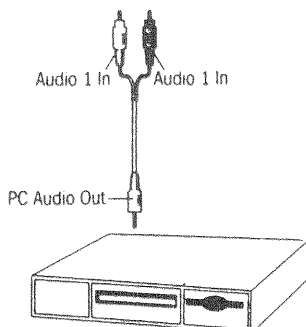
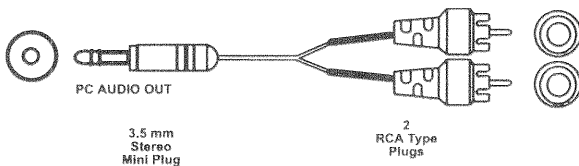
Phono Connector

Used on all standard video and audio cables which connect to inputs and outputs located on the television's rear jack panel and front control panel.



S-Video (Super Video) Connector

This connector is used on camcorders, VCRs and laser-disc players with an S-Video feature in place of the standard video cable to produce a high quality picture.



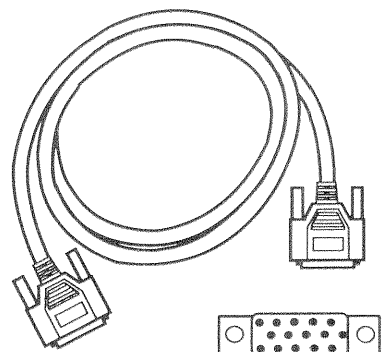
Stereo Cable (3.5 mm plug to 2 RCA plug) (Provided)

This cable is used to connect from Audio out jack on the back of the computer's sound card to the PC Audio input Jack of the monitor.



Mouse Connector Cable (Optional)

This cable is used to connect the computer mouse port to the TV/monitor mouse output for remote control mouse operation.



D-SUB MINI 5-Pin Cable (Provided)

This cable is used to connect a computer VGA output to the D-SUB input located on the rear panel.



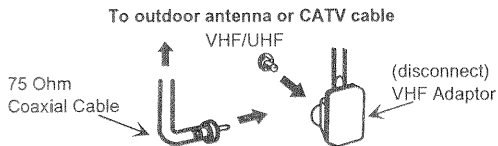
HOOKUP CABLES AND CONNECTORS

ANTENNA CONNECTIONS

These sets are equipped with one VHF/UHF antenna terminal. The VHF/UHF terminal can be used for normal TV, cable TV (CATV), a TV game, etc.

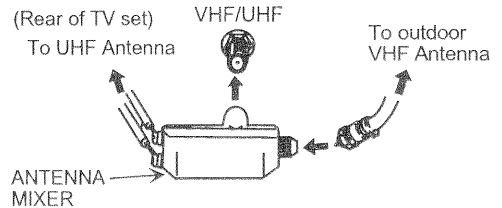
1. VHF (75-Ohm) antenna/CATV

When using a 75-Ohm coaxial cable system, disconnect the VHF adaptor from the VHF 75-Ohm receptacle and connect the outdoor antenna or CATV cable to a VHF 75-Ohm receptacle.



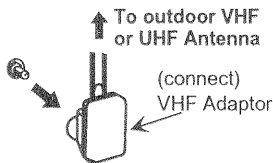
3. When both VHF and UHF antennas are connected

Attach an optional ANTENNA MIXER to the TV antenna terminal and connect the cables to the ANTENNA MIXER.



2. VHF (300-Ohm) antenna/UHF antenna

When using a 300-Ohm twin lead from an outdoor antenna disconnect the (VHF or UHF) indoor antenna leads from screws of the (VHF or UHF) adaptor and connect outdoor (VHF or UHF) leads to these screws of a (VHF or UHF) adaptor.



Notes:

1. If an outdoor antenna/CATV is used, disconnect the indoor antenna. Ghosting and poor reception may result if both the indoor and outdoor antennas/CATV are connected at the same time.
2. Consult your dealer or service store for the ANTENNA MIXER and (VHF or UHF) adaptor.
3. The special converter (decoder) will be supplied by the cable company.

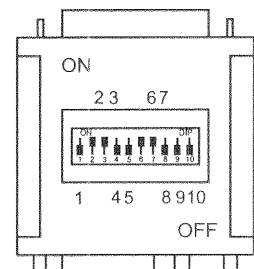
NOTE: Optional adapter for *Apple® Macintosh® computers. (*See page 51). If the optional AESP model G301/U Macintosh to VGA® adapter connector is configured and connected between Macintosh video out and the 27MMV40B video in, the Macintosh is "forced" to boot in 640 x 480/60 Hz mode because the operational adapter correctly manipulates the Macintosh sense pins.

For the optional adapter to work, it's DIP switch settings should be # 2, 3, 6, 7 = ON and # 1, 4, 5, 8, 9, 10 = OFF.

See below:

Mode 5 = 2367 (VGA 640 x 480/60 Hz configuration)
Composite Separate Sync

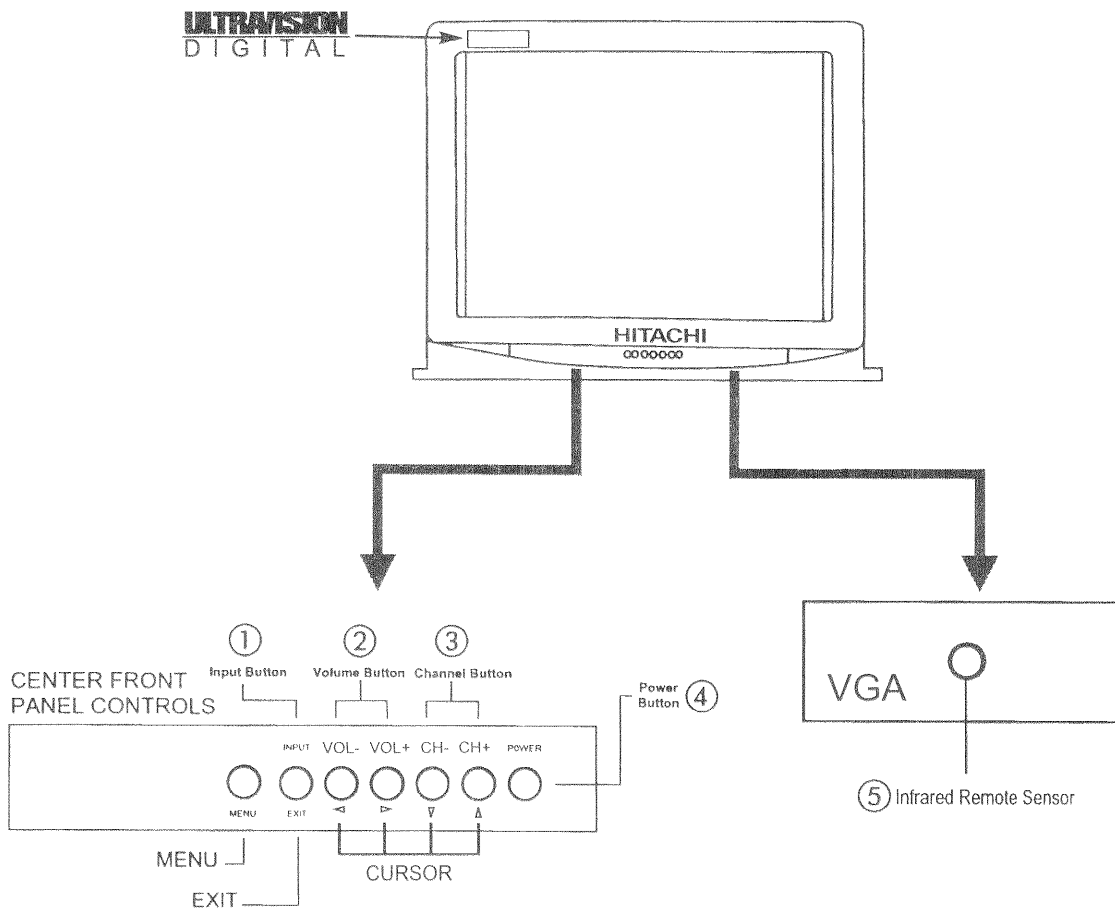
SW1	SW2	SW3	SW4	SW5	SW6	SW7	SW8	SW9	SW10
OFF	ON	ON	OFF	OFF	ON	ON	OFF	OFF	OFF



FRONT PANEL CONTROLS



FRONT VIEW



See page 20 for MENU, CURSOR, and EXIT button operations.

A detailed explanation of the circled numbers is on page 12.
VGA - See page 51.



FRONT PANEL CONTROLS

- ① **INPUT Selector**
Press this button to select the current antenna source or VIDEO. Your selection is shown at the top right corner of the screen.
- ② **VOLUME Level**
Press these buttons for your desired sound level. The volume level will be displayed on the TV screen.
- ③ **CHANNEL Selector**
Press these buttons until the desired channel appears at the top right corner of the TV screen.
- ④ **POWER Button**
Press this button to turn the TV on or off.

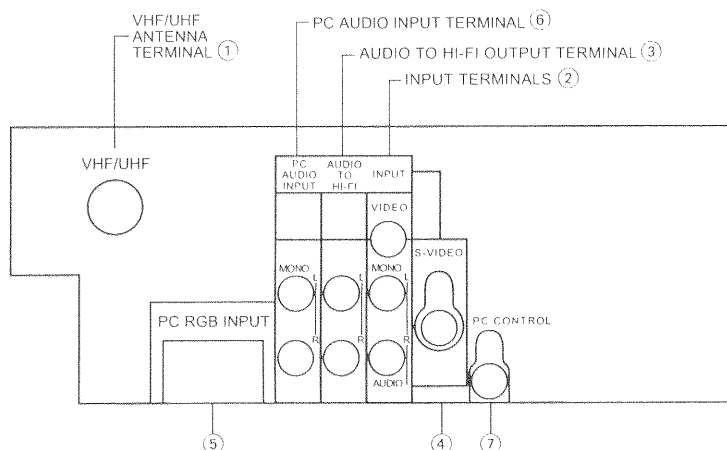
NOTE: Your HITACHI TV will appear to be turned OFF if there is no video input when VIDEO is selected. If you have no input to VIDEO, press the INPUT button until the normal broadcast picture appears. If the picture does not appear, the power is OFF.

- ⑤ **REMOTE CONTROL INFRARED Sensor**
Point your remote control at this area when selecting channels, adjusting volume, etc.

NOTE: Front panel control CURSOR operation will not operate the FAMILY FAVORITES channel function.



REAR VIEW



① Antenna Inputs

The VHF/UHF terminal can be used for normal TV, cable TV (CATV), a video game, etc.

② Audio/Video Input

Use the audio and video inputs to connect external devices, such as VCRs, camcorders, laserdisc players, video games, etc.

③ Audio to Hi-Fi

These jacks provide variable audio output to a separate stereo system amplifier. With this connection, the audio to the stereo can be controlled by the television's remote control. (see page 15)

④ S-Video

Input 1 provides S-Video (Super Video) jacks for connecting equipment with S-Video output capability.

⑤ PC RGB Input

Use this 15-pin D-Sub Input for your PC connection. (see page 43)

⑥ PC Audio Input

Connect external devices for audio in PC mode. (see page 46)

⑦ PC Mouse Control

Use this input for remote control mouse operation (see page 46)

TIPS ON REAR PANEL CONNECTIONS

IMPORTANT: TURN POWER OFF ON THE TV/PC MONITOR AND THE PC BEFORE CONNECTING OR DISCONNECTING ANY CABLES.

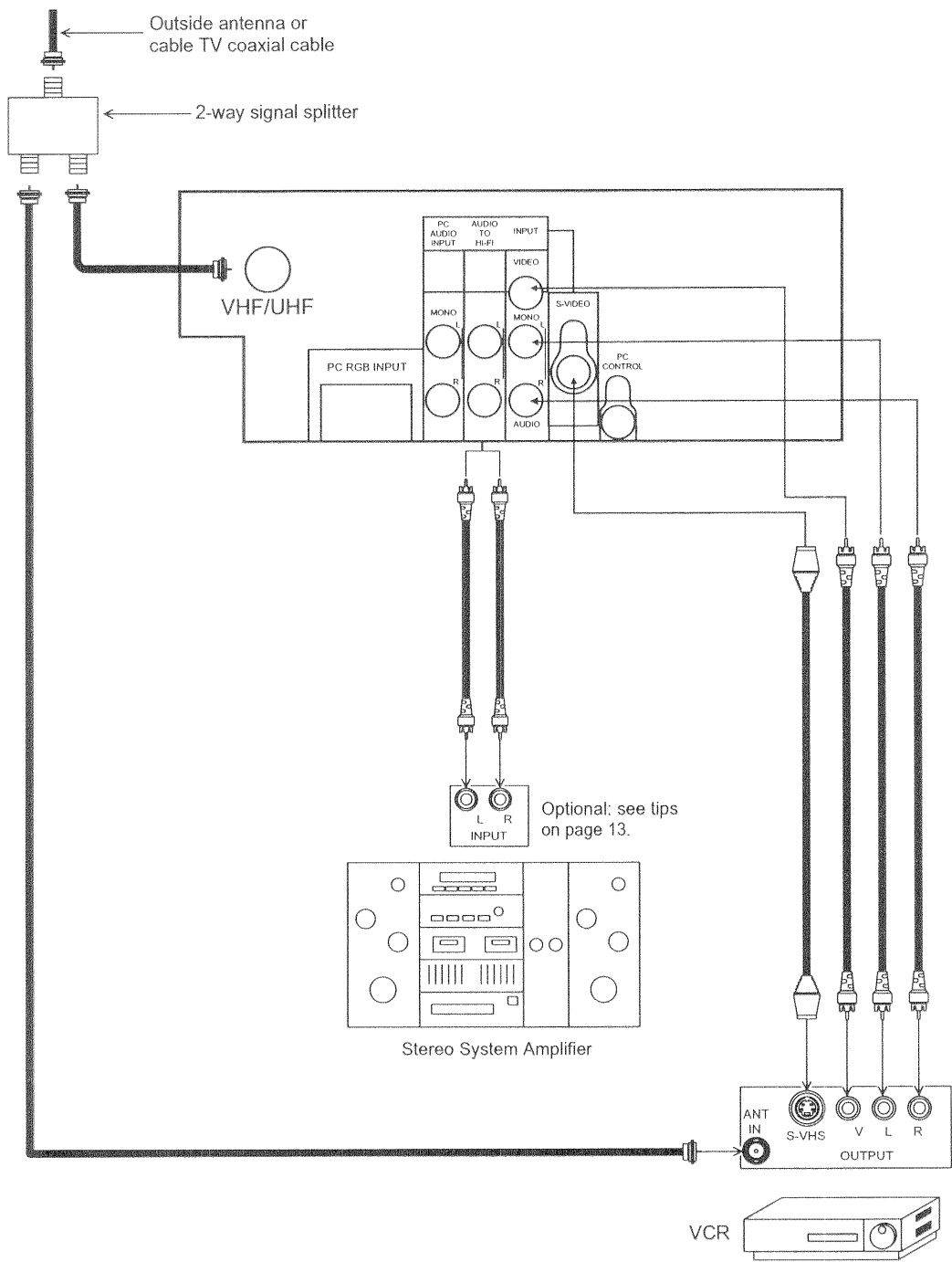
The S-Video connection is provided for high performance laserdisc players, VCRs etc., that have this feature. Use this connection in place of the standard video connection if your device has this feature.

If your device has only one audio output (mono sound), connect it to the left audio jack on the TV.

Refer to the operating guide of your other electronic equipment for additional information on connecting your hookup cables.



TV REAR PANEL CONNECTIONS



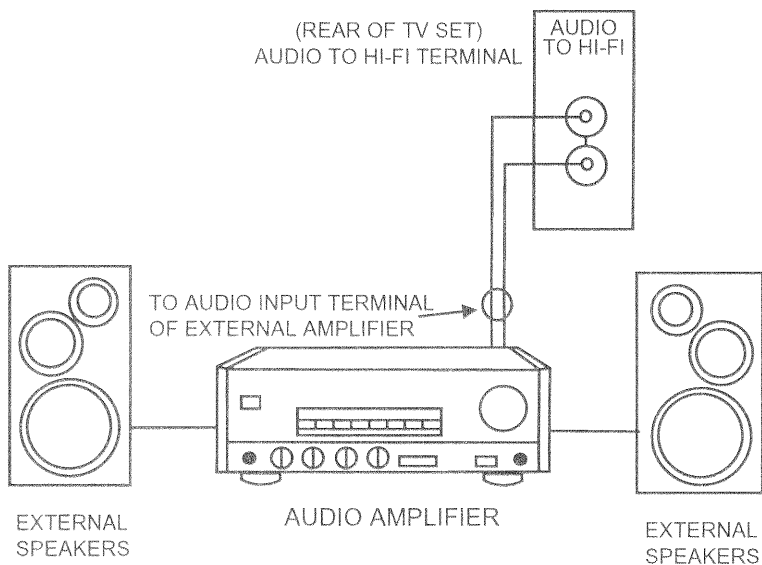
Typical full feature set-up. Follow connections that pertain to your personal entertainment system.

EXTERNAL CONNECTIONS



CONNECTING EXTERNAL AUDIO AMPLIFIER

To control the audio level of an external audio amplifier with the remote control, connect the system as shown below.



NOTE: To prevent damage to the speaker and distorted sound, set the volume control of the audio amplifier lower and adjust the sound using the remote control of the TV set.



CONNECTING EXTERNAL VIDEO SOURCES

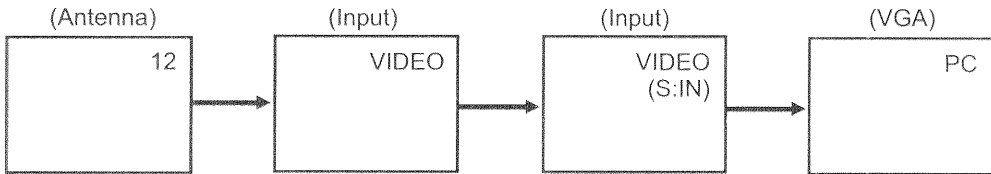
The exact arrangement you use to connect the VCR, camcorder, and laserdisc player to your TV set is dependent on the model and features of each component. Check the owner's manual of each component for the location of video and audio inputs and outputs.

The following connection diagrams are offered as suggestions. However, you may need to modify them to accommodate your particular assortment of components and features. For best performance, video and audio cables should be made from coaxial shielded wire.

Before Operating External Video Source

The input mode is changed every time the INPUT button is pressed as shown below. Connect external source to the INPUT terminal, then press the INPUT button as necessary to view the input source (see page 21).

INPUT MODE SELECTION ORDER

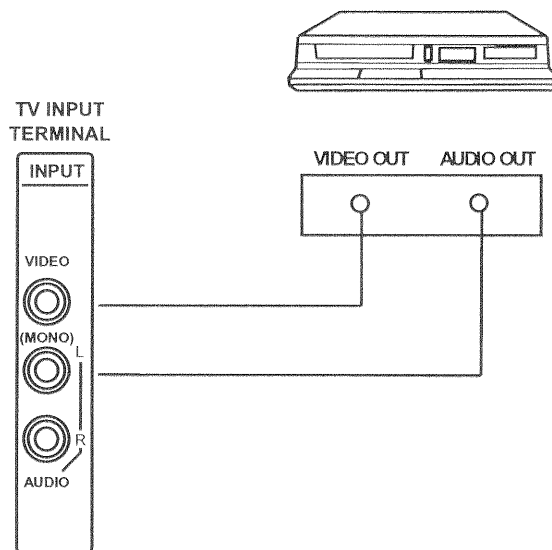


NOTE: When the TV is set to VIDEO and a video signal is not received from VIDEO INPUT JACK on the jack panel of the TV (i.e., VCR/laserdisc player, etc. is not connected or the video device is OFF), the screen will be gray-blue.

CONNECTING MONAURAL AUDIO VCR OR VIDEO DISC PLAYER

1. Connect the cable from the VIDEO OUT of the VCR or the laserdisc player to the INPUT (VIDEO) jack on the TV set below.
2. Connect the cable from the AUDIO OUT of the VCR or the laserdisc player to the INPUT (MONO)/L(AUDIO) jack.
3. Press the INPUT button to view the program from the VCR or laserdisc player. The VIDEO mode disappears automatically after approximately eight seconds.
4. Press the INPUT button to return to the previous channel.

VCR

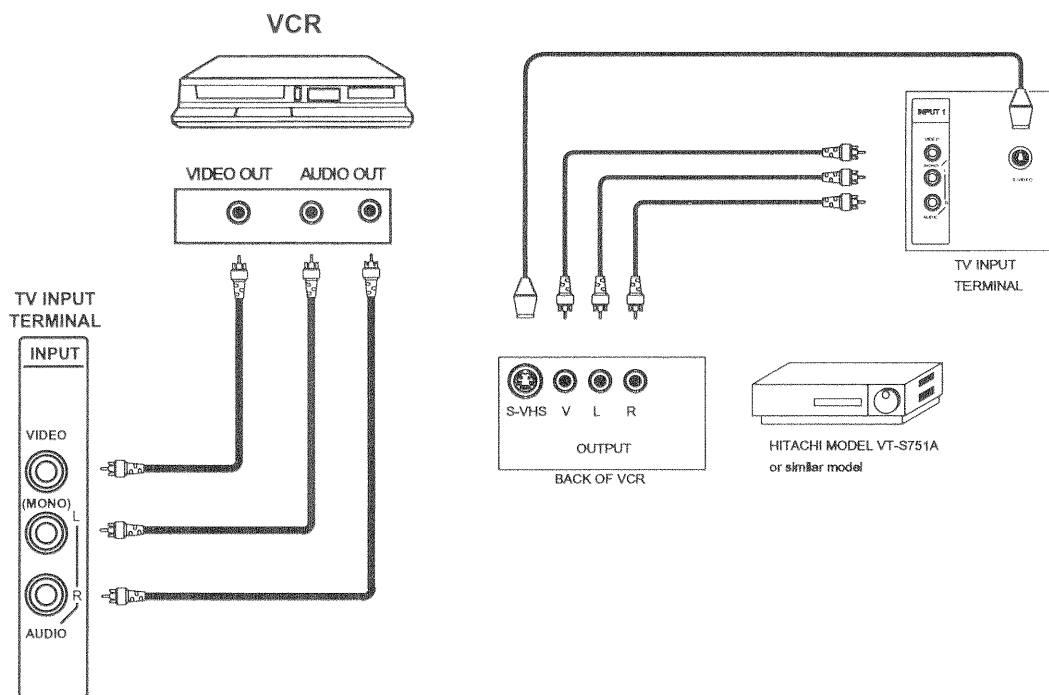


CONNECTING EXTERNAL VIDEO SOURCES



CONNECTING STEREO VCR OR STEREO LASERDISC PLAYER

1. Connect the cable from the VIDEO OUT of the VCR or the laserdisc player to the INPUT (VIDEO) jack on the TV.
2. Connect the cable from the AUDIO OUT R of the VCR or the laserdisc player to the INPUT(AUDIO/R) jack.
3. Connect the cable from the AUDIO OUT L of the VCR or the laserdisc player to the INPUT(AUDIO/L) jack.
4. Press the INPUT button to view the program from the VCR or laserdisc player. The mode VIDEO disappears automatically after approximately eight seconds.
5. Press the INPUT button to return to the previous channel.



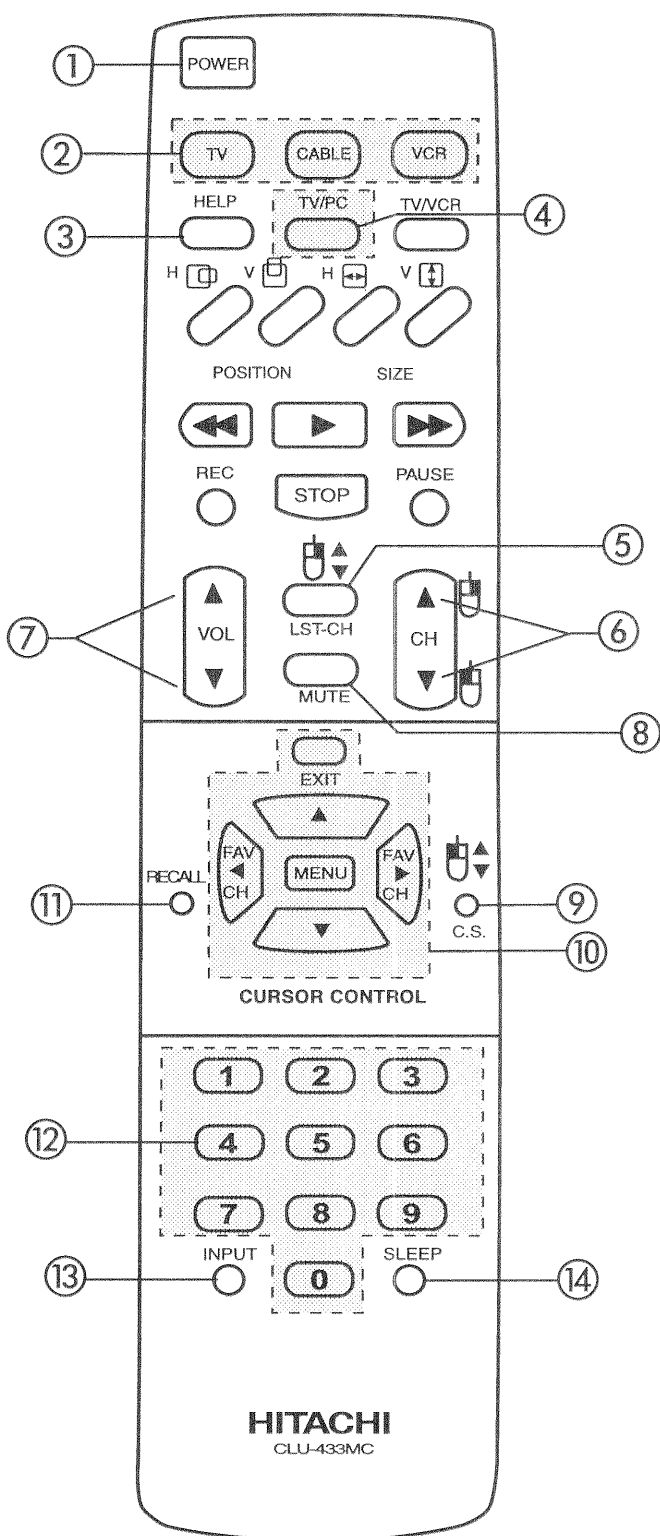
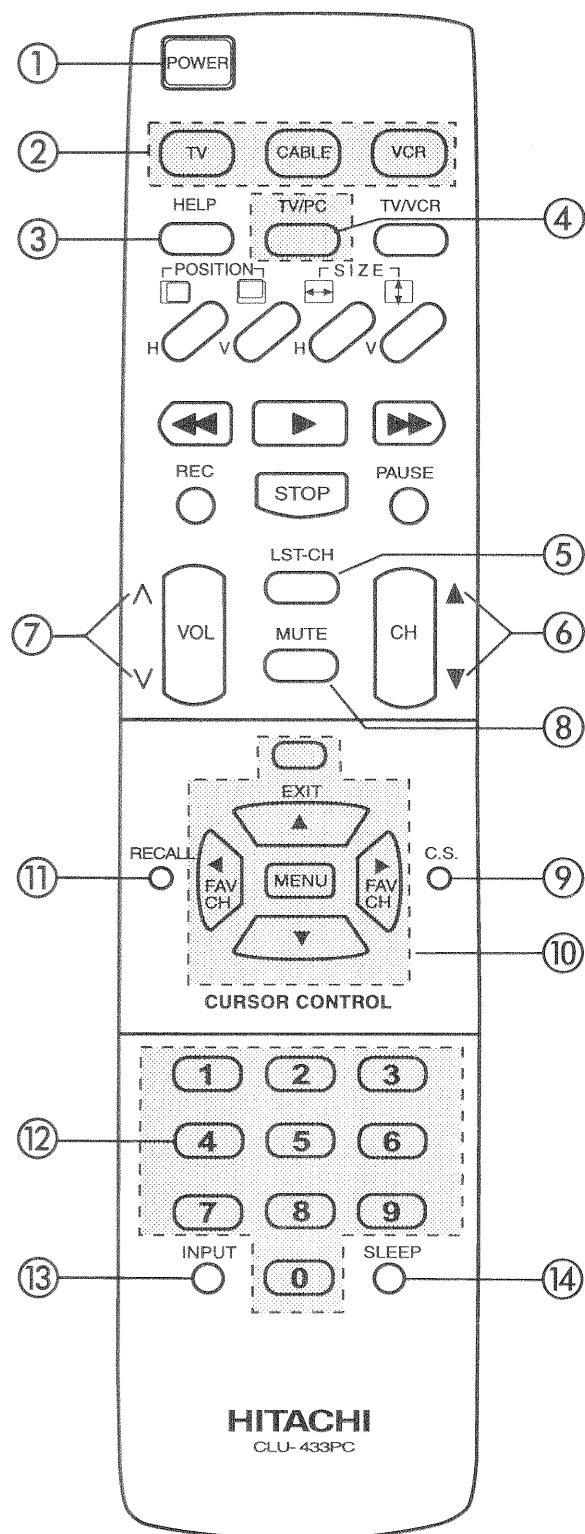
NOTE: Completely insert the connection cord plugs when connecting to rear panel jacks. The picture that is played back will be abnormal if the connection is loose.

If you have an S-VHS VCR, you can use the S-INPUT cable in place of the standard video cable.



HOW TO USE THE REMOTE TO CONTROL YOUR TV

A detailed explanation of the circled numbers follows on page 19 to 21.



HOW TO USE THE REMOTE TO CONTROL YOUR TV



① TV POWER Button

Press this button to turn the TV set on or off.

② TV/CABLE /VCR Button

Press these buttons to control your TV, cable/satellite or VCR. See remote control programming section for detailed explanation.

③ HELP Button

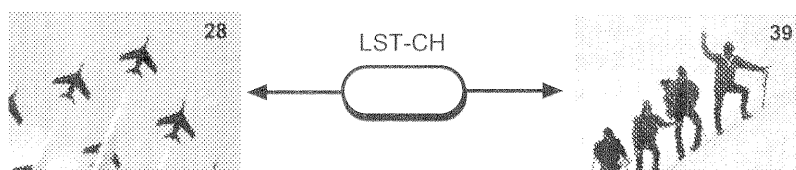
Press to display On-Screen Display help messages. (TV Mode Only)

④ TV/PC Button

Press this button to toggle back and forth between TV and PC mode.

⑤ LAST CHANNEL (LST-CH) Button

Use this button to select between the last two channels viewed. (Good for watching two sporting events, etc.)



⑥, ⑫ CHANNEL SELECTOR Buttons

Enter two or three numbers to select channels. Enter 0 first for channels 1 to 9. For channels 100 and above, press the "1" button and wait for two seconds before pressing the last two digits of the channel.

Channel selection may also be performed by pressing CH up (▲) or down (▼).

You may also use these buttons for channel scanning. Press and hold the CH up (▲) or down (▼) buttons and the TV will start quickly scanning through the channels. Release the CH up (▲) or down (▼) buttons when the TV scans to the channel you wish to watch and the TV will tune to that channel.

⑦, ⑧ VOLUME, MUTE Buttons

Press the VOLUME up (▲) or down (▼) button until you obtain the desired sound level.

To turn the sound off instantly to answer the telephone, etc., press the MUTE button. Press the MUTE button again or press the VOLUME up (▲) button to restore the sound.

⑨ COMMERCIAL SKIP (CS) Button

Press to activate 90-second commercial skip timer. You may change channel(s) and after the 90 seconds has lapsed, the TV will automatically tune back to your original channel.

NOTE: CS will be cancelled if you use the LST-CH or use Setup and Custom menus.



HOW TO USE THE REMOTE TO CONTROL YOUR TV

⑩ MENU, EXIT and CURSOR buttons

All On-Screen Display features can be set or adjusted by using these buttons.

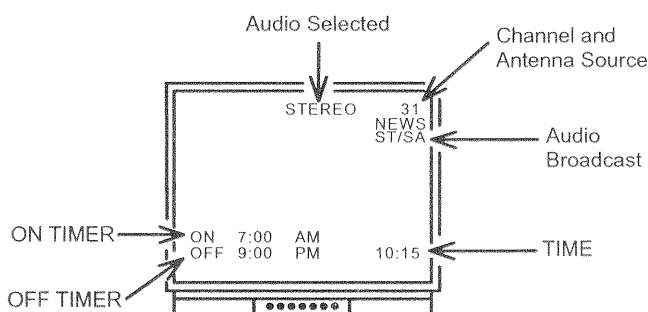
The MENU button will start the On-Screen Display.

The EXIT button will quit the On-Screen Display.

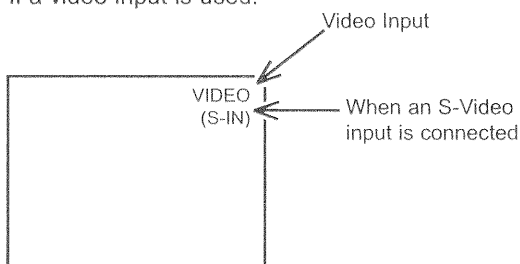
The CURSOR button will highlight functions or adjust and set different features. Pressing the cursor buttons will also give you access to the FAMILY FAVORITES CHANNELS On-Screen Display.

⑪ RECALL BUTTON

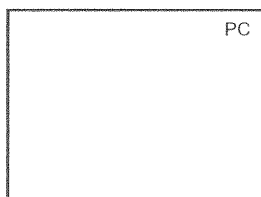
Press this button to display audio selected, current channel, antenna source, audio broadcast, time and on/off time.



If a video input is used:



If a PC input is used:



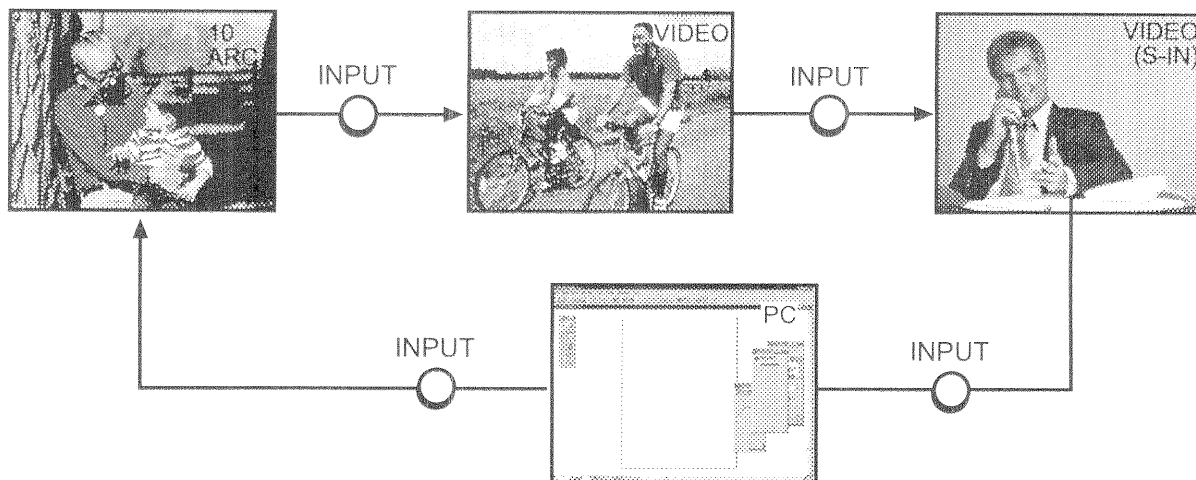
NOTE: You can also use the RECALL button to quickly clear many of the other On-Screen Displays.

HOW TO USE THE REMOTE TO CONTROL YOUR TV



⑬ INPUT Button

The INPUT button will select between the antenna signal and the video input jacks each time the button is pressed.



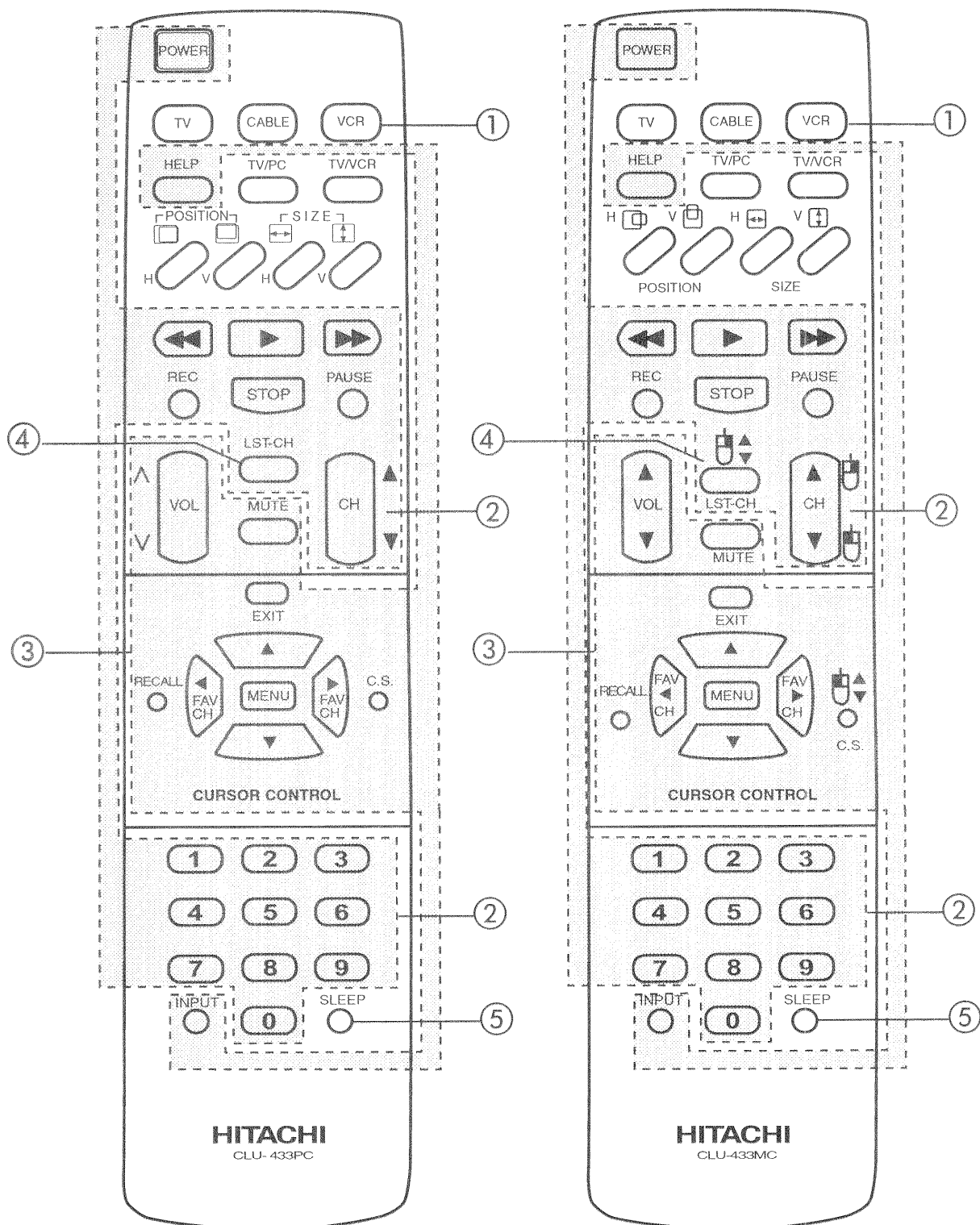
⑭ SLEEP Button

Press this button to display the SLEEP TIMER in the lower left corner of the screen. Every subsequent press of this button will add 15 minutes to the timer, up to a maximum of three hours.



USING THE REMOTE TO CONTROL YOUR VCR FUNCTIONS

A detailed explanation of the circled number follows on page 23.



USING THE REMOTE TO CONTROL VCR FUNCTIONS



Operating the precoded function for your VCR

This remote is designed to operate different types of VCRs. You must first program the remote to match the remote system of your VCR. (Refer to page 26.)

1. Turn on your VCR.
2. Aim the remote control at the front of your VCR.
3. Press the VCR button to switch to the VCR precoded mode.
4. While holding down the VCR button on the remote, enter the two digit preset code that matches your VCR as shown on page 26. The remote will turn off your VCR when the correct two digit preset code is entered. When this occurs, the remote control is programmed for your VCR. If the VCR does not turn off after five seconds, try a different two digit preset code.
5. The remote will now control your VCR.

NOTES:

1. If your VCR cannot be operated after performing the above procedures, your VCR code has not been precoded into the remote.
2. In the unlikely event that your VCR cannot be operated after performing the above procedures, please consult your VCR operating guide.
3. The remote control will remember the codes you have programmed in until the batteries are removed from the remote control. After replacing the batteries repeat the entire programming procedure stated above.
4. If your VCR does not have a power function, the remote will issue the CHANNEL UP (▲) function.

① VCR Button

This allows the remote to control your VCR by setting it to VCR mode.

② PRECODED VCR Buttons

These buttons transmit the chosen precoded VCR codes.

③ EXCLUSIVE TV Buttons

These buttons are for operating the TV.

If your VCR is a Hitachi brand, the MENU button will start your VCR on-screen display.

④ LST-CH Button

If your VCR has an "ENTER" function, this button will send the chosen VCR "+ ENTER" code.

⑤ SLEEP Button

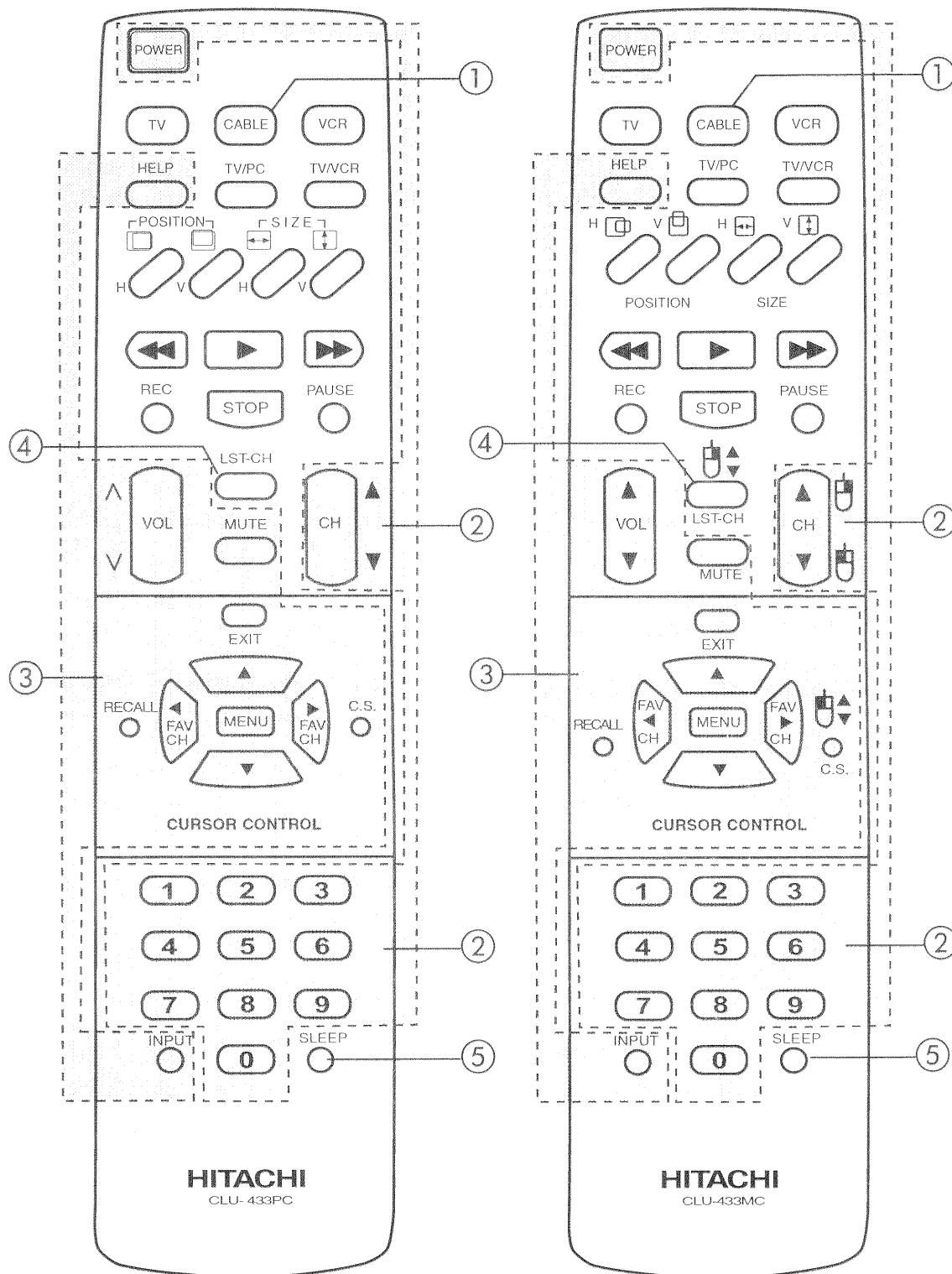
If your VCR has a "+100" function, this button will send the chosen VCR "+100" code.

NOTE: To use VCR RECORD, press the REC button twice.



USING THE REMOTE TO CONTROL CABLE/SATELLITE BOX FUNCTIONS

A detailed explanation of the circled numbers follows on page 25.



USING THE REMOTE TO CONTROL CABLE/SATELLITE BOX FUNCTIONS



Operating the precoded function for your cable/satellite box.

This remote is designed to operate different types of cable boxes and satellite systems. You must first program the remote to match the remote system in your cable/satellite box. (Refer to page 26.)

1. Turn on your cable/satellite box.
2. Aim the remote control at the front of your cable/satellite box.
3. Press the CABLE button to switch to cable/satellite box mode.
4. While holding down the CABLE button, enter the two digit preset code that matches your cable/satellite box as shown on page 26. The remote will turn off your cable/satellite box when the correct two digit preset code is entered. When this occurs, the remote control is programmed for your cable/satellite box. If the cable/satellite box does not turn off after five seconds, try another two digit preset code.
5. The remote will now control your cable/satellite box.

NOTES:

1. If your cable/satellite box cannot be operated after performing the above procedures, your cable/satellite box code has not been precoded into the remote.
2. In the unlikely event that your cable/satellite box cannot be operated after performing the above procedures, please consult your cable/satellite box operating guide.
3. The remote control will remember the codes you have programmed in until the batteries are removed from the remote control. After replacing the batteries, repeat the entire programming procedure stated above.
4. If your cable/satellite box does not have a power function, the remote will issue the CHANNEL UP (▲) function.

① CABLE Button

This button allows the remote to control your cable/satellite box by setting it to CABLE/SATELLITE mode.

② PRECODED CABLE/SATELLITE BOX Buttons

These buttons transmit the chosen precoded CATV and satellite codes.

③ EXCLUSIVE TV Buttons

These buttons are for operating the TV.

④ LST-CH Button

If your cable/satellite box has an enter function, this button will send the cable/satellite box enter code.

⑤ SLEEP Button

If your cable/satellite box has a "+100" function, this button will send the cable/satellite "+100" code.



VCR AND CABLE/SATELLITE CODES

The remote control is capable of operating many brands of VCRs and cable boxes. You must first program the remote control to match the remote system in your VCR or cable box.

NOTE: The remote control memory is limited. Some models of VCRs or cable boxes may not operate. The remote control is not designed to control all features that are available in all models.

VCR BRAND CODE

Adventura	.00
Aiko	.08
Aiwa	.00
Akai	.01, 48, 49
American High	.22
Asha	.45
Audiovox	.23
Beaumarck	.45
Bell & Howell	.32
Brandt	.43
Broksonic	.33, 34, 42, 51, 52
Calix	.23
Canon	.22
Capehart	.06
Carver	.31
CCE	.08, 30
Citizen	.08, 23
Colt	.30
Craig	.18, 23, 30, 45
Curtis Mathes	.01, 22, 47
Cybernex	.45
Daewoo	.06, 08, 16, 38, 50
Daytron	.06
Dynatech	.00
Electrohome	.23
Electrophonic	.23
Emerex	.07
Emerson	.00, 08, 12, 15, 23, 27, 28, 33, 34, 37, 42, 48, 51, 52
Fisher	.18, 20, 32, 46
Fuji	.09, 22
Funai	.00
Garrard	.00
GE	.03, 22, 41, 47
Goldstar	.23, 24, 44
Gradiente	.00
Harley Davidson	.00
Harman/Kardon	.24
Harwood	.30
Headquarter	.17
Hi-Q	.18

Hitachi	.01, 02, 03, 04
Jensen	.01
JVC	.01, 13, 26
KEC	.08, 23
Kenwood	.01, 24, 26
KLH	.30
Kodak	.22, 23
Lloyd	.00
Lloyd's	.27
Logik	.30
LXI	.23
Magnavox	.14, 22, 29, 31, 35
Magnin	.45
Marantz	.22, 31
Marta	.23
Matsushita	.22
MEI	.22
Memorex	.00, 14, 17, 18, 19, 22, 23, 32, 45
MGA	.15, 48
MGN Technology	.45
Minolta	.02, 04
Mitsubishi	.15, 26, 40, 48, 49
Motorola	.19, 22
MTC	.00, 45
Multitech	.00, 30
NEC	.01, 05, 24, 26, 32
Nikko	.23
Noblex	.45
Olympus	.11, 22
Optimus	.19, 23, 32
Orion	.51
Panasonic	.10, 11, 22, 39, 53
Penney	.02, 05, 22, 23, 24, 45, 46
Pentax	.02, 03, 04
Philco	.22
Philips	.22, 29, 31
Pilot	.23
Pioneer	.26
Portland	.06
Protec	.30
Pulsar	.14
Quarter	.17

Quartz	.17
Quasar	.22
Radio Shack	.00, 23
Radix	.23
Randex	.23
RCA	.02, 03, 04, 35, 41, 47
Realistic	.00, 17, 18, 19, 20, 22, 23, 32, 45
Ricoh	.21
Runco	.14
Samsung	.16, 45
Sanky	.14, 19
Sansui	.01, 26
Sanyo	.17, 18, 32, 45
Scott	.15, 16, 33, 34, 37, 42
Sears	.02, 04, 17, 18, 20, 22, 23, 32, 46
Sharp	.19
Shintom	.30
Shogun	.45
Singer	.30
Sony	.07, 09, 21, 22
STS	.02
Sylvania	.00, 15, 22, 29, 31
Symphonic	.00
Tatung	.01
Teac	.00, 01
Technics	.22, 39
Teknika	.00, 22, 23
Telefunken	.43
TMK	.27, 45
Toshiba	.15, 16, 20, 37
Totevision	.23, 45
Unitech	.45
Vector	.16
Vector Research	.05, 24
Video Concepts	.05, 16, 48
Videosonic	.45
Wards	.00, 02, 18, 19, 22, 30, 35, 37, 45, 47
XR-1000	.00, 22, 30
Yamaha	.24
Zenith	.09, 14, 21

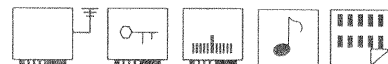
CABLE BRAND CODE

ABC	.00, 07, 08, 18, 19, 21, 37, 38, 53
Antronix	.40
Archer	.12, 25, 40
Belcor	.33
Cable Star	.33
Century	.12
Citizen	.12
Colour Voice	.31, 45
Comtronics	.26, 29
Contec	.22
Dae Ryung	.21
Eastern	.15
Electricord	.32
Everquest	.56
Focus	.57
Garrard	.12
GC Electronics	.33, 40
Gemini	.04, 39, 44, 56
General Instrument	.00, 13
Gold Star	.11, 26
Hamlin	.03, 09, 14, 23, 24
Hitachi	.00
Hytex	.37

Jasco	.12
Jerrold	.00, 08, 13, 38, 53, 55, 56
Macom	.36
Magnavox	.16
Memorex	.02
Movie Time	.30, 32, 34
NSC	.30, 34, 39
Oak	.22, 37, 50
Panasonic	.02, 10, 49
Paragon	.02
Philips	.12, 16, 17, 27, 31, 43, 44, 45, 47
Pioneer	.06, 11, 20
Popular Mechanics	.57
Pulsar	.02
RCA	.49
Realistic	.40
Recoton	.57
Regal	.03, 09, 23, 35
Regency	.15
Rembrandt	.00, 39
Runco	.02
Samsung	.11, 26
Scientific Atlanta	.18, 21, 42, 48
Signal	.26, 56

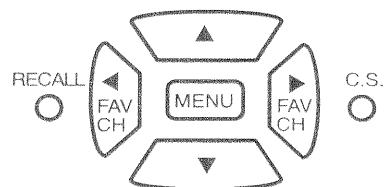
Signature	.00
SL Marx	.26
Sprucer	.01, 49
Starcom	.38, 53, 56
Stargate	.26, 56
Starquest	.56
Starsight	.58, 59
Sylvania	.19
Teleview	.26
Texscan	.19
Tocom	.07, 28, 55
Toshiba	.02
Tusa	.56
TV 86	.30
Unika	.12, 40
United Artists	.37
United Cable	.53
Universal	.12, 25, 32, 33, 35, 40
Videoway	.51
Viewstar	.16, 29, 30, 41
Zenith	.02, 52, 60
Zentek	.57
Hitachi (SAT)	.61
RCA (SAT)	.62
SONY (SAT)	.63

ULTRATEC ON-SCREEN DISPLAY



With HITACHI'S ULTRATEC On-Screen Display, each category has its own color and icon. This semi-transparent system includes SET-UP, CUSTOMIZE, VIDEO, AUDIO, and INFO CENTER categories. Using the four cursor buttons, you can easily access and control all of the TV's functions. Checked boxes let you know which function you have chosen. You can also choose to access the menu in English, French, or Spanish.

1. Press MENU on the remote control to display the different features on your HITACHI TV.
2. Press the CURSOR buttons to highlight and select different features.
3. Press EXIT on the remote control to quickly exit from a menu.
4. Press HELP on the remote control when a menu is displayed, and text will appear giving a description of that menu.



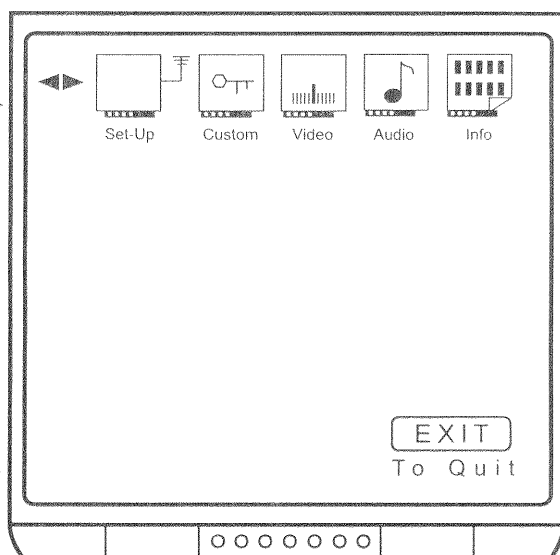
CURSOR CONTROL

NOTE: Please see page 18 and 19 for details on remote control operation.

This part of the screen shows what selections are available.



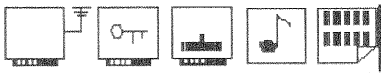
This part of the screen shows which remote control buttons to use.



AUTO-DEMONSTRATION

This feature will demonstrate how to use and set up your HITACHI television. To perform this feature, press the front panel POWER button and hold for five seconds. The On-Screen Display will appear on your TV set demonstrating the settings of your TV feature.

To exit AUTO-DEMONSTRATION, press the power button on the front panel of the TV, which will turn the TV off. Press the power button again to turn your TV set on and resume normal operation.



TV ULTRATEC ON-SCREEN DISPLAY



Set-Up

Menu Language
Signal Source
Auto Channel Set
Channel Memory
Channel List
Clock Set

Choose English, French or Spanish language.
Select Antenna or cable TV.
First time set up for channel buttons.
Add or delete channel.
Clock channel name, scan and child lock.
Set before using timer features.



Customize

Channel ID
Family Favorites
Child Lock
On/Off Timer
Closed Caption

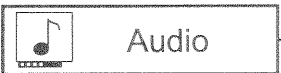
Label channels PAY1, ABC, etc.
Store family favorites channels.
Block channel picture and sound.
Turn TV on or off once, daily or weekly.
Feature to display dialogue/text.



Video

Contrast
Brightness
Color
Tint
Sharpness
Color Temperature
Reset

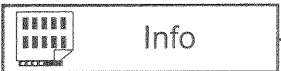
Adjust contrast.
Adjust brightness.
Adjust color.
Adjust tint.
Adjust sharpness.
Adjust warm (red tones) or cool (blue tones).
Set VIDEO to factory preset condition.



Audio

Bass
Treble
Balance
Reset
Advanced Settings
Volume Correction

Adjust bass.
Adjust treble.
Adjust balance.
Set AUDIO settings to factory preset condition.
Improve sound performance.
Lower volume on selected channels.



Info

Personal Message

Leave message once, daily or weekly reminder.

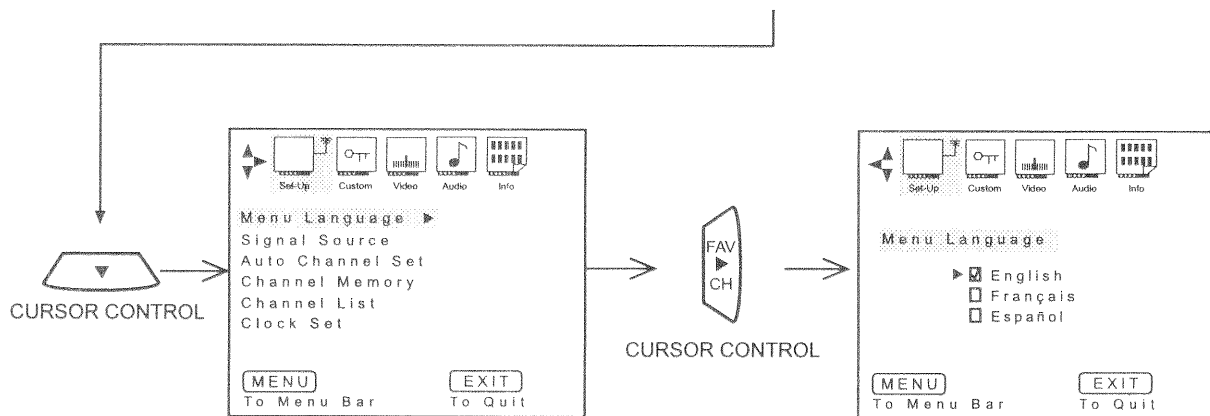
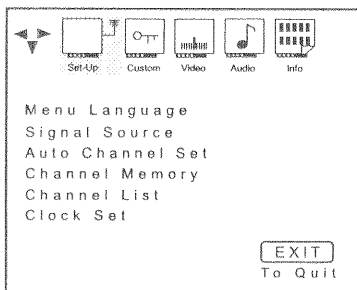
SETUP



Select SET-UP when setting your TV up for the first time. Use the CURSOR ▲,▼ buttons on the remote to highlight the function desired.

MENU LANGUAGE

This feature will allow you to select any one of three different languages for all On-Screen Displays.



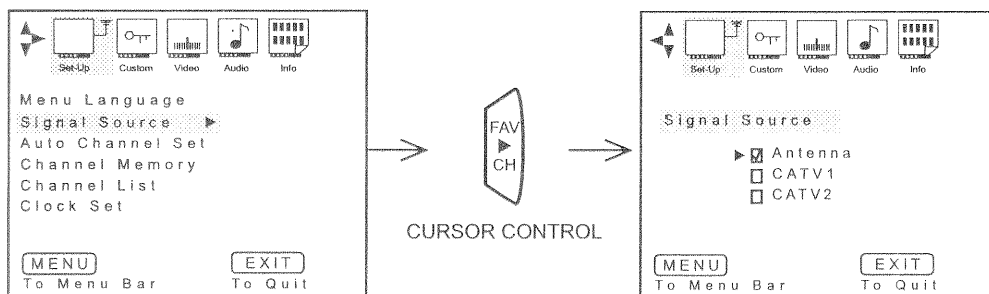
Use CURSOR ▲ or ▼ to select the MENU LANGUAGE of your choice.

Press EXIT to quit menu or CURSOR ◀ to return to previous menu.



SIGNAL SOURCE

Select ANTENNA if you are using an indoor or outdoor antenna. Select CATV if you have cable TV.



Press CURSOR ▲ or ▼ to highlight and select the correct SIGNAL SOURCE mode.
Press EXIT to quit menu or CURSOR ◀ to return to previous menu.

RECEPTIONBAND		
ANTENNA	CATV 1 OR CATV 2	
	CATV CHANNEL	Indicated on the screen
VHF 2 ~ 13ch UHF 14 ~ 69ch	VHF 2 ~ 13	2 ~ 13
	Mid band A ~ I	14 ~ 22
	A-5 ~ A-1	95 ~ 99
	Super band J ~ W	23 ~ 36
	Hyper band W + 1 ~ W + 28	37 ~ 64
	Ultra band W + 29 ~ W + 84	65 ~ 125

Reception channels for each mode are shown at the left.

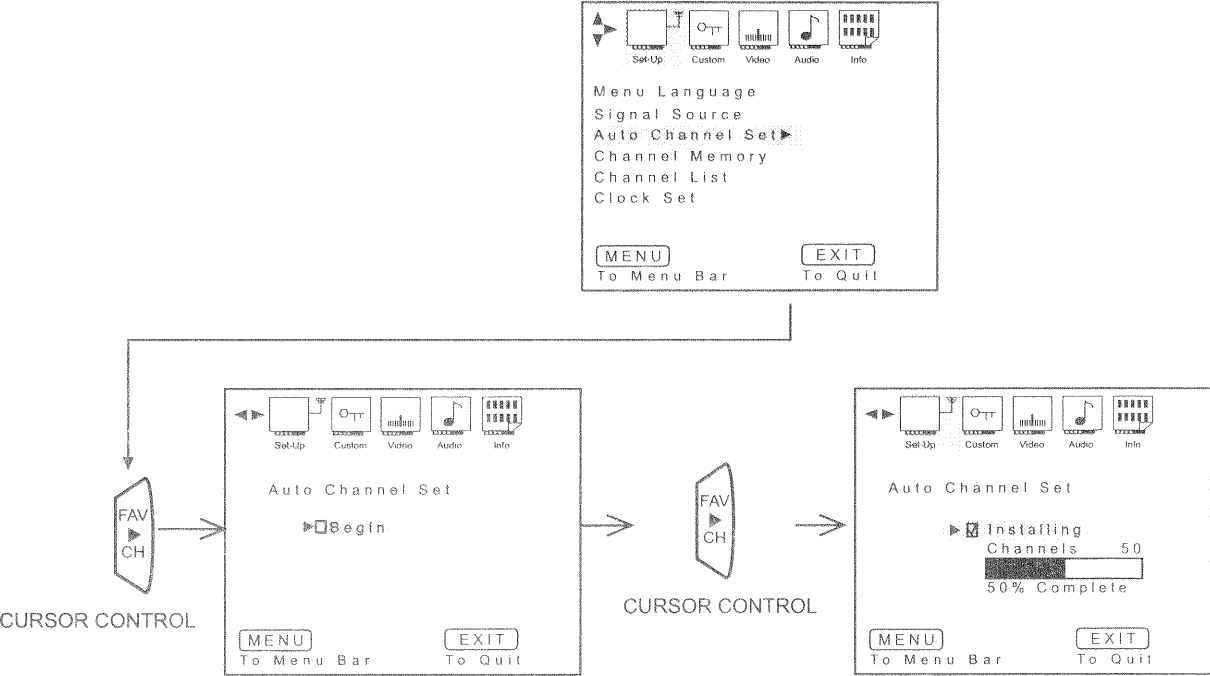
Refer to your cable or TV guide for channel identification standards.

If certain CATV channels are poor or not possible in CATV1 mode, set SIGNAL SOURCE to CATV2.



AUTO CHANNEL SET

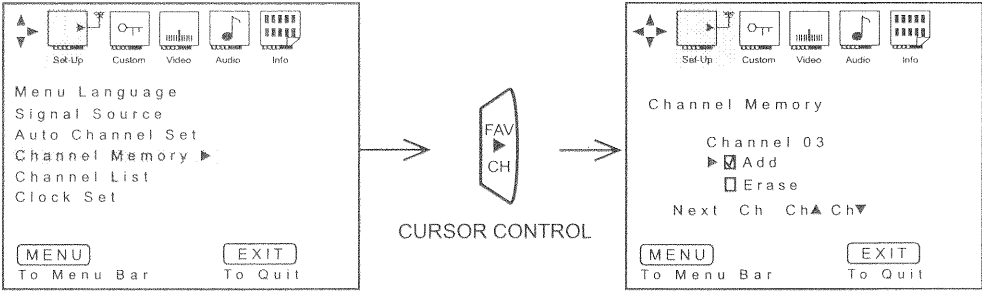
This feature will automatically store active TV channels in CHANNEL MEMORY. This will allow you to skip over unused channels when using the CHANNEL UP (▲) or DOWN (▼) buttons.



If the EXIT button is pressed while the AUTO CHANNEL SET function is engaged, programming will stop. Remember to select the correct SIGNAL SOURCE mode before using AUTO CHANNEL SET. See CHANNEL MEMORY to add or erase additional channels.

CHANNEL MEMORY

Use this function after AUTO CHANNEL SET to add or erase channels to or from the TV channel memory.



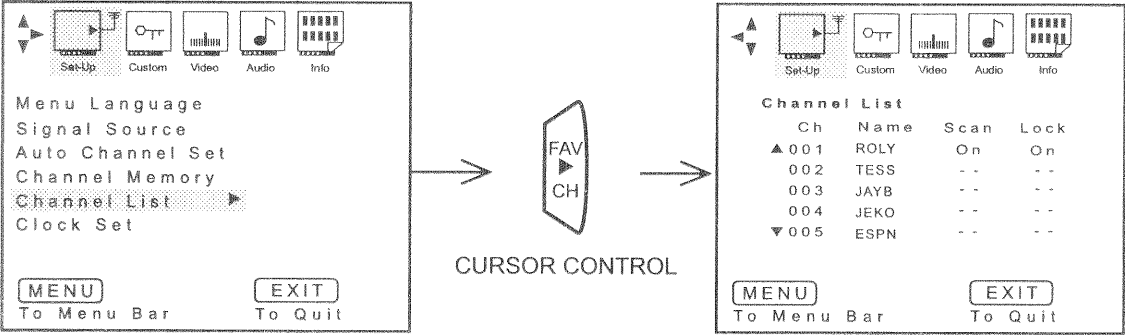
To view additional channels while still in CHANNEL MEMORY, use CURSOR ▲ or ▼, CHANNEL ▲ or ▼, or number buttons. Then, use the CURSOR ► button to add or erase the channel currently in view.

Press EXIT to quit menu or CURSOR ◀ to return to previous menu.



CHANNEL LIST

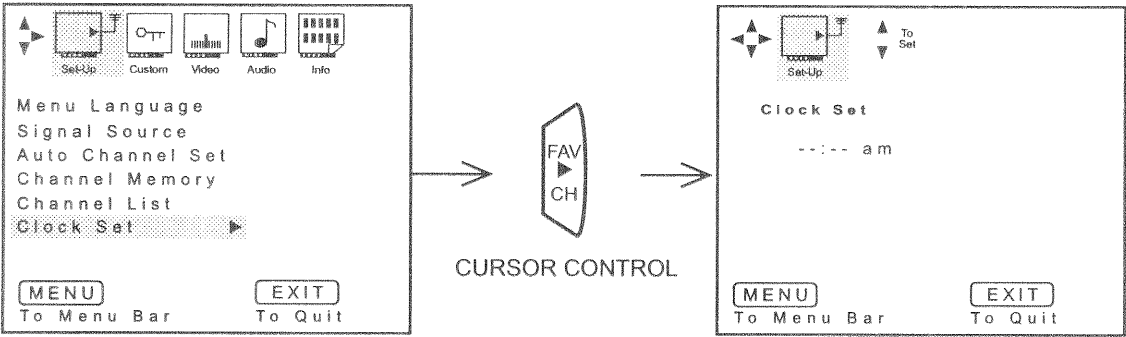
This function allows you to view which channels are labeled in CHANNEL ID (NAME), which have been added to CHANNEL MEMORY (SCAN), and which are protected by CHILD LOCK (LOCK).



Press CURSOR ▲ or ▼ to view more channels.
Press EXIT to quit menu or CURSOR ◀ to return to previous menu.

CLOCK SET

Use this feature for all time related functions. The time must be set before you can use the ON/OFF TIMER, TV TIME OUT or PERSONAL MESSAGE.



Use CURSOR ▲ or ▼ buttons to set the time and AM or PM.
Press CURSOR ► to change position.
Press EXIT to quit menu or CURSOR ◀ to return to previous menu.

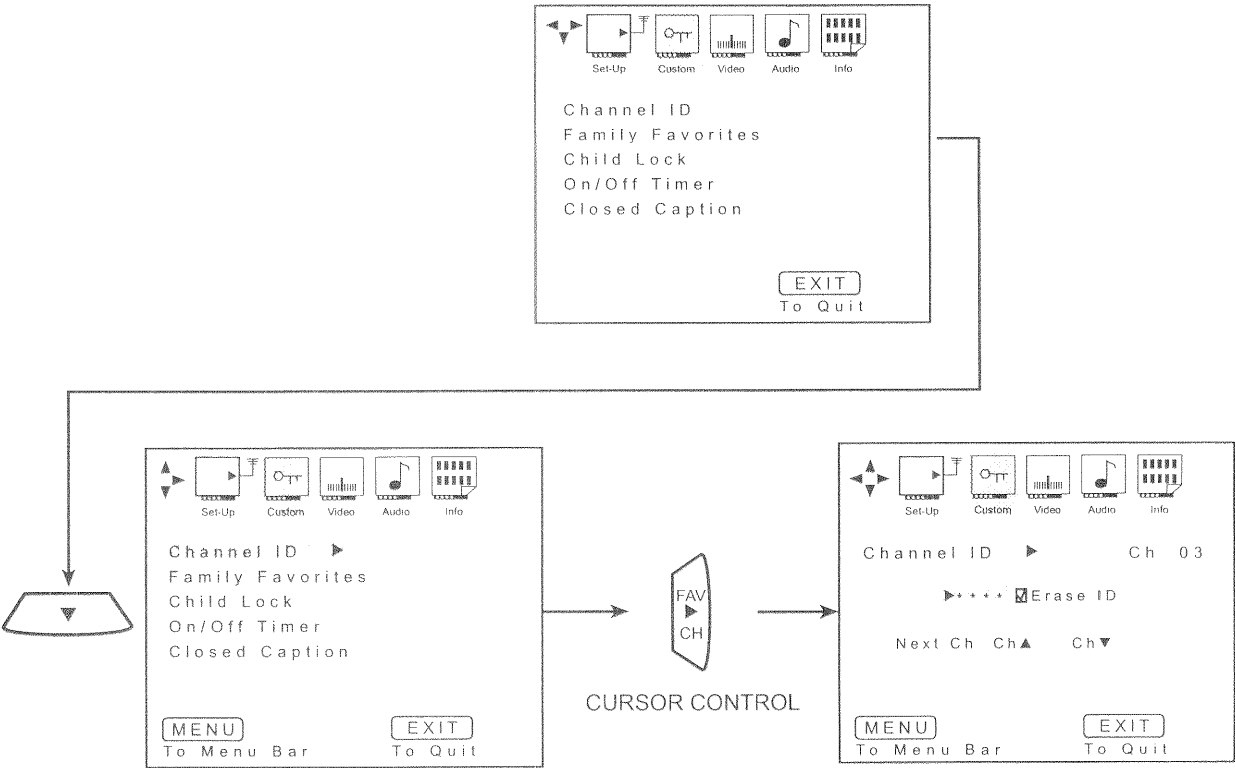


 CUSTOMIZE

This selection contains advanced features which will make TV viewing easier and more enjoyable.

CHANNEL ID

Use this feature to name up to 25 channels.



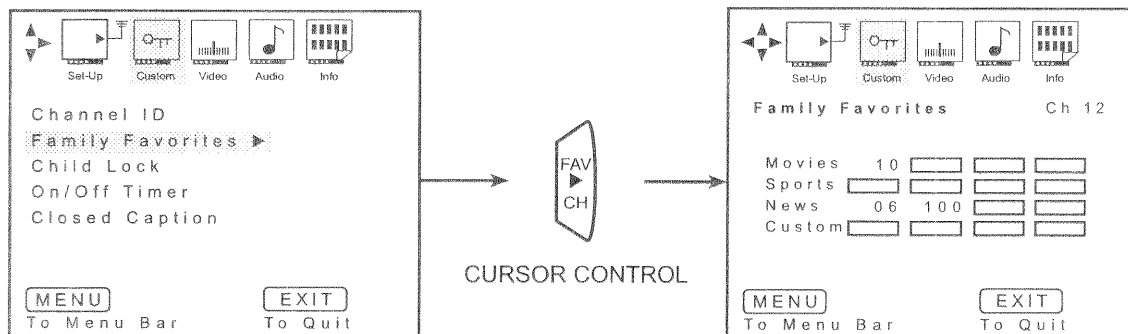
- Press CURSOR ▲ or ▼ to select letters.
- Press CURSOR ► to change character position.
- Press CHANNEL ▲ or ▼ to select and label additional channels.
- Press EXIT to quit menu or CURSOR ◀ to return to previous menu.

The CHANNEL ID will appear in the top right corner of the screen when the RECALL button is pressed.

The (*) represents a blank space.
Select ERASE ID to erase a CHANNEL ID. An “ARE YOU SURE?” display will appear on the screen to confirm your choice.

**FAMILY FAVORITES**

With Family Favorites, you can easily access your favorite movie, sports, news, and custom stations by registering any of your favorite stations into one of four categories. Once you have input your four favorite stations in each category, you simply press any of the cursor buttons and the Family Favorites screen appears. Now you can easily switch between your 16 favorite stations.



Use CURSOR ▲ or ▼ buttons to highlight the category you wish to register the channel under.

Press CURSOR ► to select the column you wish to register the channel under.

Press CHANNEL ▲ or ▼ or the number buttons to enter the desired channel. The channel to be added is displayed in the top right corner of the screen.

Press MENU button to register your favorite channel.

Repeat until the category has been registered with your favorite channels.

To erase a FAMILY FAVORITES channel, enter 00 as channel then press MENU button.

Once your favorite channels are registered in the FAMILY FAVORITES menu, your TV set will change to that station when selected.

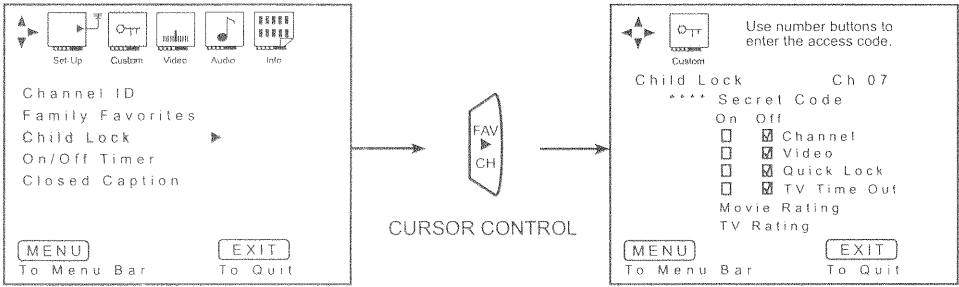
Press EXIT to remove FAMILY FAVORITES from the screen.

NOTE: After all of your favorite channels are registered, the CURSOR buttons can be used for quick access to the FAVORITE CHANNELS menu.

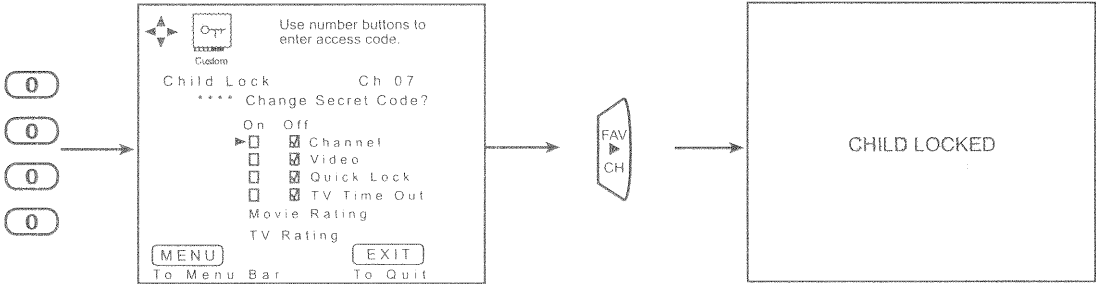


CHILD LOCK
OPTIONS

This feature allows you to block out the picture and sound of the selected channel or video input of any channel that you feel may be inappropriate for your children. There is no limit to the number of channels that can be locked. Your secret code allows you to reinstate these channels any time you wish. It can also be used to schedule an amount of time that the TV cannot be viewed.

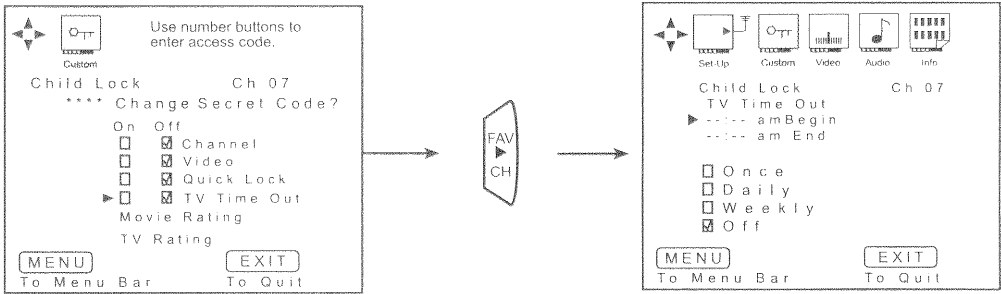


The code to enter CHILD LOCK is a four digit key number. The factory preset code is 0000. Use CURSOR ▲ or ▼ to select number or CURSOR ► to change position.



Use CURSOR ▲ or ▼ to highlight function and CURSOR ► to to set ON or OFF.

When CHANNEL is turned on, the picture and sound for the chosen channel will be blocked out.
When VIDEO is turned on, the picture and sound for the video input will be blocked out.
When QUICK LOCK is turned on, the picture and sound for channels 3, 4 and all video input will be blocked out.
When TV TIME OUT is turned on, you can set the BEGIN and END times and the TV cannot be viewed during that time period.



Press cursors ▲ or ▼ to select the time to begin.
Press cursor ► to select hour, minutes and AM/PM.
Press cursor ▲ or ▼ to set the time to begin.
Press cursor ◀ then cursor ▼ to select time to end.
Press cursors ▲ or ▼ to set time to end.
Press cursors ◀ to exit time end.
Press cursors ▲ or ▼ to select once, daily, or weekly.



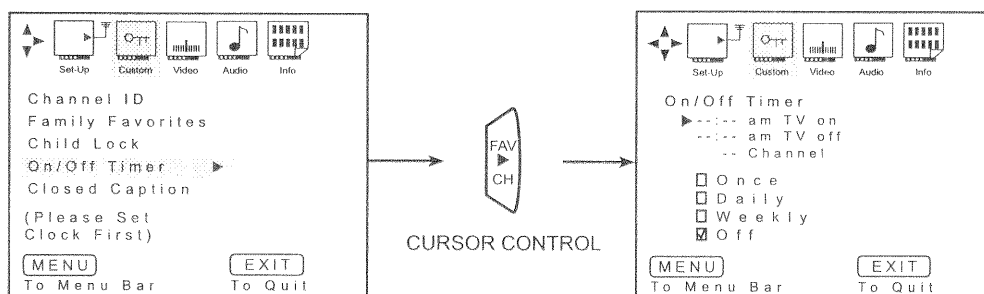
To change the key number, select CHANGE CODE. Enter a new four digit key number you prefer.

If you forget your key number, use the factory code 7777 to erase your key number. This will reset the key number back to the factory preset 0000.

NOTE: PC mode does not have child lock capability.

ON/OFF TIMER

This function will automatically turn the TV set on or off one time only, every day, or once a week. It can also be set to turn on to your favorite program, or as a reminder, to turn to your favorite program when the TV is already on.



Press CURSOR ▲ or ▼ to select either the ON or OFF TIMER.

Press CURSOR ► to highlight selection to be changed.

Press CURSOR ▲ or ▼ to select the time the TV will turn on and off and to choose AM or PM.

Press CURSOR ◀ to exit time setting.

Select CHANNEL and press CHANNEL ▲ or ▼ to set the channel the TV will tune to when it automatically turns on.

Press CURSOR ◀ to exit channel setting.

Press CURSOR ▲ or ▼ to highlight then CURSOR ► to select mode: ONCE (one time only), DAILY (every day), or WEEKLY (once a week).

Press EXIT to quit menu or CURSOR ◀ to return to previous menu.

NOTE: You can set either ON TIME only or OFF TIME only, or both. The mode will be the same for both.

If the TV is turned on by the ON TIMER and there is no remote control operation within three hours, the TV will automatically turn off.

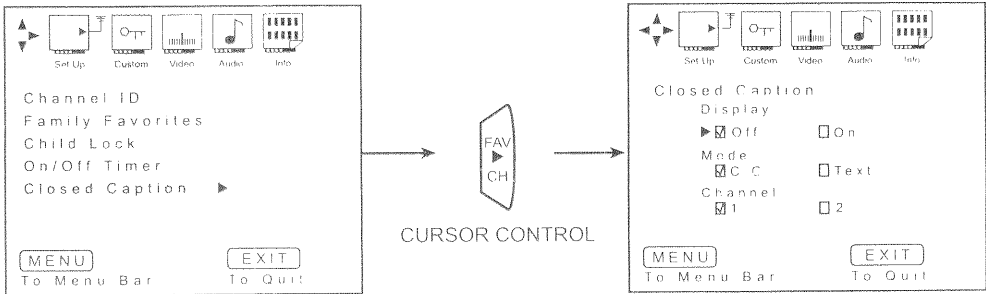


CAUTION: Do not use your TV as a crime deterrent when away from home by using both the ON TIMER and OFF TIMERS. For safety, the TV should be turned off when you are away from home.



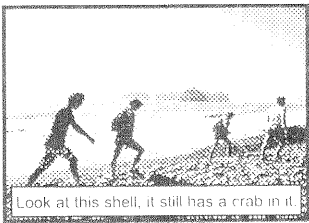
CLOSED CAPTION

Closed captions are the dialogue, narration, and/or sound effects of a television program or home video which are displayed on the TV screen allowing you to read the dialogue being spoken (when broadcast). Your local TV program guide denotes these programs as or .

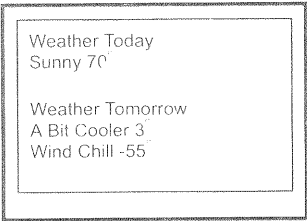


- DISPLAY:** ON/OFF will turn the display on or off.
- MODE:** C.C. (Closed Caption) is for the program you are viewing.
- MODE:** TEXT is for additional information such as news reports or a TV program guide. This information covers the entire screen and viewing the TV program is not possible. TEXT may not be available with every program.
- CHANNEL:** 1 is used for the primary language (usually English).
- CHANNEL:** 2 is sometimes used for a second language (may vary by region).

Use CURSOR or to highlight the function to be changed; press CURSOR to change the function. Press EXIT to quit menu or CURSOR to return to previous menu.



C.C. Selected

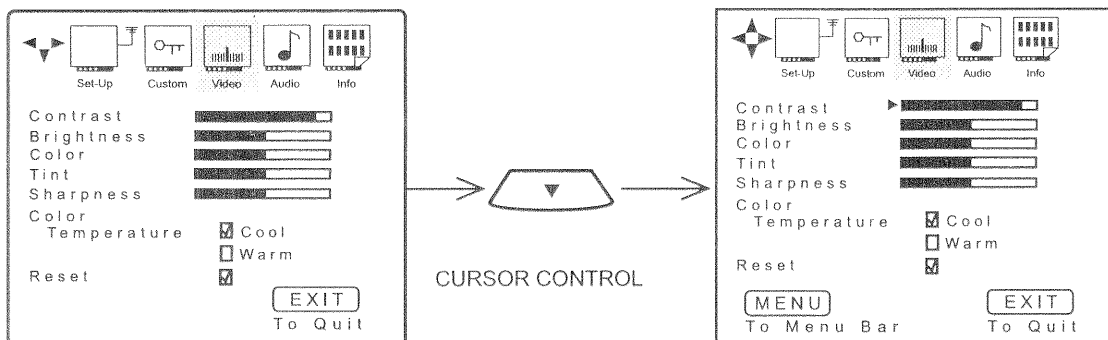


Text Selected

NOTE: The word “mute” will not be displayed if the closed caption display is on. If you do not have sound, make sure mute is not set.

**VIDEO**

Select VIDEO to adjust picture settings and improve picture quality.



Use the CURSOR ▲ or ▼ to highlight the function to be adjusted.
 Press CURSOR ◀ or ▶ to adjust the function.
 Press EXIT to quit menu or CURSOR ◀ to return to previous menu.

CONTRAST

Use this function to change the contrast between black and white levels in the picture.

BRIGHTNESS

Use this function to adjust overall picture brightness.

COLOR

Use this function to adjust the level of color in the picture.

TINT

Use this function to adjust flesh tones so they appear natural.

SHARPNESS

Use this function to adjust the amount of fine detail in the picture.

COLOR TEMP.

Use this function to adjust the white balance (hue) of the picture to your own color preference.
 When shipped from the factory, this is set to COOL. If you prefer a reddish screen, set to WARM.

RESET

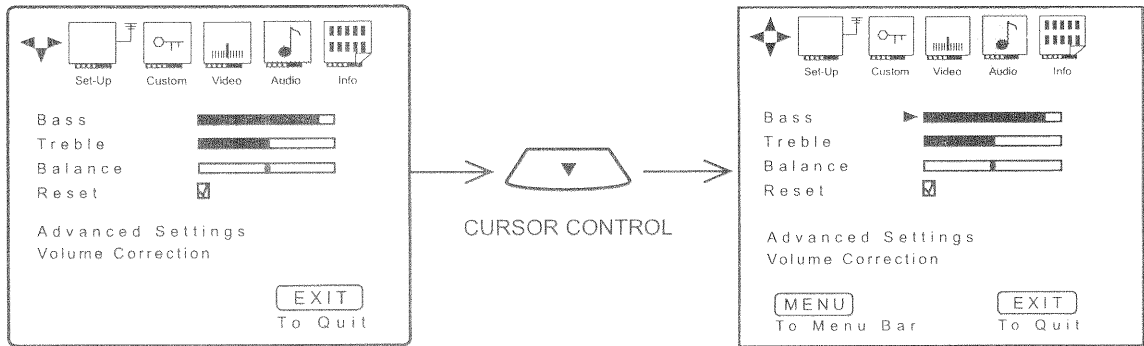
When RESET is selected, the "ARE YOU SURE?" display will appear on the screen to confirm your choice. Press CURSOR ▶ to return VIDEO adjustments to factory preset conditions.



AUDIO



Select AUDIO to adjust the TV to your preference and to improve the sound quality.



Use the CURSOR ▲ or ▼ to highlight the function to be adjusted.
 Press CURSOR ◀ or ▶ to adjust the function.
 Press EXIT to quit menu or CURSOR ◀ to return to previous menu.

BASS
 This function controls the low frequency audio to all speakers.

TREBLE
 This function controls the high frequency audio to all speakers.

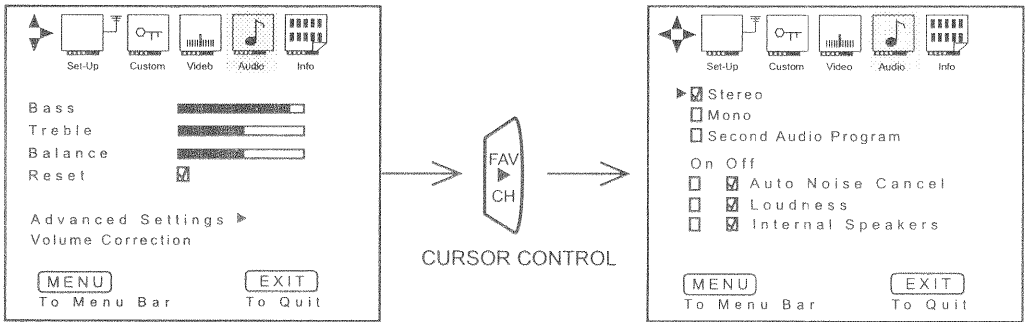
BALANCE
 This function will control the left to right balance of the TV internal speakers and the AUDIO TO HI FI output.

RESET
 When RESET is selected, the “ARE YOU SURE?” display will appear on the screen to confirm your choice. Press CURSOR ▶ to return AUDIO adjustments to factory preset conditions.



**ADVANCED
SETTINGS**

Use **ADVANCED SETTINGS** to improve the sound performance of your TV depending on listening conditions.

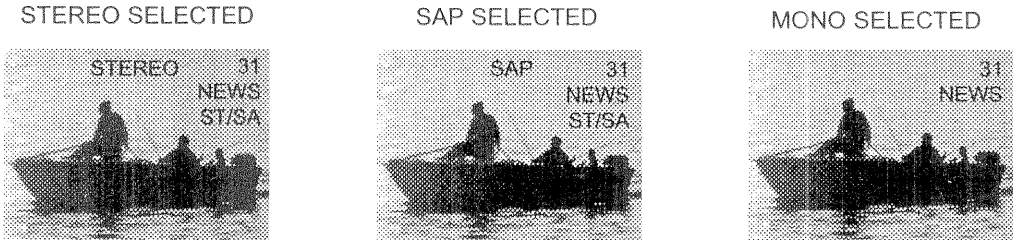


Press **CURSOR ▲** or **▼** to highlight a function.
Press **CURSOR ►** to change the function setting.
Press **EXIT** to quit menu or **CURSOR ◀** to return to previous menu.

MTS MODE

Multi-Channel Television Sound (MTS) will allow you to select **STEREO** (Stereo Broadcast), **SAP** (Second Audio Program) which may be a secondary language, weather report, etc. or **MONO** (Monaural Sound) used when receiving a weak stereo broadcast.

The sources received will be displayed below the channel number. The MTS mode you selected will be displayed to the left of the channel number. See example below for each selection when both stereo and second audio are received (monaural is always received).



AUTO NOISE CANCEL

This function eliminates the noise in between stations. If a channel is tuned and is noisy, this function will automatically eliminate the audio for that channel.

LOUDNESS

This function will improve the quality of both low and high frequency sounds when listening at low volume levels.

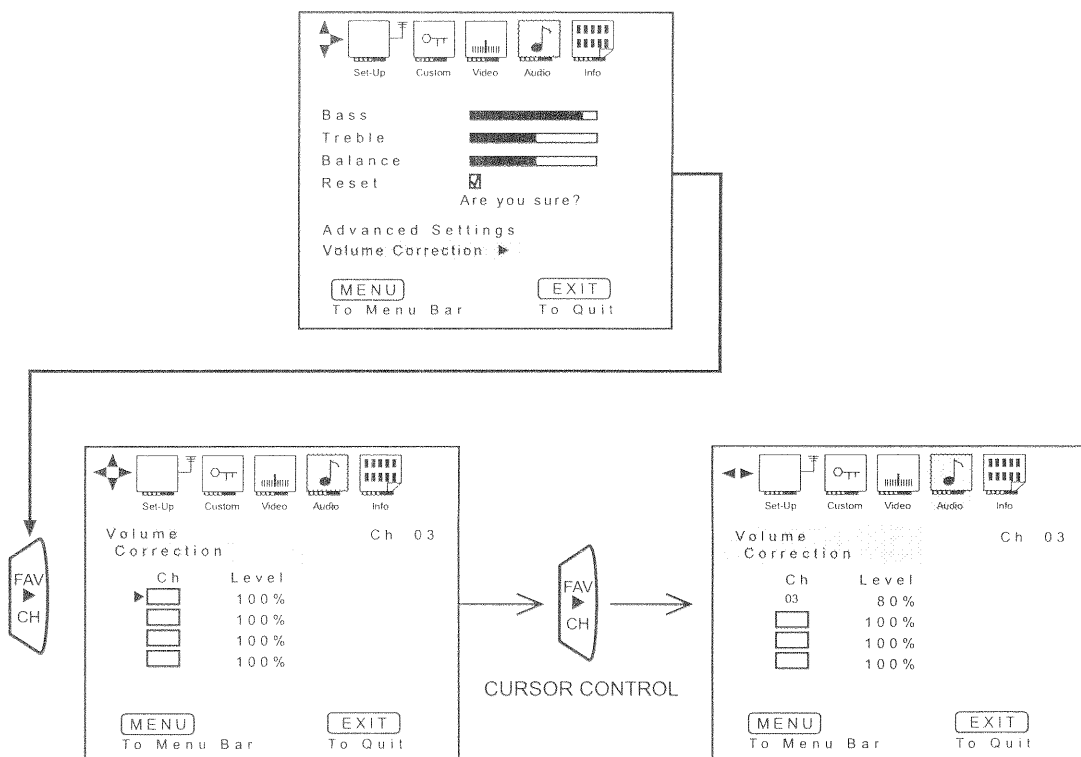
INTERNAL SPEAKERS

This function is useful when first setting up the external speakers, or if you prefer to use only speakers from a separate stereo system.



VOLUME CORRECTION

Use this function to reduce the volume level of up to four channels that sound loud compared to other channels.



Press CURSOR ▲ or ▼ to move arrow to one of the four volume corrections, then CURSOR ► to select.

Press number buttons to set a channel.

Press CURSOR ▲ or ▼ to adjust volume level in 5% increments.

Press EXIT to quit menu or CURSOR ◀ to return to previous menu.

- NOTE:**
1. Volume Correction adjustment is for the channel display in the top right corner of the screen.
 2. If the channel is already set, use CURSOR ► to select that channel, then use CURSOR ▲ or ▼ to change the level.
 3. To erase a channel from volume correction, select channel 00 and press MENU.
 4. The volume level will change from 50% to 100% in increments of 5%.

**INFO.**

This function allows the user to program messages in the TV.

PERSONAL MESSAGE

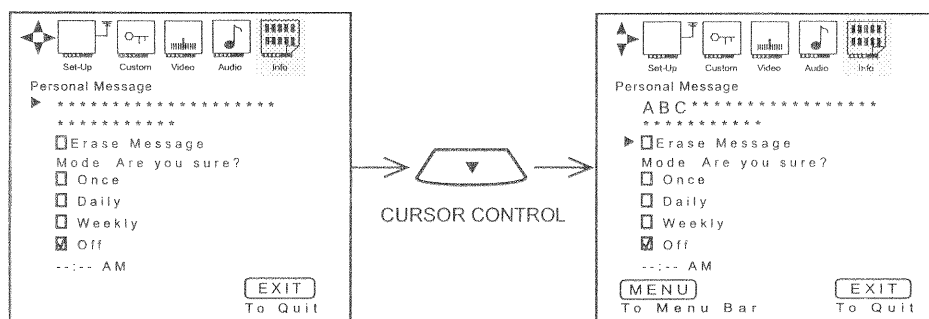
Use this function to program one or two personal messages in your TV's memory up to a maximum of 31 characters. The user can program the message to appear one time only or every day.

Press CURSOR ▲ or ▼ to select letters or other characters.

The asterisk (*) represents a blank space.

To erase the message, use CURSOR ▲ or ▼ until ERASE MESSAGE is highlighted, then press CURSOR ► to erase message.

The "ARE YOU SURE?" display will appear on the screen to confirm your choice.



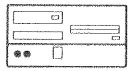
Press CURSOR ▲ or ▼ to choose MODE or TIME.

Press CURSOR ► to set MODE when it is highlighted.

Press CURSOR ▲ or ▼ to set the time.

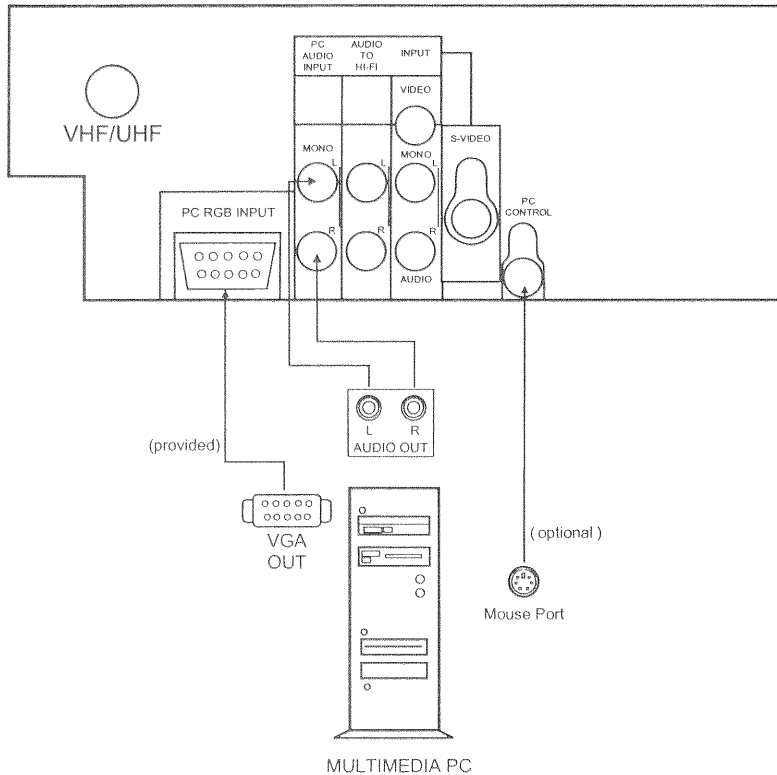
Press EXIT to quit or MENU to menu bar.

PC MODE CONNECTION AND OPERATION



IMPORTANT: TURN POWER OFF ON THE TV/PC MONITOR AND THE PC BEFORE CONNECTING OR DISCONNECTING ANY CABLES.

REAR PANEL CONNECTION TO PC



- NOTE:**
1. This monitor can display only VGA formats:
PS2-1 640 X 350 (horizontal frequency: 31.469kHz, vertical frequency: 70.08Hz)
PS2-2 640 X 400 (horizontal frequency: 31.469kHz, vertical frequency: 70.08Hz)
PS2-3 640 X 480 (horizontal frequency: 31.469Khz, vertical frequency: 59.94Hz)

THIS MONITOR WILL NOT DISPLAY VGA SETTINGS ON A SVGA OR HIGHER RESOLUTION NOTEBOOK PC, IF YOU USE THE BUILT-IN LCD DISPLAY AT THE SAME TIME WITH THE MONITOR.

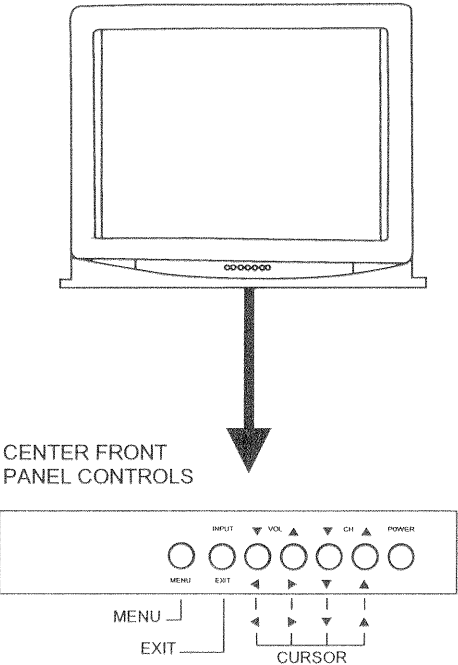
If PC display setting is wrong the monitor will display: "Please set PC for 640 x 480 display."

2. This monitor uses PS/2 format for the mouse interface. On some PC's, the mouse control may not work in the following situations:
 - Disconnecting and reconnecting mouse cable while TV and PC power is turned on.
 - Turning on the PC power before turning on the TV power.
 - Operating systems other than Windows 3.1x and Windows 95.

Consult your PC operation manual for the keyboard keys to re-start or shutdown your computer.

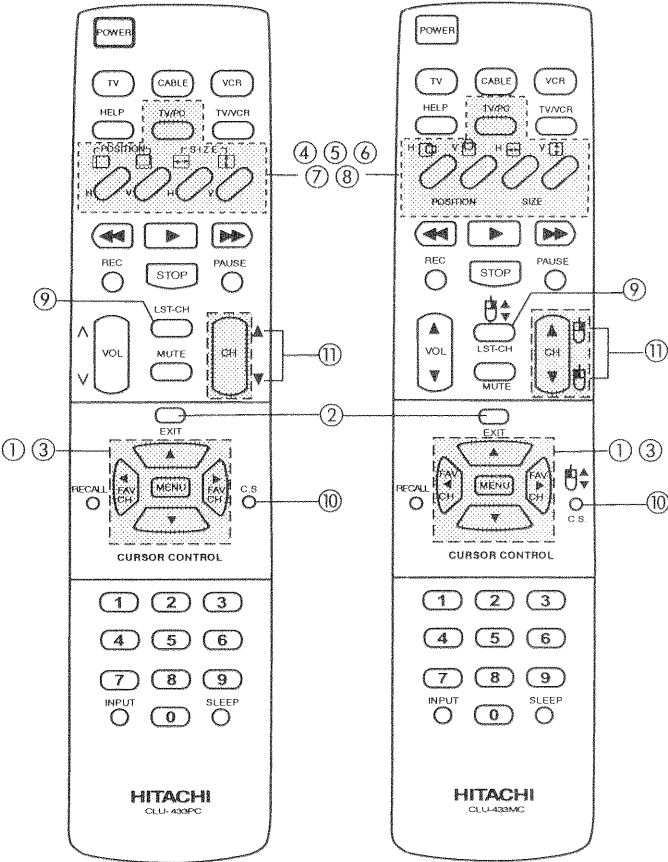


1. FRONT PANEL



2. REMOTE CONTROL

A detailed explanation of the circled numbers follows on page 45.



PC MODE CONTROLS



① MENU

Press MENU to display PC mode On-Screen Display.

PC MAIN MENU

There are eight features that allow you to set up your multimedia vision (while in PC Mode) to your preference. Features from left to right are H Position, H Size, V Position, V Size, Pincushion, Contrast, Brightness and Audio.



After completing adjustment, press MENU to store.

② EXIT

Press EXIT button to exit the on-screen display.

③ CURSORS

Use Left/Right cursors to highlight a feature and Up/Down cursors to select the highlighted item, then use left/right cursors to adjust. These buttons are also used for mouse cursor remote control operation.

④ TV/PC Button

Press this button to toggle back and forth between TV and PC mode.

⑤ H Position

Press to display PC horizontal position adjustment bar. Press cursor left/right to adjust PC horizontal position.

⑥ V Position

Press to display PC vertical position adjustment bar. Press cursor left/right to adjust PC vertical position.

⑦ H Size

Press to display PC horizontal size adjustment bar. Press cursor left/right to adjust PC horizontal size.

⑧ V Size

Press to display PC vertical size adjustment bar. Press cursor left/right to adjust PC vertical size.

⑨ LAST CHANNEL (LST-CH) Button /

Press to perform mouse right button drag, toggle.

⑩ C.S. Button /

Press to perform left button drag, toggle.

⑪ Channel Up/Down Button /

Use the channel up () button to perform a right click. Use the channel down () button to perform a left click.



PC MODE CONNECTION AND OPERATION

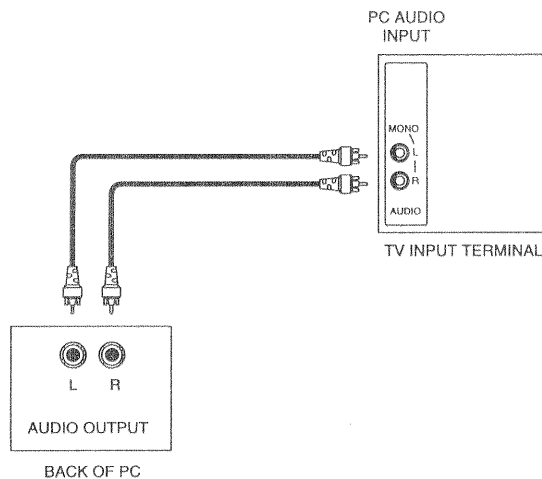
IMPORTANT: TURN POWER OFF ON THE TV/PC MONITOR AND THE PC BEFORE CONNECTING OR DISCONNECTING ANY CABLES.

PC MOUSE CONTROL OPERATION

1. Connect the 6 pin-din cable (optional) to the PC and monitor as shown on page 43.
2. Turn the TV/PC monitor power on.
3. Press the input button three times on the front panel or on the remote control to select PC mode.
4. Turn the PC power on.
5. After the PC has completed booting, use the cursor buttons on the TV front panel or on the remote control to move the mouse cursor up/down/left/ or right to make selections. Use the channel down, channel up, C.S., and LST-CH buttons to perform other mouse functions (see page 45). (0,0,0,0,0,0)

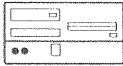
PC AUDIO INPUT OPERATION

1. Connect the audio output of the PC to the PC Audio Input on the TV/PC monitor as shown below.

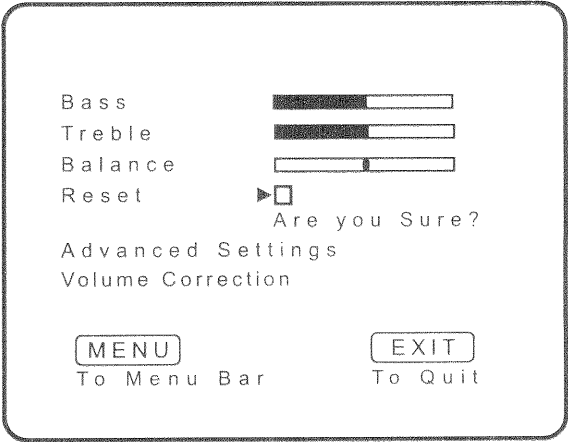


2. Turn the TV/PC monitor power on.
3. Press the input button three times on the front panel or on the remote control to select PC mode.
4. Turn the PC power on.
5. Press volume up (▲) or down (▼) to increase or decrease the sound level.
6. Press the menu button on the TV/PC monitor front panel or on the remote control to display the PC on-screen display.
7. Press the right (▶) or left (◀) cursor buttons to select the audio menu.
8. Press the up (▲) or down (▼) cursor buttons to access the audio adjustment functions.

NOTE: Make sure that the Remote Control is on TV Mode (not VCR or CABLE) when using the Cursor and Mouse control buttons.



PC AUDIO
OPERATION



Use the CURSOR ▲ or ▼ to highlight the function to be adjusted.

Press CURSOR ◀ or ▶ to adjust the function.

Press EXIT to quit menu or CURSOR ◀ to return to previous menu.

BASS

This function controls the low frequency audio to all speakers.

TREBLE

This function controls the high frequency audio to all speakers.

BALANCE

This function will control the left to right balance of the TV internal speakers and the AUDIO TO HI FI output.

RESET

When RESET is selected, the “ARE YOU SURE?” display will appear on the screen to confirm your choice. Press CURSOR ▶ to return AUDIO adjustments to factory preset conditions.

ADVANCED SETTINGS

See page 40 for details.

VOLUME CORRECTION

See page 41 for details.

NOTE: These audio settings are common to both TV and PC modes.
Changing settings in either mode affects the other.

When selecting Volume Correction at PC Mode, the screen will switch back to TV Mode.



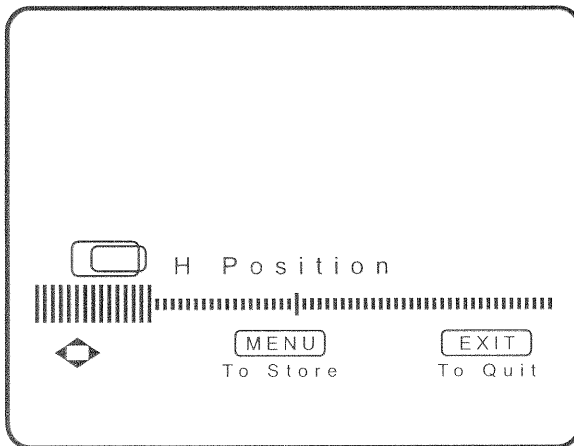
PICTURE ADJUSTMENTS

The following adjustments are independent of the TV mode:

- Press MENU in PC mode for on-screen display.
- Press CURSORS right (▶) or (◀) left to highlight the item to be adjusted.
- Press CURSORS up (▲) or down (▼) to select the highlighted item.
- Use CURSORS right (▶) or (◀) left to adjust.

H POSITION

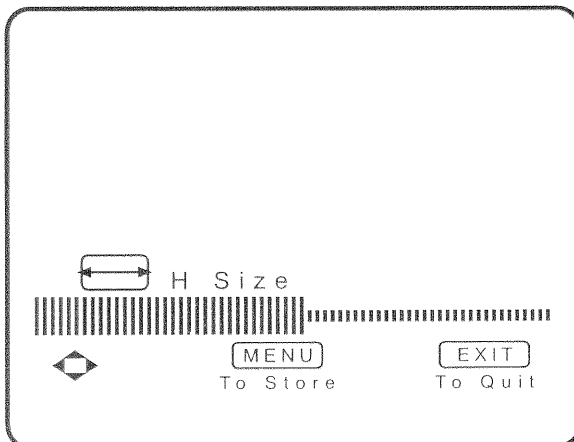
This feature allows you to adjust the horizontal position of the display.



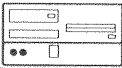
Use Left/Right cursors to adjust the horizontal position. Press the MENU button to store and EXIT to quit.

H SIZE

This feature allows you to adjust the horizontal size in PC mode.



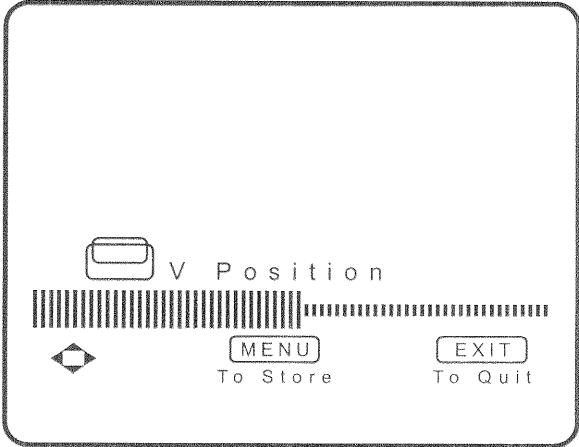
Use Left/Right cursors to adjust the horizontal size. Press MENU button to store and EXIT to quit.



V POSITION

This feature allows you to adjust the vertical position in PC Mode.

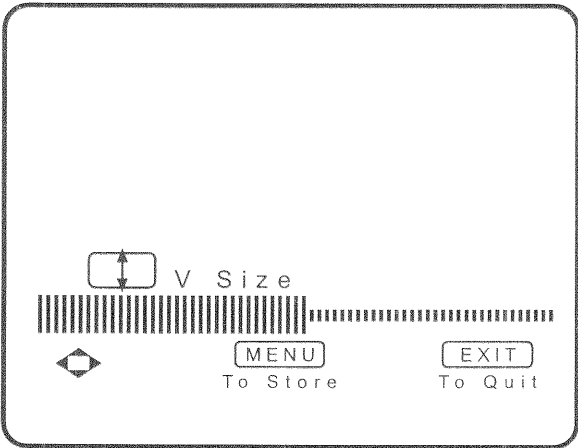
Use Left/Right cursors to adjust the vertical position.
Press MENU button to store and EXIT to quit.



V SIZE

This feature allows you to adjust the vertical size in PC mode.

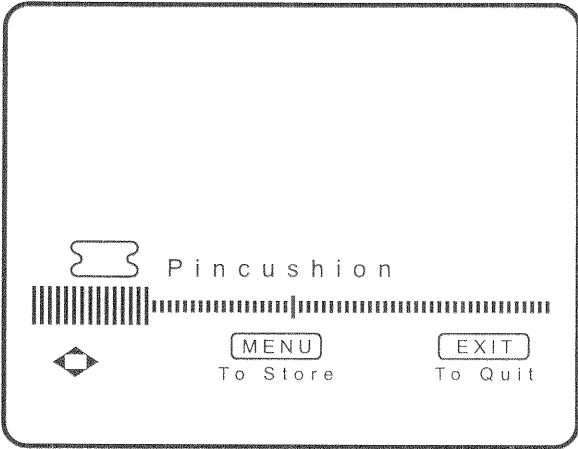
Use Left/Right cursors to adjust the vertical size.
Press MENU button to store and EXIT to quit.



PINCUSHION

This feature allows you to adjust the left and right sides (pincushion) in PC Mode.

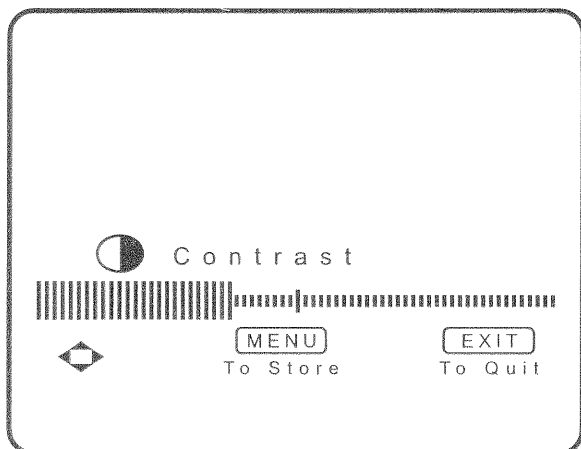
Use Left/Right cursors to adjust pincushion.
Press the MENU button to store and EXIT to quit.





CONTRAST

This feature allows you to adjust the contrast in PC mode.

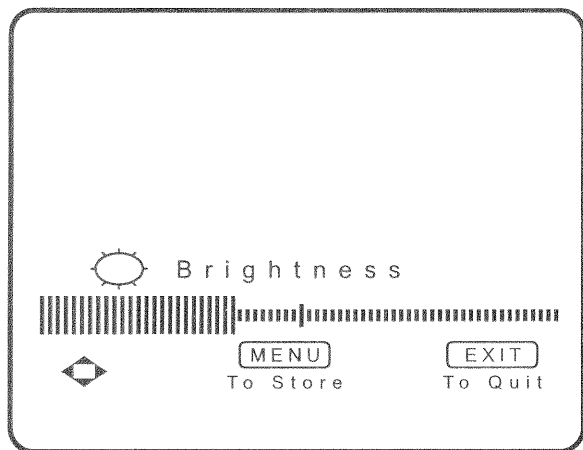


Use Left/Right cursors to adjust contrast.
Press MENU button to store and EXIT to quit.

NOTE: See TV contrast feature for additional information regarding contrast.

BRIGHTNESS

This feature allows you to adjust brightness in PC Mode.

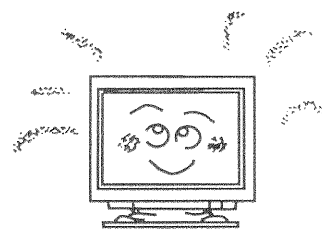


Use Left/Right cursors to adjust brightness.
Press MENU button to store and EXIT to quit.

PLUG & PLAY

This monitor complies with VESA DDC2B specifications, Plug & Play is a system with computer, peripherals (including monitors), and operating system. It works when the monitor is connected to a DDC ready computer that is running an operating system software that is capable for the plug & play.

When a Plug and Play PC is powered on, it sends a command to the Monitor requesting identification. The Monitor sends back a string of data including its characteristics.



TRADEMARK ACKNOWLEDGMENT

VGA is a registered trademark of International Business Machines Corporation.

Apple and Macintosh are registered trademarks of Apple Computer, Inc.

VESA is a trademark of a nonprofit organization, Video Electronics Standard Association.

This Class B digital apparatus meets all requirements of the Canadian Interference-Causing Equipment Regulations.

Cet appareil numérique de la classe B respecte toutes les exigences du Règlement sur le matériel brouilleur du Canada.



DO

Make sure the TV is turned off when cleaning the screen.

Dust the screen and cabinet with a soft cloth.

Clean the screen with a soft cloth moistened in warm water and dry with a soft cloth. A mild soap may be used if the screen is extremely dirty.

Place your TV and remote control away from extreme heat, humidity and extremely dusty places.

Remove the plug from the wall outlet if your television will not be used for a long period of time, for instance, when you go on vacation.

DO NOT

Do not clean your screen or cabinet with strong cleaners, polishes, or chemically treated cloth.

Do not place rubber or vinyl products or cellophane tape on your set.

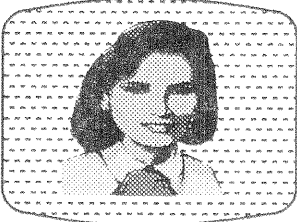
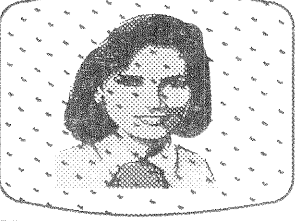
Do not touch the screen too often.

Do not subject the remote control to shocks such as dropping it on the floor, etc. Physical damage to the precision parts may result.

Avoid placing the remote control in a high humidity place or getting it wet. Do not leave it on or near a heater. Excessive heat or moisture may cause the unit to cease operation.

When the batteries run down, remote control operation will become erratic or possibly stop altogether. Replace one old battery with one new "AA" size battery.



	• IGNITION NOISE: Black spots or horizontal streaks may appear, picture may flutter or drift. Usually caused by interference from automobile ignition systems, neon lamps, electrical drills, and other electrical appliances.
	• GHOSTS: Ghosts are caused by the television signal following two paths. One is the direct path and the other is reflected from tall buildings, hills or some other objects. Changing the direction or position of the antenna may improve reception. Ghosting may also be caused by defects in the antenna system such as unshielded leads or connecting several sets to the same antenna without using multiple antenna couplers.
	• SNOW: If your receiver is located in the fringe area of a television station where the signal is weak, your picture may be marred by the appearance of small dots. When the signal is extremely weak, it may be necessary to install a special antenna to improve the picture.
	• RADIO FREQUENCY INTERFERENCE: The interference produces moving ripples or diagonal streaks, and in some cases, causes loss of contrast in the picture.



SYMPTOMS	CHECK THESE ITEMS AND TRY THESE ADJUSTMENTS										
	Be sure external connection is correct	Be sure power cord is plugged in	Be sure TV is switched ON	Try another channel (station trouble)	Check antenna connections (back of TV)	Check antenna for broken lead-in wire	Check for local interference	Adjust Contrast control	Adjust Brightness control	Adjust Color control	Adjust Tint control
No picture, no sound	●	●	●	●	●	●					
Sound OK, picture poor	●			●	●	●	●	●			
Picture OK, sound poor	●			●	●	●	●				●
Picture blurred	●			●	●	●	●				
Lines or streaks in picture				●	●	●	●				
Poor reception on some channels				●	●	●	●				
No color	●			●	●	●			●		
Poor color	●			●	●	●			●	●	

This Color Television incorporates advanced power surge protection technology designed to protect against component or circuit damage due to internal voltage or power surges.

IF YOUR SET SHOULD APPEAR TO HAVE A LOSS OF POWER, PLEASE FOLLOW THIS PROCEDURE:

- 1) Press the power switch (ON/OFF switch) once.
- 2) If there is still no power, wait 30 seconds and press the power switch again.
- 3) If there is still no power, unplug the power cord from the wall. Wait thirty seconds and plug the power cord back in. Press the power switch again.

This protective technology should provide for years of lasting entertainment from your HITACHI Color Television.



AGENCY REGULATORY INFORMATION

Federal Communications Commission Notice

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:

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

Modifications

The FCC requires the user to be notified that any changes or modifications made to this device that are not expressly approved by Hitachi Home Electronics (America), Inc. may void the user's authority to operate the equipment.

Cables

Connections to this device must be made with shielded cables with metallic RFI/EMI connector hoods to maintain compliance with FCC Rules and Regulations.

Any cables that are supplied with the system must be replaced with identical cables in order to assure compliance with FCC rules. Order Hitachi spares as replacement cables.

Declaration of Conformity

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

Any cables that are supplied with the system must be replaced with identical cables in order to assure compliance with FCC rules. Order Hitachi spares as replacement cables.

For questions regarding this declaration, contact:

Hitachi America Ltd.
Home Electronics Division
1855 Dornoch Court
San Diego, CA 92154
Tel. 1-800-448-2244 (1-800-HITACHI)
ATTN: CUSTOMER RELATIONS



TV Features:

- 600 Line Horizontal Resolution.
- ULTRABLACK Picture Tube (0.81mm dot pitch).
- Remote Control (controls many brands of VCR's, Cable Boxes, and Satellites).
- ULTRATEC On-Screen Display.
- Full Set of Input Jacks, including S-Video.
- Variable Audio Output Jacks.
- Closed Caption Decoder.
- Comb Filter, Wide-Band Video and Temperature Controls.
- MTS (Multi-Channel Television Sound) Stereo Broadcast Reception.
- 6 Watts Front Firing Speaker System.

PC Features:

- VGA Computer Resolution (640 x 480).
- Scanning Frequency 31.5kHz.
- Refresh Rate 60Hz and 70Hz.
- Screen Size and Placement Adjustments.
- PS/2 Mouse Output.
- PC Audio Input Jacks.
- Plug & Play - This monitor is VESA DDC2B compliant when used with a computer compliant with VESA DDC (Display Data Channel). See page 51.

Screen Size: 27V (27 inches measured diagonally).

Inputs:

- Power InputAC 120V, 60Hz
- Power Consumption (operating)188W
- Power Consumption (maximum)188W

- Antenna input impedance75 Ohm
- Channel coverage181 ch.
- VHF-Band2 ~ 13
- UHF-Band14 ~ 69
- CATV Mid BandA-5 ~ A-1

- Super BandJ-W
- Hyper BandW+1 - W+28
- Ultra BandW+29 - W+84

- Video input1.0Vp-p, 75 Ohm
- S-Video input
Luminance (Y)1.0Vp-p, 75 Ohm
Chrominance (C)0.286Vp-p, 75 Ohm
- Audio input level (average) . . .400mVrms, 47K Ohm

Outputs:

- Audio Output (variable)400mVrms, 1K Ohm

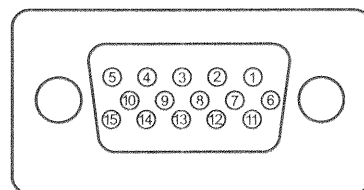
Dimensions:

- Height (in.)23¹/₃₂
- Width (in.)27⁹/₃₂
- Depth (in.)20¹³/₆₄
- Weight (lbs.)88

VGA SPECIFICATIONS

TYPE		PS2-1	PS2-2	PS2-3
MODE		640X350	640X400	640X480
HORIZONTAL FREQUENCY		31.469Khz	31.469Khz	31.469Khz
VERTICAL FREQUENCY		70.08Hz	70.08Hz	59.94Hz
SYNC TYPE		H/V separate	H/V separate	H/V separate
SYNC POLARITY	H	TTL: positive	TTL: negative	TTL: negative
	V	TTL: negative	TTL: positive	TTL: negative

D-Sub Mini 15-Pin Connector Pin Assignments



PIN NO.	SIGNAL	PIN NO.	SIGNAL
1	Red Video	9	No Connection
2	Green Video	10	Ground
3	Blue Video	11	No Connection
4	Ground	12	No Connection
5	Ground	13	H-Sync (or H/V sync)
6	Red Ground	14	V-Sync
7	Green Ground	15	Ground
8	Blue Ground		

NOTE: Due to improvements, specifications in this operating guide are subject to change without notice.



HITACHI

*service
hotline*

To locate an authorized
HITACHI service facility
in the continental U.S.A.
and Canada,

DIAL TOLL FREE

7 days a week, 24 hours a day

800 HITACHI

(1-800-448-2244)

Hitachi America, LTD. Home Electronics Division

Hitachi has made every effort to assure you hours of trouble free operation from your unit. However, should you require service, a network of Hitachi Authorized Service Facilities has been established in all 50 states and Puerto Rico. Each facility will provide you with convenient and expedient assistance. Our service hotline operator will direct you to the Hitachi Authorized Service Facility nearest you. Just present proof of purchase and/or delivery receipts to the Hitachi Authorized Service Facility, and service will be rendered in accordance with the terms of the limited warranty as stated on your warranty card or operating guide.

Should you have any questions regarding warranty, service, operation, or technical assistance, please contact:

**Hitachi America, LTD.
Home Electronics Division**
1855 Dornoch Court
San Diego, CA 92154

***In Canada, please contact: 1-800-HITACHI
(1-800-448-2244)***

Hitachi (HSC) Canada Inc.
6740 Campobello Road
Mississauga, Ont. L5N 2L8





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REFERENCE GUIDE 27MMV MODELS

CHILD LOCK & MOVIE/TV RATINGS

Caution:

Programs are rated by program material producers. Hitachi has no part in setting the rating for any particular program nor in ensuring that the program has been "correctly rated."

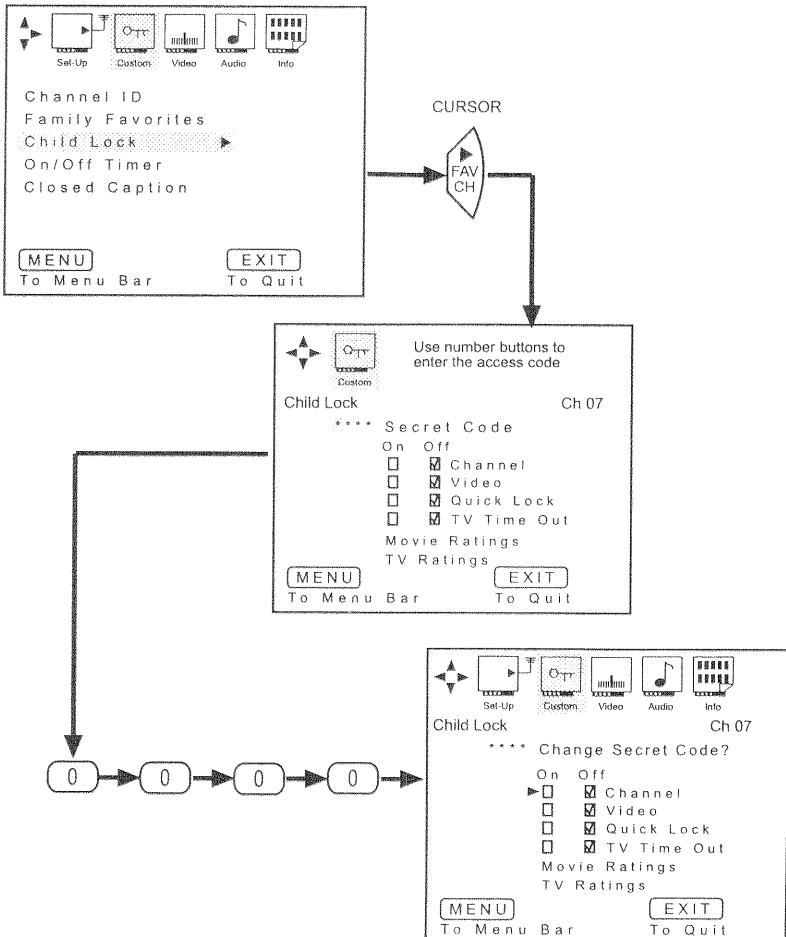
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CHILD LOCK

This function will block out the picture and sound of the selected channel or video input. It can also be used to keep the TV from being viewed for a scheduled amount of time that you set.

The code to enter CHILD LOCK is a four digit secret code number. The factory preset code is 0000. Use the number buttons to select secret code.



CHILD LOCK

Use CURSOR ▲ or ▼ to highlight function and the CURSOR ► button to select ON or OFF.

When CHANNEL is selected, the picture and sound for the chosen channel will be blocked out.

When VIDEO LOCK is selected, the picture and sound for all video inputs will be blocked out. To lock the video inputs, you must be tuned to any video input.

When QUICK LOCK is selected, the picture and sound for channels 3, 4 on all antenna inputs and all video inputs will be blocked out.

When TV TIME OUT is selected, you can set the Begin and End times and the TV cannot be viewed during that time period. (Set clock first.) Use CURSOR ▲ or ▼ to highlight Once (TV will time out one time only), Daily (TV will time out every day), Weekly (TV will time out one time a week) or Off (to disable this function) and then press cursor ► to select your choice.

When MOVIE RATINGS is selected, you can block various types of movies and video tapes based on motion picture ratings.

When TV RATINGS is selected, various types of television programming based on a child lock rating will be blocked.

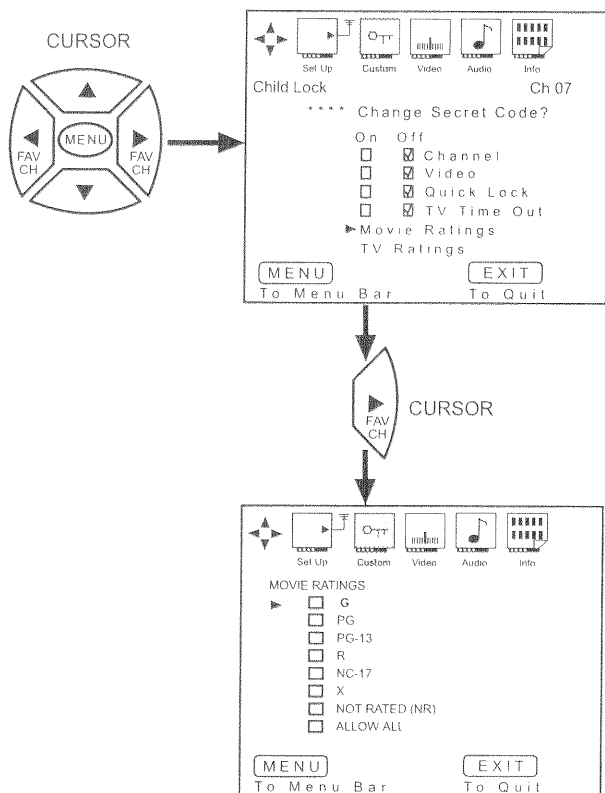
To change the secret code number, select CHANGE SECRET CODE. Enter a new four digit key number you prefer.

If you forget your secret code, use the factory code 7777 to erase your key number. This will reset the secret code number back to the factory preset 0000.

Press EXIT to quit menu or cursor ◀ to return to previous menu.

MOVIE RATINGS

Use MOVIE RATINGS to eliminate from viewing any movie that you feel may be inappropriate due to its content.



Use CURSOR ▲ or ▼ to select the MOVIE RATING category that you want to block.

Use CURSOR ► block the MOVIE RATING that you selected. Once rating is selected for example PG-13, all movies rated PG-13 and higher (R, NC-17, and X) will be blocked.

Press EXIT to quit menu or CURSOR ◀ to return to the previous menu.

NOTE:

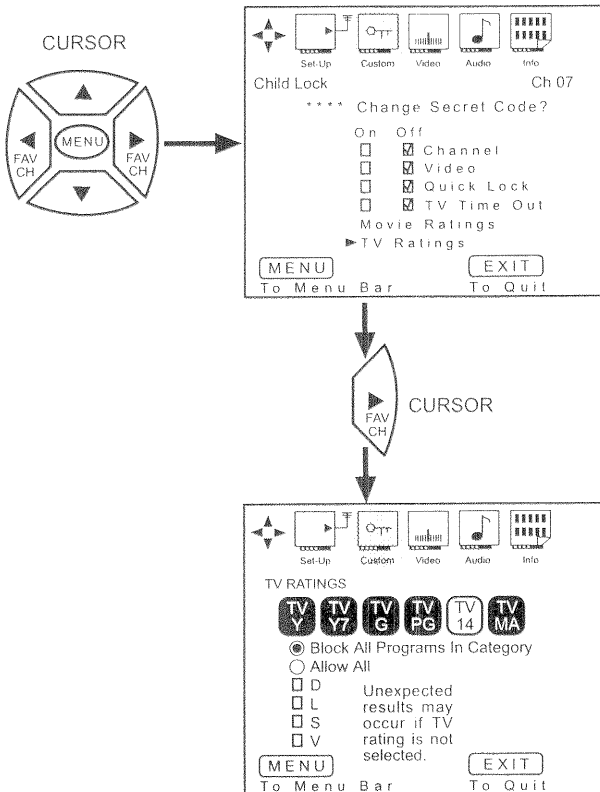
☐ Means rating is viewable, ☒ means rating is selected.

MOTION PICTURE RATING CHART

G	General audiences. All ages admitted.
PG	Parental guidance suggested. Some material may not be suitable for children.
PG-13	Parents strongly cautioned. Some material may be inappropriate for children under 13.
R	Restricted. Under 17 requires accompanying parent or adult guardian.
NC-17	No one 17 and under admitted.
X	Adults only
NR	Contains no rating. Not Rated (NR) and Not Applicable (NA) programs. Movie has not been rated or ratings do not apply.
ALLOW ALL	No movie ratings will be blocked.

TV RATINGS

Use TV RATINGS to eliminate from viewing any TV program that you feel may be inappropriate due to its content.



Use CURSOR ◀ or ▶ to highlight the category that you want to block.
 Use CURSOR ▲ or ▼ to the kind of programs you want to block.
 Press EXIT to quit menu or select CURSOR ◀ to return to the previous menu.

TV PARENTAL GUIDE RATING CHART

NR	Not rated. See Customer Caution on page 7.
TV-Y	All children. The themes and elements in this program are specifically designed for a very young audience, including children from ages 2-6.
TV-Y7	Directed to older children. Themes and elements in this program may include mild physical or comedic violence, or may frighten children under the age of 7.
TV-G	General audience. It contains little or no violence, not strong language, and little or no sexual dialogue or situations.
TV-PG	Parental guidance suggested. The program may contain infrequent coarse language, limited violence, some suggestive sexual dialogue and situations.
TV-14	Parents strongly cautioned. This program may contain sophisticated themes, sexual content, strong language and more intense violence.
TV-MA	Mature audiences only. This program may contain mature themes, profane language, graphic violence, and explicit sexual content.
FV	Fantasy/Cartoon Violence
V	Violence
S	Sex
L	Offensive Language
D	Dialogue with Sexual Content

CUSTOMER CAUTION

The TV Rating system that is used in this set is capable of blocking "NR" programs (non-rated, not applicable and none) per FCC Rules Section 15.120(e)(2). If the option of blocking "NR" programs is chosen "unexpected and possibly confusing results may occur, and you may not receive emergency bulletins or any of the following types of programming."

- Emergency Bulletins (Such as EAS messages, weather warnings and others)
- Locally originated programming
- News
- Political
- Public Service Announcements
- Religious
- Sports
- Weather

NOTE:

If you Block TV-14D, you will still permit TV MA programs;
If you block TV-14DV you will block TV-MAV programs, but you will still permit TV-MALS programs. This means that TV will block violence in TV-14 and higher (TV-MA), but not language and sex.

NOTES:

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