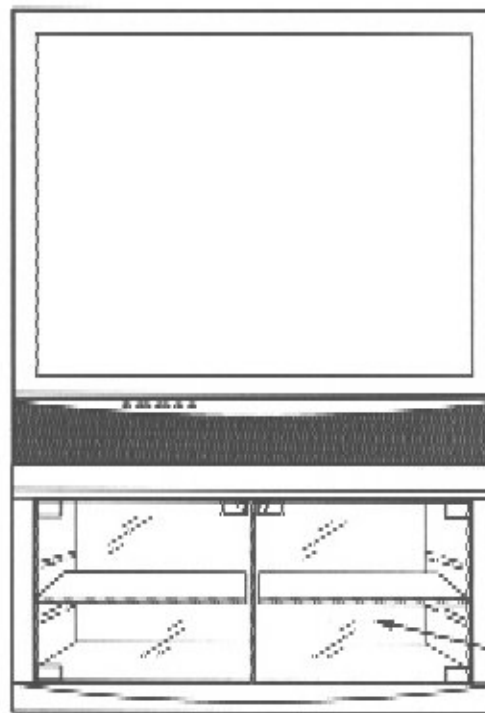


JUL 23 1996

Panasonic®

Color Video Projection System Operating Instructions

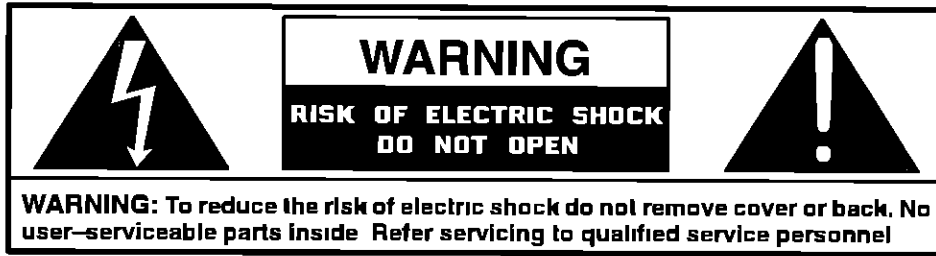
PT-51G45



The Cabinet Glass Doors
Installation Instructions
are located in this Manual

Read these instructions completely before operating this set.
Contents subject to change without notice or obligation.

Safety Instructions



The lightning flash with arrow-head within a triangle is intended to tell the user that parts inside the product are a risk of electric shock to persons.

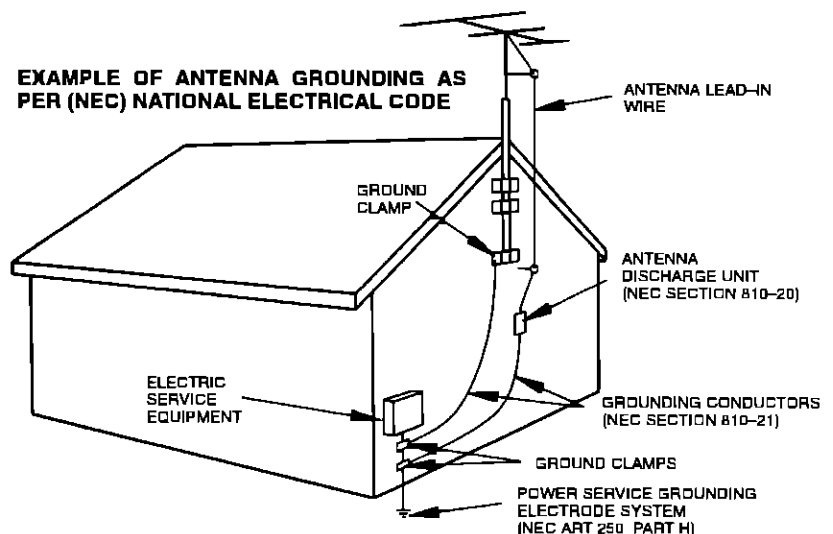


The exclamation point within a triangle is intended to tell the user that important operating and servicing instructions are in the papers with the appliance.

Note To CATV System Installer: This reminder is provided to call the CATV system installer's attention to Article B20-40 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.

Safety Instructions For Television Receivers

- 1 Read and apply the operating instructions provided with your television receiver.
- 2 Read all of the instructions given here and retain them for later use.
- 3 Unplug this television receiver from the wall outlet before cleaning. Do not use liquid or aerosol cleaners. Use a damp cloth for cleaning.
- 4 Do not use attachments not recommended by the television receiver manufacturer as they may cause hazards.
- 5 Do not use this television receiver near water. For example, avoid placing it near a bathtub, washbowl, kitchen sink, or laundry tub, in a wet basement, or near a swimming pool, etc.
- 6 Do not place this television receiver on an unstable cart, stand or table. The television receiver may fall, causing serious injury to a child or adult, and serious damage to the appliance. Use only with a cart or stand recommended by the manufacturer, or sold with the television receiver. Wall or shelf mounting should follow the manufacturer's instructions, and should use a mounting kit approved by the manufacturer.
- 6A 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.
- 7 Slots and openings in the cabinet and the back or bottom are provided for ventilation, and to insure reliable operation of the television receiver and to protect it from overheating. These openings must not be blocked or covered. The openings should never be blocked by placing the television receiver on a bed, sofa, rug or other similar surface. This television receiver should never be placed near or over a radiator or heat register. This television receiver should not be placed in a built-in installation such as a bookcase unless proper ventilation is provided.
- 8 Operate 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 television dealer or local power company. For television receivers designed to operate from battery power, refer to the operating instructions.
- 9 This television receiver 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.
- 10 Do not allow anything to rest on the power cord. Do not locate this television receiver where the cord will be abused by persons walking on it.
- 11 Follow all warnings and instructions marked on the television receiver.
- 12 Do not overload wall outlets and extension cords as this can result in fire or electric shock.
- 13 Never push objects of any kind into this television receiver through 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 receiver.



- 14 If an outside antenna is connected to the television equipment, be sure the antenna system is grounded so as to provide some protection against voltage surges and built up static charges. In the U.S. Section 810 of the National Electrical Code and in Canada Part 1 of the Canadian Electrical Code 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. See Figure.
- 15 For added protection for this television 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. This will prevent damage to the receiver due to lightning and power-line surges.
- 16 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.
- 17 Unplug this television receiver from the wall outlet, and refer servicing to qualified service personnel under the following conditions:
 - a When the power cord or plug is damaged or frayed
 - b If liquid has been spilled into the television receiver
 - c If the television receiver has been exposed to rain or water
 - d If the television receiver does not operate normally by following the operating instructions. Adjust only those controls that are covered by 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 receiver to normal operation.
 - e If the television receiver has been dropped or the cabinet has been damaged
 - f When the television receiver exhibits a distinct change in performance – this indicates a need for service.
- 18 Do not attempt to service this television receiver yourself as opening or removing covers may expose you to dangerous voltage or other hazards. Refer all servicing to qualified service personnel.
- 19 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.
- 20 Upon completion of any service or repairs to this television receiver, ask the service technician to perform routine safety checks to determine that the television is in safe operating condition.
- 21 **WARNING: To prevent fire or shock hazard, do not expose this appliance to rain or moisture.**
- 22 **CAUTION: TO PREVENT ELECTRIC SHOCK DO NOT USE THIS (POLARIZED) PLUG WITH A RECEPTACLE OR OTHER OUTLET UNLESS THE BLADES CAN BE FULLY INSERTED TO PREVENT BLADE EXPOSURE.**

NOTE: This equipment is designed to operate in the U.S.A., Canada and other countries where the broadcasting system and AC house current is exactly the same as in the U.S.A. and Canada.

Important Information Regarding Use of Video Games, Computers, Teletext or Other Fixed Image Displays.

The extended use of fixed image program material can cause a permanent "shadow image" on the picture tube. This background image is viewable on normal programs in the form of a stationary fixed image. This type of irreversible picture tube deterioration can be limited by observing the following steps:

- A Reduce the brightness/contrast setting to a minimum viewing level.
- B Do not display the fixed image for extended periods of time.
- C Turn the power off when not in actual use.

NOTE: The marking or retained image on the picture tube resulting from fixed image use is not an operating defect and as such is not covered by Warranty. This product is not designed to display fixed image patterns for extended periods of time.

Specifications

- Power Source:** 120V, 60Hz, AC
 127V, 60Hz, AC (PT-51G45X)
 120V, 50Hz, AC (PT-51G45L)
 Local Adjustment (110 –240)
- Channel Capability:** 181 channels (See chart)
 VHF 2-13, UHF 14-69, Cable 125 channels
- Video Input Jacks (2):** 1V p-p, 75 ohm, phono jack type
- Audio Input Jacks (2):** High impedance – 10K ohm, 500mV rms
- To Audio AMP Jacks:** 0-4 0V rms 10K ohm
- S-VHS Input Jack:** S-Video (Y-C) Connector
- Stereo Sound**
- Surround Sound**
- Closed Caption Display**
- Picture In Picture:** One Tuner

Channel Capability Chart

BAND	USA/CAN
VHF	12
UHF	56
CABLE (Mid-Band)	15
CABLE (Super Band)	14
CABLE (Hyper Band)	28
CABLE (Ultra Band)	56
TOTAL CHANNELS	181

Specifications are subject to change without notice or obligation.

Introduction

Congratulations on Your New Purchase

Your new video component features an all solid state chassis which is designed to give you many years of enjoyment. It was thoroughly tested and adjusted at the factory for best performance.

In order for you to take full advantage of your new video component, please read and follow the installation and operating instructions supplied with this product.

Customer's Record

The model and serial number of this product may be found on its back cover. You should note the model and serial number in the space provided and retain this book as a permanent record of your purchase to aid in identification in the event of theft or loss.

Model Number _____ Serial Number _____

Table of Contents

Safety Instructions	2	Picture	20
Specifications	3	Sharpness	20
Introduction	4	Auto Color	21
Installation	5	Video NR (Noise Reduction)	21
Receiver Location	5	Audio Adjustments	22
Optional External Equipment Connections	5	Audio Norm	22
AC Power Supply Cord	5	Bass, Treble & Balance Adjustment	22
Battery Installation & Replacement	5	Surround	22
Antenna/Cable Connections	6	Speaker (On/Off)	23
Picture in Picture Antenna & External Video Connections	7	Audio Mode Selection	23
Convergence Adjustment Controls	8	PIP Features	24
Care & Cleaning	9	PIP Frame (Off/On)	24
Location of Controls (Receiver)	10	PIP Frame Size (Large/Small)	24
Quick Reference Control Operation (Receiver)	10	Input Select	25
Location of Controls (Remote Control)	11	Main (Picture) Input Selection	25
Quick Reference Control Operation (Remote)	10	PIP (Picture in Picture) Input Selection	25
Remote Control Quick Ref. Functional Key Chart	12	Timer Features	26
Control Operation	14	Sleep Timer	26
Power Button	14	(Program) Timer	26
Volume (Vol) Buttons	14	Lockout Features	28
Mute Button	14	Lockout Game, Channel or All	28
Channel Change Features	14	Favorite Channel Feature	30
Channel (Ch) Buttons	14	Channel Scan	30
Keyboard "0 through 9" Buttons	14	Favorite Channel Select	30
VCR Function Buttons	14	Channel Caption (Station Identifier)	31
TV/Video Button	15	Closed Caption	32
Recall Button	15	Closed Caption/Field Mode	32
R-Tune (Rapid Tune) Button	15	CC (Closed Caption) On Mute	33
Multi Button	15	3 – Language Menu System (English/Spanish/French)	34
PIP (Picture in Picture) Button	16	Set-Up Features	35
PIP Swap Button	16	Set Time (Clock)	35
PIP Size Button	16	Set Day	35
PIP Freeze Button	17	Antenna Mode (TV or Cable)	36
PIP Move Button	17	Auto Program	37
Main Menu (Icons)	18	Manual Program	38
Language Menu	18	Programming The Universal Remote Control ...	39
AI (Artificial Intelligence)	19	Infrared Remote Control Codes	40
AI Sound	19	Optional Equipment Connection & Operation ...	44
Picture Adjustments	20	Stereo Connection (To Audio AMP)	44
Picture Norm	20	Video/Audio Connection	44
Color	20	S-Video Connection	45
Tint	20	Power Loss	45
Brightness	20	Cabinet Glass Door Installation Instructions	46
		Troubleshooting Chart	48

Installation

Receiver Location

This unit can be used as an entertainment center. Consult your dealer for available options. Locate for comfortable viewing. Avoid placing where sunlight or other bright light (including reflections) will fall on the screen.

Use of some types of fluorescent lighting can reduce remote control transmitter range.

Adequate ventilation is essential to prevent internal component failure. Keep away from areas of excessive heat or moisture.

To insure optimum color purity do not position magnetic equipment (motors, fans, other speakers, etc.) nearby.

Optional External Equipment Connections

The Video/Audio connections between components can be made with shielded video and audio cables. For best performance, video cables should utilize 75 ohm coaxial shielded wire. Cables are available from your dealer or electronic supply house.

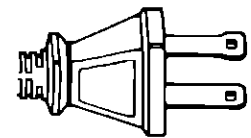
Before you purchase any cables, be sure you know what type of output and input connectors your various components require. Also determine the length of cable you'll need.

Condensation

When the set is moved into a warm room from a cold area, the picture may become out of focus because of condensation on the lens surface due to the temperature change. Picture will become clear when the set reaches the same temperature of the surrounding area.

AC Power Supply Cord

CAUTION TO PREVENT ELECTRIC SHOCK, MATCH WIDE BLADE OF PLUG TO WIDE SLOT OF AC OUTLET AND FULLY INSERT. DO NOT USE THIS (POLARIZED) PLUG WITH A RECEPTACLE OR OTHER OUTLET UNLESS THE BLADE CAN BE FULLY INSERTED TO PREVENT BLADE EXPOSURE.



Polarized Plug

Remote Control Battery Installation & Replacement

Battery Installation

Batteries Use two "AA" batteries.

- 1 Turn the Transmitter face down. To remove top cover, press down on marking and slide cover off in the direction indicated.
- 2 Install the batteries as shown in the battery compartment (Polarity (+) or (-) must be correct.)
- 3 Replace the cover and slide in reverse until the lock snaps.

Helpful Hint:

For frequent Remote Control users, replace old batteries with Alkaline batteries for longer life.

Precaution on Battery Use

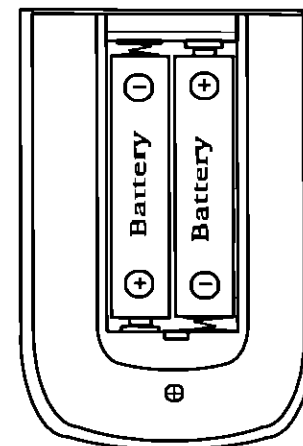
Incorrect installation can cause battery leakage and corrosion that will damage the Remote Control Transmitter.

Observe the Following Precautions:

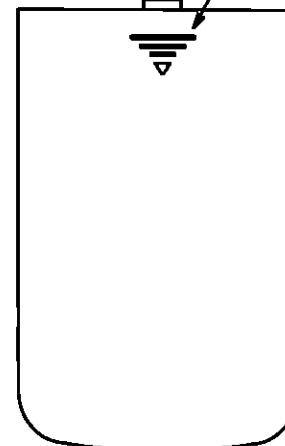
- 1 Batteries should be replaced as a pair. Always use new batteries when replacing the old set.
- 2 Do not combine a used battery with a new one.
- 3 Do not mix battery types (Example "Zinc Carbon" with "Alkaline").
- 4 Do not attempt to charge, short-circuit, disassemble, heat or burn used batteries.
- 5 Battery replacement is necessary when Remote Control reacts sporadically or stops operating the Receiver.

Helpful Hint:

Whenever you remove the batteries to replace them, you may need to reset the Remote Control Infrared Codes. We recommend that you initially record the codes on page 39, when you setup the remote.



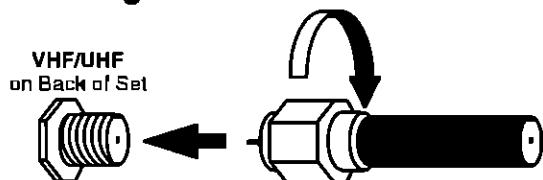
Press Down Here
And Slide Cover
Back



Antenna/Cable Connections

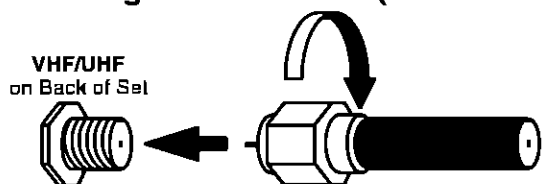
Antenna Connection – For proper reception of VHF/UHF channels an external antenna is required. For best reception an outdoor antenna is recommended. Antenna Mode must be set to TV (Refer to Antenna Mode section)

Incoming Cable From Home Antenna (75 Ohm)



Cable Connection – For reception of cable channels (01–125) connect the cable supplied by your local cable company. Antenna Mode must be set to CABLE (Refer to Antenna Mode section)

Incoming 75 Ohm Cable (From Cable Company)



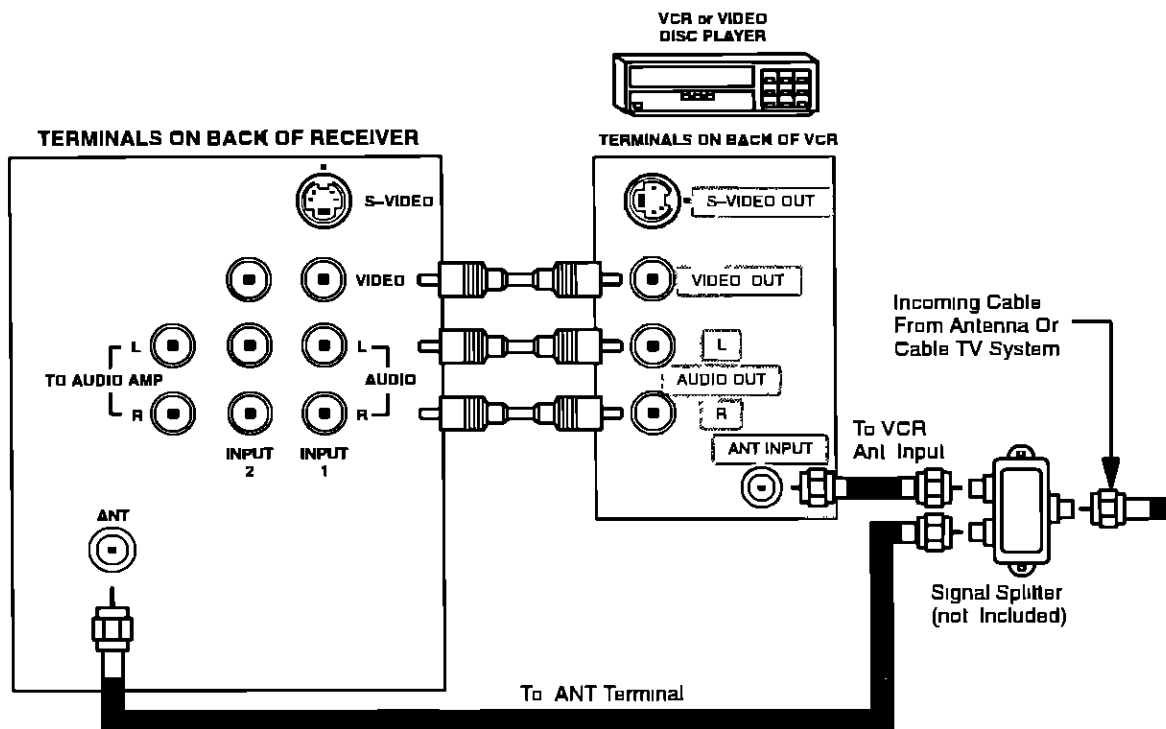
NOTE• Certain cable systems offset some channels to reduce interference or have Premium (scrambled) channels. A cable converter box is required for proper reception. Check with your local Cable company for its compatibility requirements.

Other Video Equipment

VCRs, Video Disc Players, Computers and Teletext equipment can also be connected to the antenna input connection.

Picture in Picture External Video and Antenna Connection

This Receiver has the "PICTURE IN PICTURE" feature. For the proper operation of this feature a second video source is required (such as a VCR). We recommend that you make your antenna and External Video connection as shown below when a second video source is available.



Helpful Hints:

The PIP will operate using Audio/Video input terminals 1 or 2. Use the TV/VIDEO button (when the PIP frame is displayed) to select proper mode.

The PIP feature will operate using S-Video input terminal 1.

Convergence Adjustment Controls

Convergence Adjustment may be required when the Receiver is moved due to the influence of earth's magnetic field on the projection tubes. Convergence can also be reset as necessary. Perform the convergence adjustment using the following procedure:

GREEN ADJUSTMENT

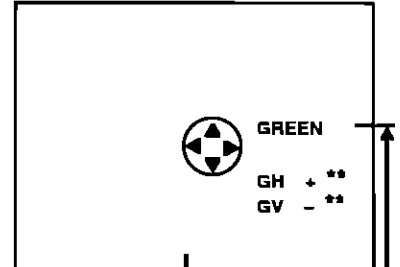
- Turn the Receiver ON and tune in a local channel that provides a clear picture. The test pattern requires a received channel for stabilization. Green is the standard reference for the convergence adjustment procedure.

- Access the Convergence Test Key by opening the Right Cabinet Glass door on the Receiver front.

NOTE: Use a pencil type object to press the Test Key (8mm diagonally).

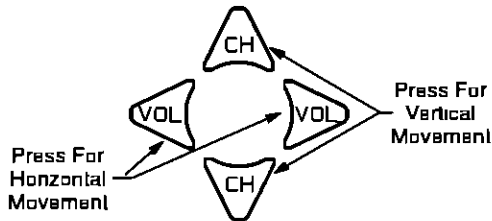
- Press the TEST KEY to display the Green Convergence Test Pattern. Green horizontal and vertical test marks must be present at screen frame mechanical reference marks.

- Align the Green test marks with the frame mechanical reference marks. Press the VOL LEFT or RIGHT button on Remote Control for horizontal movement and the CH UP or DOWN button on Remote Control for the vertical movement.



** this number can be + or - ← mechanical reference marks on frame

Located On Remote Control

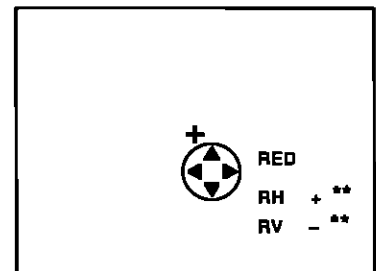


RED ADJUSTMENT

- Press the ACTION button on the Remote Control.

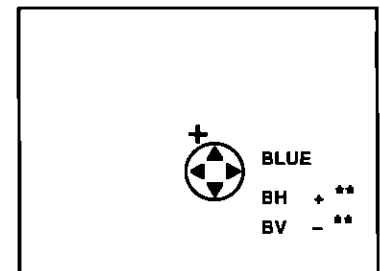
NOTE: A properly converged cross pattern will appear as white with a minimum of red color fringing.

- Align the Red Cross with the white cross pattern at the center of the screen. Press the VOL LEFT or RIGHT button on Remote Control for horizontal movement and the CH UP or DOWN button on Remote Control for the vertical movement.



BLUE ADJUSTMENT

- Press the ACTION button on the Remote Control.
- Repeat the steps in Red Adjustment for the Blue Adjustment.



- Press the TEST KEY to exit the Convergence Adjustment Menu.



NOTE: TO PREVENT PICTURE TUBE DAMAGE DO NOT LEAVE TEST PATTERN ON FOR A LONG PERIOD OF TIME

Care and Cleaning

Plastic Cabinets

Wipe the cabinet with a soft cloth dampened with water or a mild detergent solution and wipe dry with a soft clean cloth. Avoid excessive moisture. Do not use benzene, thinners or other petroleum based cleaners.

Wood Cabinets

When dusting or polishing the cabinet, use a clean soft cloth and stroke straight with the grain. An occasional coat of furniture polish will help preserve the finish. Do not use benzene, thinners or other petroleum based cleaners. Do not place objects made of plastic or rubber directly on top of the cabinet. A chemical reaction could result causing permanent marring of the finish.

Remote Control Transmitter

Do not use benzene, thinners or other petroleum based cleaners to clean the Remote Control Transmitter. To clean, wipe with a soft cloth slightly moistened with a mild detergent and then wipe dry with a soft clean cloth.

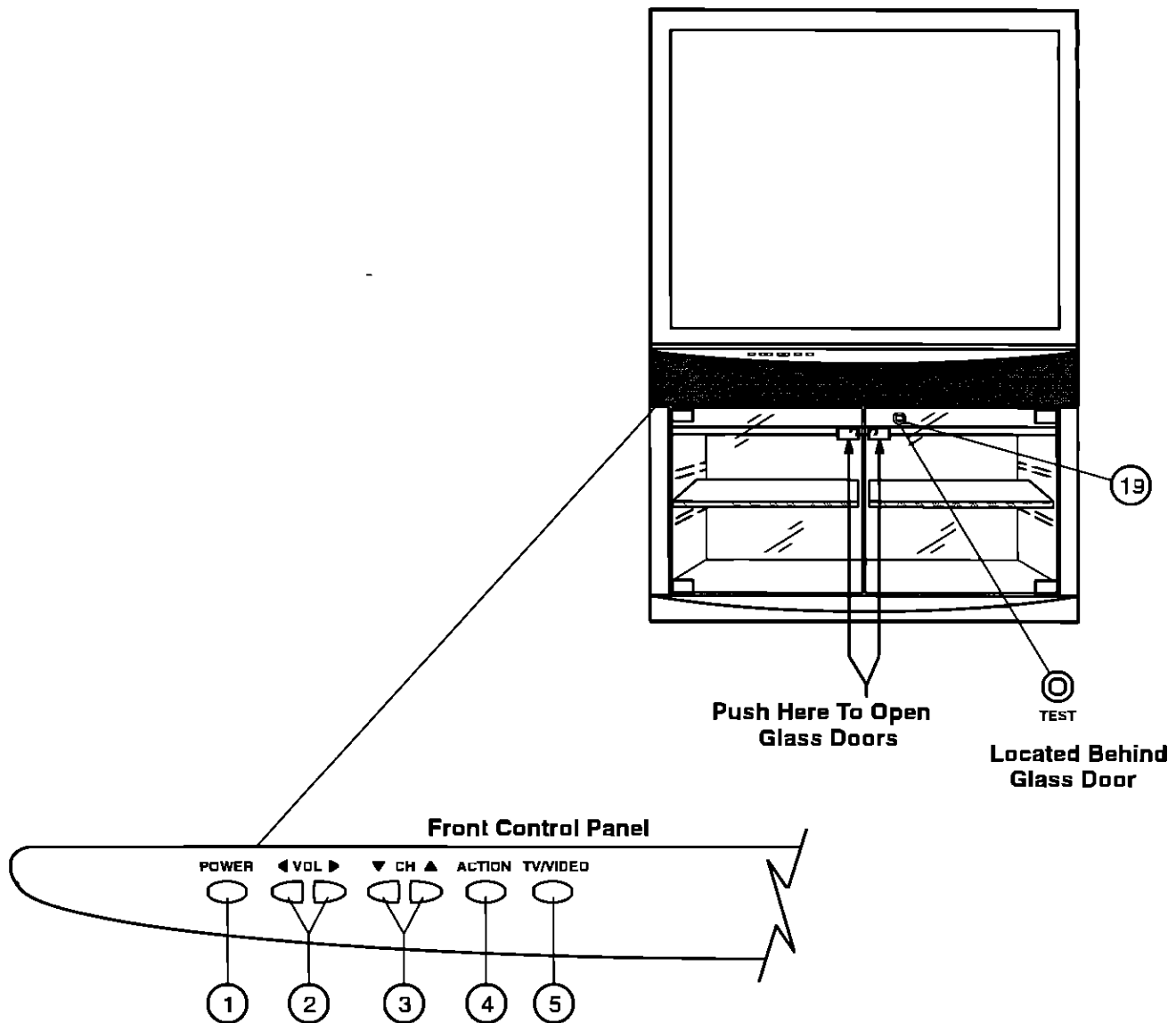
Screen Caution

Your Projection screen may be marred by accidental contacts or improper cleaning. Avoid BUMPING or SCRAPING the screen BY ANY OBJECTS.

Screen Cleaning

The projection screen has a protective shield which is fully washable by using these following precautions. Use a mild soap solution or window cleaner and a clean cloth. Do not use laundry detergent, automatic dishwasher soap, abrasive cleaners, products containing alcohol, ammonia or petroleum distillates. Avoid excessive moisture and wipe dry.

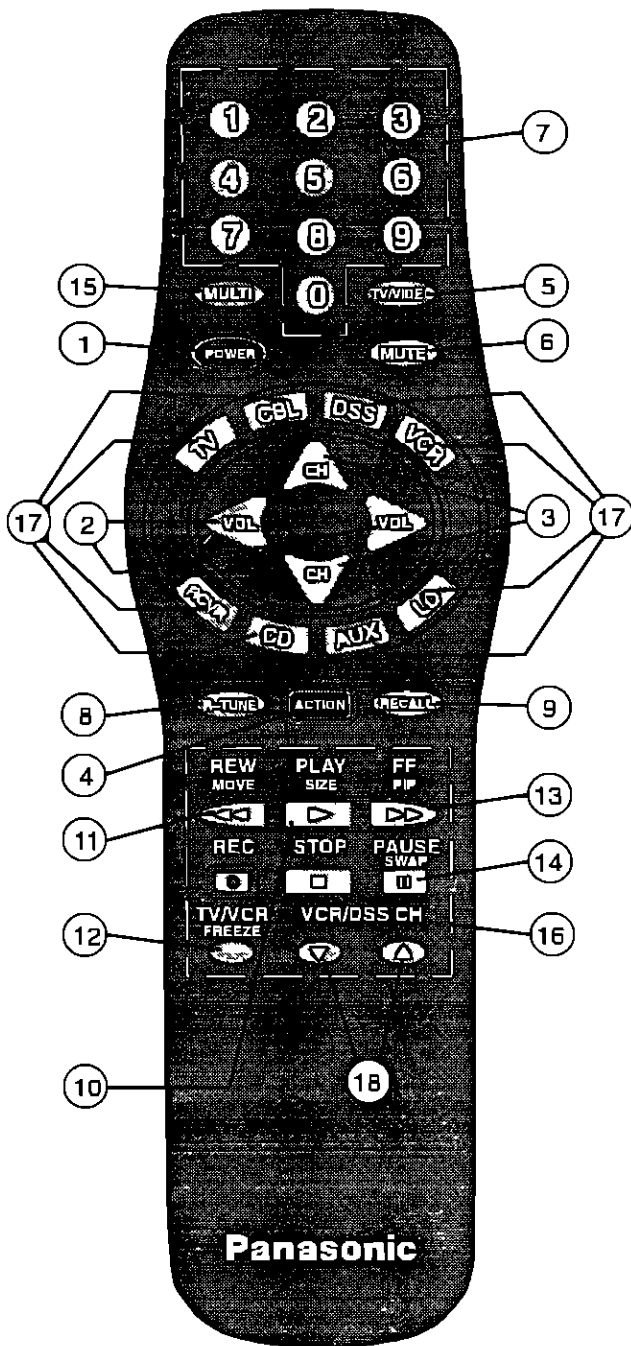
Location of Controls (Receiver)



Quick Reference Control Operation (Receiver)


- ① **Power Button** – Press to turn ON or OFF (pg 14)
- ② **Volume Buttons** – Press to adjust Sound Level Press to adjust Audio Menus, Video Menus and select operating features when menus are displayed (pg 14)
- ③ **Channel Buttons** – Press to select programmed channels Press to highlight desired features when menus are displayed (pg 14)
- ④ **Action Button** – Press to display Main Menu and access or exit On Screen feature and Adjustment Menus (pg 18)
- ⑤ **TV/Video Button** – Press to select TV or one of two (2) Video Inputs, for the Main Picture or the PIP frame (when the PIP frame is displayed) (pg 15)
- ⑱ **Test Key** – Press to display convergence test pattern Press to exit the Convergence Adjustment Menu after converging **NOTE:** Do not leave test pattern on for a long period of time (pg 8)

Location of Controls for the Remote Unit



Home Theater Remote Control

Basic Remote Control Functions For Television Operation

The following is a basic overview of the remote control unit for television operation. Ensure the TV mode is selected by initially pressing . Please refer to the indicated pages for more information.

- ① **Power Button** – Press to turn the TV ON or OFF (pg 14)
- ② **Volume Buttons** – Press to adjust TV sound level. Use with Channel buttons to navigate in menus (pg 14)
- ③ **Channel Buttons** – Press to select channels. Use with Volume buttons to navigate in menus (pg 14)
- ④ **Action Button** – Press to display Main Menu and access or exit On Screen feature and Adjustment Menus (pg 18)
- ⑤ **TV/Video Button** – Press to select TV or one of two (2) Video Inputs, for the Main Picture or the PIP frame (when the PIP frame is displayed) (pg 15)
- ⑥ **Mute Button** – Press to mute sound. A second press returns sound (pg 14)
- ⑦ **Keyboard “0 through 9” Buttons** – Press desired channel number to access any channel (pg 14)
- ⑧ **R-Tune (Rapid Tune) Button** – Press to switch to the previous channel (pg 15)
- ⑨ **Recall Button** – Press to display Time, status of Sleep Timer, Channel, Video Mode, Channel Caption (Station Identifier) and Audio Mode (pg 15)
- ⑩ **PIP Size Button** – Press to select size of PIP frame (when the PIP frame is displayed) (pg 16)
- ⑪ **PIP Move Button** – Press to position PIP frame to any corner of the Main Picture (when PIP frame is displayed) (pg 17)
- ⑫ **PIP Freeze Button** – Press to stop action in the Main Picture or PIP frame (when the PIP frame is displayed) (pg 17)
- ⑬ **PIP (Picture In Picture) Button** – Press to display the PIP frame, press again to remove PIP frame (pg 16)
- ⑭ **PIP Swap Button** – Press to interchange PIP frame with Main Picture (when the PIP frame is displayed) (pg 16)
- ⑮ **Multi Button** – Programmable to operate up to six Remote Function buttons simultaneously (pg 15)
- ⑯ **VCR Function Buttons** – Programmable to operate many brands of VCR's (pg 14)
- ⑰ **Mode Selection Buttons** – Selects the operation mode for the remote control (pg 39)
- ⑱ **VCR/DSS Channel Buttons** – These buttons are used to select VCR or DSS Up/Down channels (pg 13)

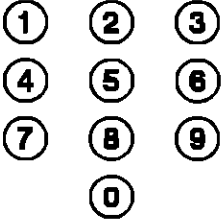

























Helpful Hints:

If the selected component does not respond to the remote control, ensure that the proper mode is selected. First, press the **Mode Selection Button** that corresponds to that component. For example, after first pressing the TV Mode Button, the remote will remain in the TV mode for any following commands. If a different mode button is pressed while operating the television, the TV mode button must be pressed again to reset the TV mode condition.












NOTE: For more information on the Remote Control, please refer to the Remote Control Quick Reference Functional Key Chart (pages 12 and 13)

Remote Control

Quick Reference Functional Key Chart

KEY	MODE	FUNCTION
	TV VCR CABLE, DSS	Selects Channel Selects Channel Selects Channel
	RECEIVER/AMPLIFIER	 Selects TV Video 1  VCR 1  Selects TV Video 2  VCR 2  Selects TV Video 3  VCR 3  Selects Tuner  Selects CD Player  Selects Tape Cassette Player
	CD PLAYER	Selects Track Number
	LD PLAYER	Selects Track Number
	ALL COMPONENTS	Programmable Button That Can Operate Up To Six Remote Functions At Once
	TV	Selects the TV Input Mode
	ALL COMPONENTS	Turns On and Off Selected Components
	TV, DSS, VCR, LDP CABLE RECEIVER/AMPLIFIER	Mutes TV Audio Mutes Audio Mutes Audio
	TV	TV Mode Selection for Remote Control
	CABLE	Cable Mode Selection for Remote Control
	DSS (DIGITAL SATELLITE SYSTEM)	DSS Mode Selection for Remote Control
	VCR	VCR Mode Selection for Remote Control
	RECEIVER/AMPLIFIER	Receiver/Amplifier Mode Selection for Remote Control
	COMPACT DISC	CD Mode Selection for Remote Control
	CASSETTE PLAYER, DVD	AUX Mode Selection for Remote Control Enables User to Operate a Tape Cassette Player, or Digital Video Disc
	LASER DISC PLAYER	LD Mode Selection for Remote Control
 	TV CABLE DSS LDP CD RECEIVER/AMPLIFIER DVD	Channel Up/Down, Menu Navigation Channel Up/Down DSS Guides and Menu Navigation Skip FF, REW Preset or Tuning Frequency Skip FWD / Skip REW
 	TV CABLE DSS RECEIVER/AMPLIFIER VCR LDP	Volume Up/Down, Menu Navigation Volume Up/Down DSS Guides and Menu Navigation Volume Up/Down TV Volume Up/Down TV Volume Up/Down

Remote Control Quick Reference Functional Key Chart

KEY	MODE	FUNCTION
	LDP TV CABLE VCR DSS RECEIVER/AMPLIFIER CD TAPE CASSETTE PLAYER	Side A/B Selects Previously Tuned Channel Selects Previously Tuned Channel Selects Previously Tuned Channel Selects Previously Tuned Channel Switches between AM and FM Selects Next Disc Selects Tape Cassette Player A or B
	TV DSS	Activates TV Menus Acts as Menu Button for DSS
	TV DSS VCR LDP	Displays Channel, Time, and Audio Mode Displays Current DSS Settings Displays Current VCR Settings Displays Current LDP Settings
REW MOVE 	TV DSS VCR LDP TAPE CD DVD	PIP Move DSS Guide Rewind Rewind Rewind Selects Previous Track Rewind
PLAY SIZE 	TV DSS VCR LDP TAPE CD DVD	PIP Size Enter/Select Play Play Play (in Normal Direction) Play Play
FF PIP 	TV DSS VCR LDP TAPE CD DVD	PIP On/Off Exit/Clear Fast Forward Fast Forward Fast Forward Selects Next Track Fast Forward
REC 	DSS VCR TAPE CABLE	One Touch Record in DSS Mode Record Record VCR Record
STOP 	DVD VCR LDP TAPE CD CABLE	Stop Stop Stop Stop Stop VCR Stop
PAUSE SWAP 	DVD TV VCR LDP TAPE CD CABLE	Pause PIP Swap Pause Pause Pause Pause VCR Pause
TV/VCR FREEZE 	VCR DSS CABLE	Selects TV/VCR Mode Selects TV/DSS Mode Selects TV/VCR Mode
VCR/DSS CH 	TV VCR DSS CABLE	PIP Channel Up/Down (2 Tuner PIP Models Only) Channel Up/Down Channel Up/Down VCR Up/Down

Control Operation

Helpful Hints:

- Press the TV Mode Selection button to operate TV Remote functions, if necessary

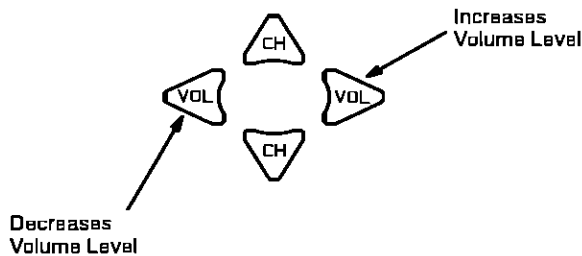


Power Button – Press the POWER button after selecting a mode to turn ON. Press again to turn OFF.



Volume Button – Press the VOLUME (VOL) LEFT or RIGHT button for desired listening level (when On Screen menus are not displayed).

Located On Remote Control



Mute Button – Press the MUTE button to quickly reduce sound level (Mute will appear on screen). Press again to restore sound.



Helpful Hints:

- Helpful information will display On Screen momentarily when Receiver is first turned on and when the channel is changed.
- When using keyboard entry for channels 10, 11 and 12 in the CABLE mode there is a slight delay before channel change because of the capability of tuning cable channels 100 to 125.

NOTE: If "SPEAKER OFF" is displayed On Screen after pressing the VOLUME button, refer to Audio Menu to turn Speakers "ON".

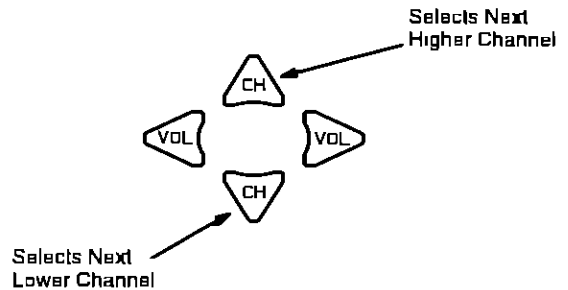
Channel Change – (Two options)

Option 1.

Press the CHANNEL (CH) UP or DOWN button to sequentially scan through programmed channels (when On Screen menus are not displayed).

NOTE. Press the TV Mode button to operate TV Remote functions, if necessary.

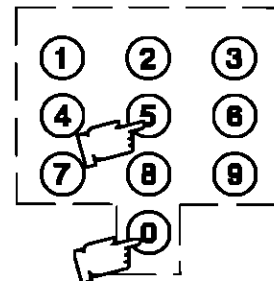
Located On Remote Control



Keyboard "0 through 9" Buttons

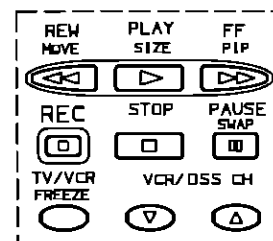
Option 2.

Press two digits on keyboard (Example press 0, then 5 for channel 05). For channels over 99, press three digits on keyboard.



VCR Function Buttons – The VCR FUNCTION buttons have been designed to operate numerous brands of VCRs. The infrared code must be obtained prior to use (Please refer to Programming the Universal Remote for programming instructions).

NOTE: Press the VCR Mode Selection button to operate VCR Remote functions.

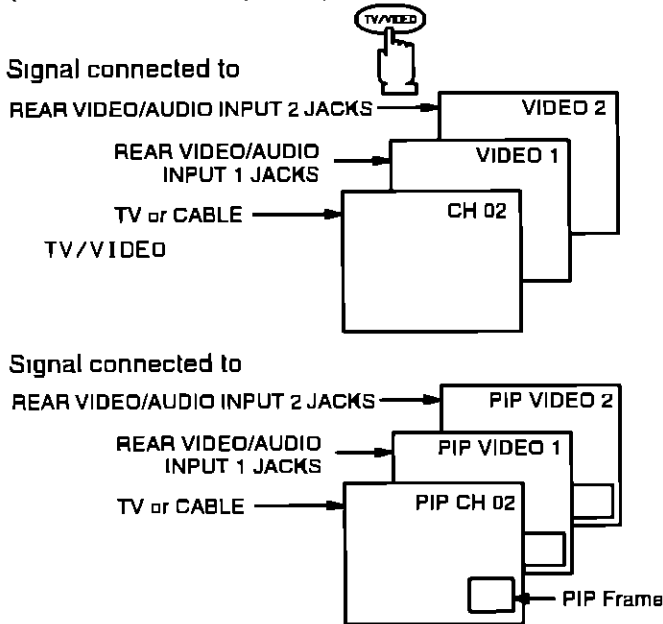


Helpful Hints:

- Press the TV Mode Selection button to operate TV Remote functions, if necessary.

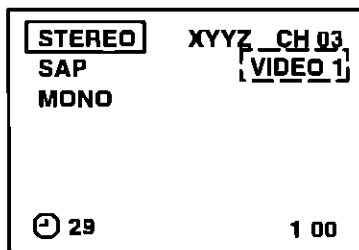


TV/Video Button – Press the TV/VIDEO button to select desired input for Main Picture or PIP frame (when the PIP is displayed)

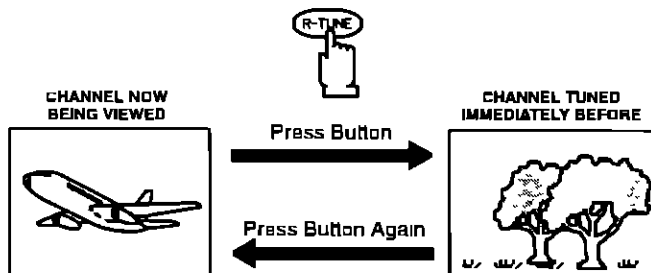


Recall Button – Press the RECALL button to review

- Audio Mode status
- CH number or Video Input selected
- Sleep Timer status
- Clock time
- Channel Caption (Station Identifier)



R-Tune (Rapid Tune) Button – Press the R-TUNE (RAPID TUNE) button to instantly switch between the last two channels selected (without any On Screen display being activated)



Multi Button

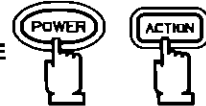
The MULTI button can be programmed to operate up to 6 Remote function buttons at the same time.

For Example. TV Power/On, VCR Power/On and Cable box Power/On (selected brands) can be operated at the same time with one press of the MULTI button

Procedure

- First program the Remote for the selected device Infrared access code Confirm that the Remote Control is compatible with the equipment
- Face the Remote Control transmitter away from all equipment remote sensors
- Press and hold the Remote POWER button, then press and hold the ACTION button down at the same time for three seconds (All previous commands are erased)

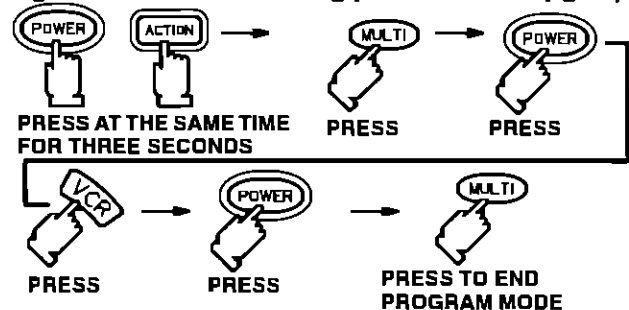
PRESS AT THE SAME TIME FOR THREE SECONDS



- After three seconds, let go of the POWER and ACTION buttons
- Press the MULTI button (Waiting more than 30 seconds without pressing another button will exit the programming mode)
- Press a maximum of 6 Function buttons on the Remote

Each button you press is equal to one function. If six Remote button functions are entered, all will register in the MULTI button memory in the sequence entered. When finished, press the MULTI button to end the program mode.

The following is an example flow chart of Remote functions that can be programmed into the MULTI button (The VCR Mode button should be programmed before starting procedure see pg.39).



Now you can turn the TV and VCR ON/OFF at the same time with one press of the MULTI button

To delete entered functions – Press and hold the Remote POWER button then press and hold the ACTION button down at the same time for three seconds. Now you can enter from one to six different Remote functions

NOTE:

You can also program the MULTI button to perform most individual Remote Control button functions. Buttons which continuously perform a function as long as pressed (Volume Up/Down, Channel Up/Down, etc.) cannot be programmed. Only those buttons which perform a function when initially pressed (Power On/Off, Mute, Direct Channel Entry, etc.) can be programmed.

- Press the TV Mode Selection button to operate TV Remote functions, if necessary



PIP (Picture in Picture) Button – This feature allows monitoring one channel while watching another when a second video source with a tuner is connected (such as a VCR) to the television

NOTE: When the Main Picture is in Video mode with no signal, the PIP will not operate properly

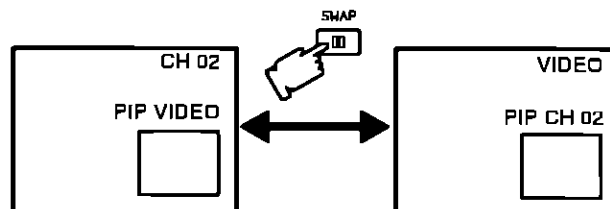


PIP Operation

- 1 Turn VCR ON and select a desired channel
- 2 Press the TV Mode Selection button to operate TV Remote functions, if necessary
- 3 Press the PIP button (television must be ON) The PIP frame will appear at the position it was last displayed. The Main Picture Video Source and PIP Video Source will display on screen momentarily. Audio will be that of Main Picture
- 4 Press the PIP button again to cancel PICTURE IN PICTURE feature (if desired)

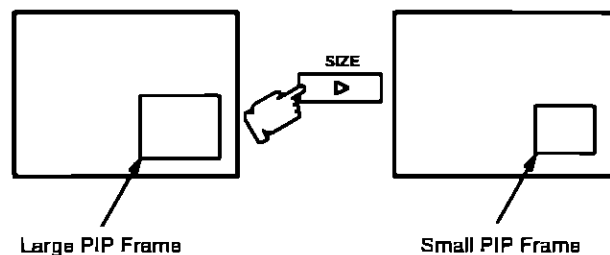
NOTE: For PIP Video source connection, refer to the PIP External Video and Antenna Connections section

PIP Swap Button – Press the SWAP button (when the PIP frame is displayed) to interchange what is being viewed on the Main Picture with that of the PIP frame



- Audio will be that of the Main Picture

PIP Size Button – Press the SIZE button (when the PIP frame is displayed) to choose either the large or small PIP frame

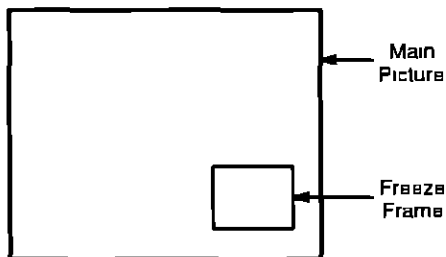


Helpful Hints:

- Press the TV Mode Selection button to operate TV Remote functions, if necessary



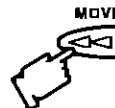
PIP Freeze Button – Press the FREEZE button to stop action in the PIP frame



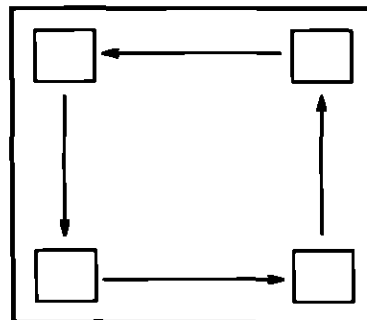
NOTE:

- Pressing the FREEZE button when the PIP frame is not displayed will stop action in the Main Picture and display it on the PIP frame
- Pressing the FREEZE button when PIP frame is displayed will stop action in the PIP frame, press the FREEZE button again to continue action
- Press the PIP button to delete PIP frame

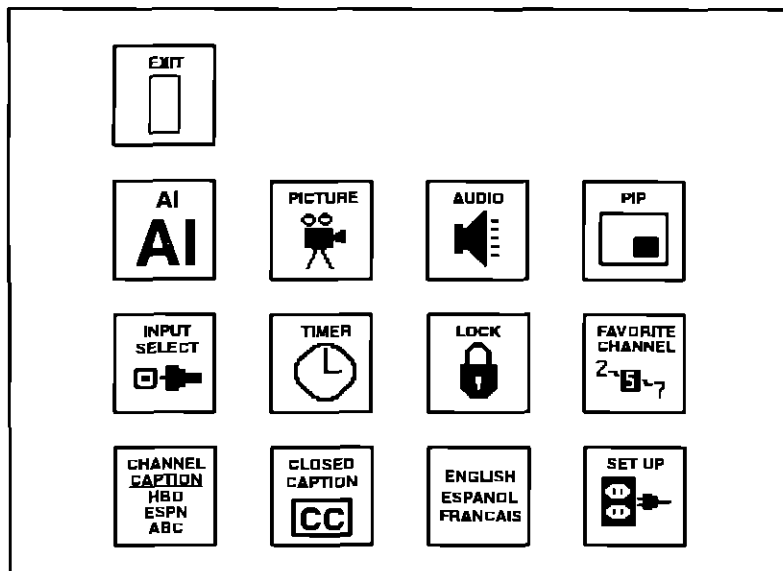
PIP Move Button – The PIP frame may be located at any corner of the Main Picture by pressing the PIP MOVE button (when the PIP frame is displayed)



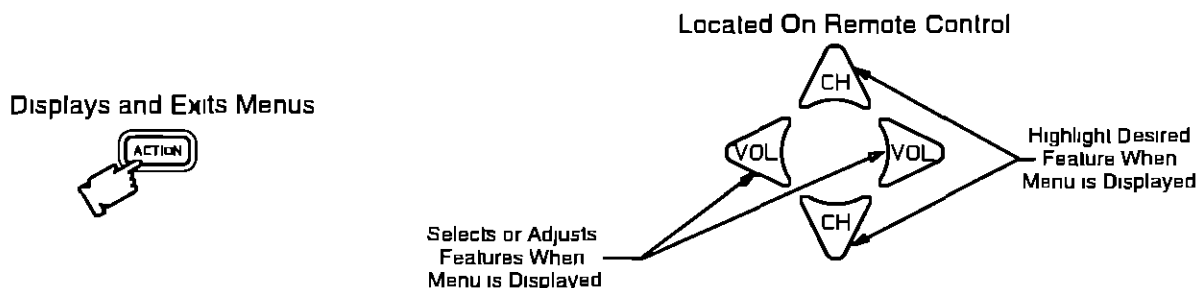
NOTE: Each time MOVE button is pressed (when the PIP frame is displayed), the PIP frame will move (counterclockwise) as illustrated



Main Menu (Icons)



* **Note:** Remote Control must be set to TV Mode

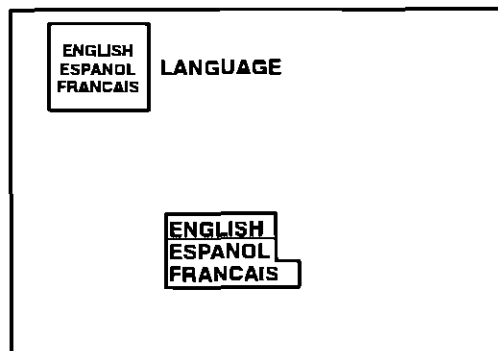


- 1 Press the ACTION button to display the Main Menu with Icons
- 2 Press the CH UP or DOWN and the VOL LEFT or RIGHT buttons to select the desired Icon when the Main Menu is displayed (selected Icon will be indicated in Red)
- 3 Press the VOL buttons for left and right movement and the CH buttons for up or down movement
- 4 To exit the Main Menu first select the EXIT Icon, then press the ACTION button.

Language Menu

The **LANGUAGE MENU** is factory set to **ENGLISH** Follow these instructions to change the Language Menu to **SPANISH** or **FRENCH** and back to **ENGLISH**.

- 1 Press the ACTION button to display the Main Menu
- 2 Press the CH UP/DOWN and VOL LEFT/RIGHT buttons to highlight the Language ENGLISH/ESPAÑOL (Spanish)/FRANCAIS (French) Icon
- 3 Press the ACTION button to display the Language select Menu



- 4 Press the CH UP or DOWN button to select ENGLISH, SPANISH or FRENCH from the Language Menu
- 5 Press the ACTION button twice to exit the Language Select Menu

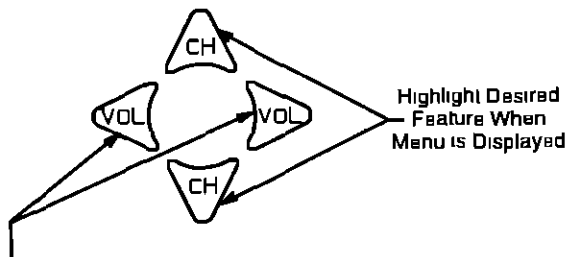
AI (Artificial Intelligence)

- AI Sound

Displays and Exits Menus



Located On Remote Control

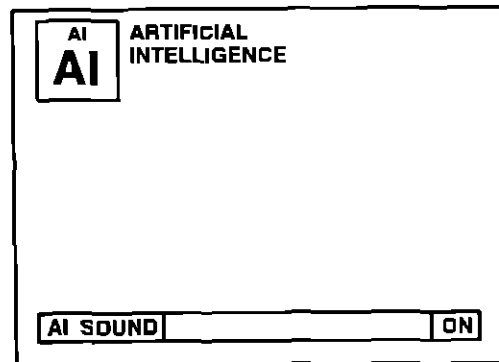


Selects or Adjusts Features When Menu is Displayed

Highlight Desired Feature When Menu is Displayed

AI Sound – This feature is used to enhance sound quality through automatic adjustment of Bass and Treble during Speech or Music segments of the audio broadcast. It also regulates the volume between program and commercial audio to maintain a constant sound output level.

- 1 Press the ACTION button to display the Main Menu
- 2 Press the CH UP/DOWN and VOL LEFT/RIGHT buttons to highlight the AI icon
- 3 Press the ACTION button to display the AI (Artificial Intelligence) Selection Menu



- 4 Press the CH UP or DOWN button to highlight "AI SOUND"
- 5 Press the VOL LEFT or RIGHT button to select AI SOUND ON or OFF
- 6 Press the ACTION button twice to exit

* **Note:** Remote Control must be set to TV Mode

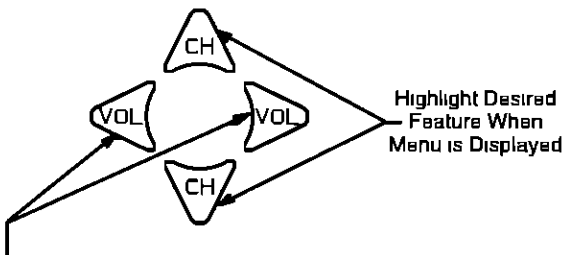
Picture Adjustments

- Picture Norm
- Color
- Tint
- Brightness
- Picture
- Sharpness
- Auto Color
- Video NR (Noise Reduction)

Displays and Exits Menus



Located On Remote Control



Selects or Adjusts Features When Menu is Displayed

Highlight Desired Feature When Menu is Displayed

Helpful Hints:

COLOR – adjust for desired color intensity
TINT – adjust for natural flesh tones
BRIGHTNESS – adjust so dark areas of picture just become black for a crisp detail
PICTURE – adjust so the white areas of the picture are to your liking
SHARPNESS – adjust for best clarity of outline detail

* **Note:** Remote Control must be set to TV Mode

Picture Norm – This feature is used to reset Color, Tint, Brightness, Picture and Sharpness adjustments back to a factory preset level

- 1 Press the ACTION button to display the Main Menu
- 2 Press the CH UP/DOWN and VOL LEFT/RIGHT buttons to highlight the Picture Icon
- 3 Press the ACTION button to display the Picture Adjustment Menu

PICTURE VIDEO	
PICTURE NORM	NO
COLOR	-----+-----
TINT	-----+-----
BRIGHTNESS	-----+-----
PICTURE	-----+-----
SHARPNESS	-----+-----
AUTO COLOR	ON
VIDEO NR	OFF

- 4 Press the CH UP or DOWN button to highlight "PICTURE NORM"
- 5 Press the VOL LEFT or RIGHT button to select "SET" to Normalize Color, Tint, Brightness, Picture and Sharpness
- 6 Press the ACTION button twice to exit the Picture Adjustment Menu

Color, Tint, Brightness, Picture & Sharpness Adjustments

- 1 Press the ACTION button to display the Main Menu
- 2 Press the CH UP/DOWN and VOL LEFT/RIGHT buttons to highlight the Picture Icon
- 3 Press the ACTION button to display the Picture Adjustment Menu

PICTURE VIDEO	
PICTURE NORM	NO
COLOR	-----+-----
TINT	-----+-----
BRIGHTNESS	-----+-----
PICTURE	-----+-----
SHARPNESS	-----+-----
AUTO COLOR	ON
VIDEO NR	OFF

- 4 Press the CH UP or DOWN button to select the desired Picture Adjustment (Color, Tint, Brightness, Picture or Sharpness)
- 5 Press the VOL LEFT or RIGHT button to adjust your selection (The Selected Picture Adjustment will be displayed)
- 6 Repeat steps 4 and 5 for the remaining Picture Adjustments
- 7 Press the ACTION button twice to exit the Picture Adjustment Menu

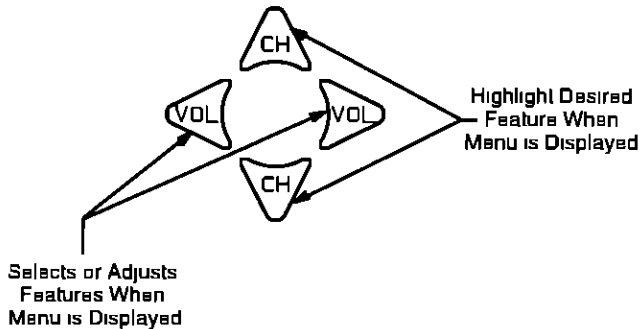
NOTE: Pressing the ACTION button again will return you to the Picture Icon

Auto Color and Video NR

Displays and Exits Menus

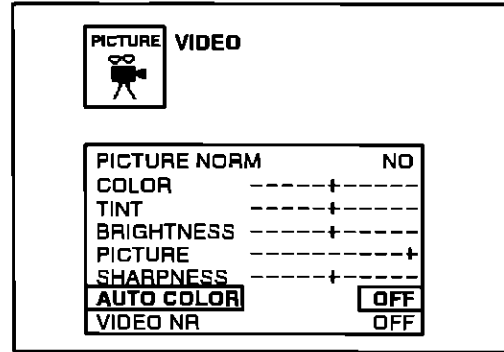


Located On Remote Control



Auto Color – This feature automatically optimizes color adjustment to compensate for signal variations

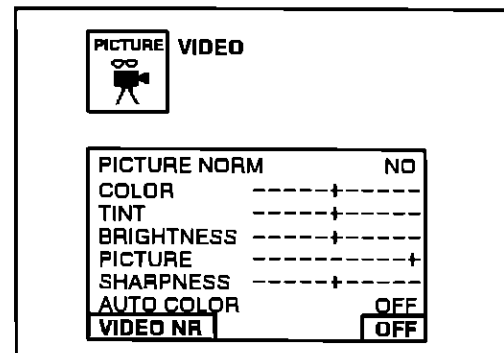
- 1 Press the ACTION button to display the Main Menu
- 2 Press the CH UP/DOWN and VOL LEFT/RIGHT buttons to highlight the Picture Icon
- 3 Press the ACTION button to display the Picture Adjustment Menu



- 4 Press the CH UP or DOWN button to highlight "AUTO COLOR"
- 5 Press the VOL LEFT or RIGHT button to turn Auto Color feature ON or OFF
- 6 Press the ACTION button twice to exit the Picture Adjustment Menu

Video NR (Noise Reduction) – This feature reduces video noise (snow in picture) due to weak signal

- 1 Press the ACTION button to display the Main Menu
- 2 Press the CH UP/DOWN and VOL LEFT/RIGHT buttons to highlight the Picture Icon
- 3 Press the ACTION button to display the Picture Adjustment Menu



- 4 Press the CH UP or DOWN button to highlight "VIDEO NR"
- 5 Press the VOL LEFT or RIGHT button to turn Video NR feature ON or OFF
- 6 Press the ACTION button twice to exit the Picture Adjustment Menu

* **Note:** Remote Control must be set to TV Mode

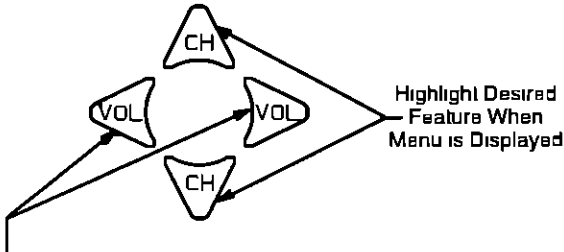
Audio Adjustment

- Audio Norm
- Bass
- Treble
- Balance
- Surround
- [TV] Speaker
- Audio Mode

Displays and Exits Menus



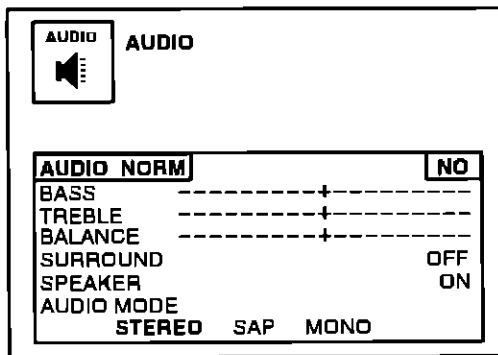
Located On Remote Control



Selects or Adjusts Features When Menu is Displayed

Audio Norm — This feature is used to reset BASS, TREBLE and BALANCE back to a factory preset level

- 1 Press the ACTION button to display the Main Menu
- 2 Press the CH UP/DOWN and VOL LEFT/RIGHT buttons to highlight the Audio Icon
- 3 Press the ACTION button to display the Audio Adjustment Menu



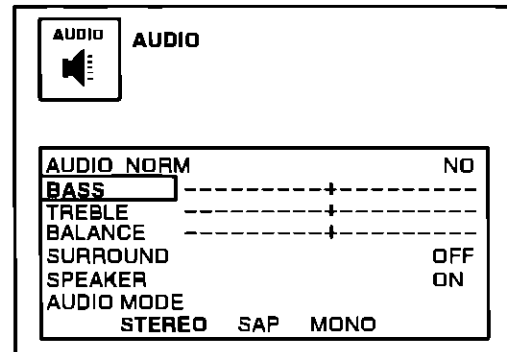
- 4 Press the CH UP or DOWN button to highlight "AUDIO NORM"
- 5 Press the VOL LEFT or RIGHT button to select "SET" to Normalize Bass, Treble and Balance
- 6 Press the ACTION button twice to exit

Helpful Hints:

BASS – To increase or decrease the Bass response
TREBLE – To increase or decrease the Treble response
BALANCE – To emphasize the Right and Left Speaker's volume

Bass, Treble & Balance Adjustment

- 1 Press the ACTION button to display the Main Menu
- 2 Press the CH UP/DOWN and VOL LEFT/RIGHT buttons to highlight the Audio Icon
- 3 Press the ACTION button to display the Audio Adjustment Menu

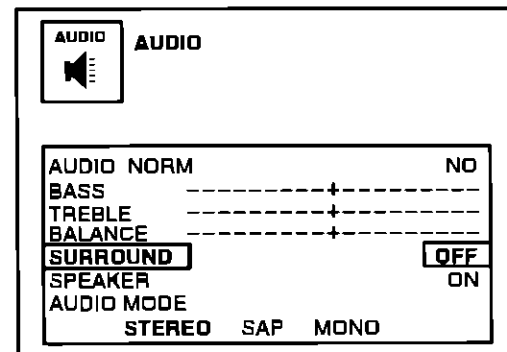


NOTE. While the AI (Artificial Intelligence) Sound is "ON" the Bass and Treble can not be adjusted

- 4 Press the CH UP or DOWN button to highlight BASS, TREBLE or BALANCE
- 5 Press the VOL LEFT or RIGHT button to adjust for desired audio response
- 6 Repeat steps 4 and 5 for remaining Audio functions
- 7 Press the ACTION button twice to exit

Surround — Use the Surround Feature to enhance audio response when listening to Stereo broadcasts

- 1 Press the ACTION button to display the Main Menu
- 2 Press the CH UP/DOWN and VOL LEFT/RIGHT buttons to highlight the Audio Icon
- 3 Press the ACTION button to display the Audio Adjustment Menu



- 4 Press the CH UP or DOWN button to highlight "SURROUND"
- 5 Press the VOL LEFT or RIGHT button to select SURROUND OFF or ON
- 6 Press the ACTION button twice to exit

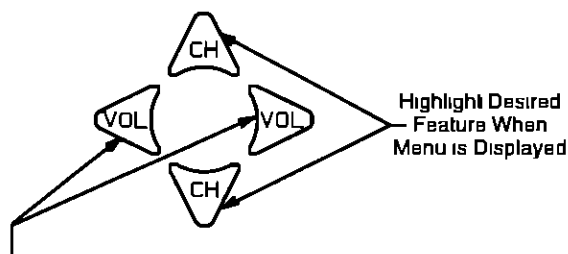
* **Note:** Remote Control must be set to TV Mode

[TV] Speaker (OFF/ON) Audio Mode Selection

Displays and Exits Menus



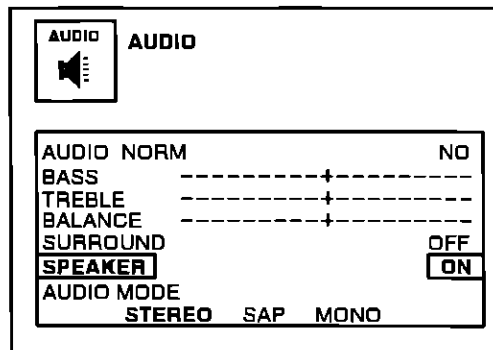
Located On Remote Control



Selects or Adjusts
Features When
Menu is Displayed

[TV] Speaker – This feature is used to turn the internal speakers “ON” or “OFF”, when the Receiver is connected to an External Audio Amplifier

- 1 Press the ACTION button to display the Main Menu
- 2 Press the CH DOWN and VOL RIGHT buttons to highlight the Audio Icon
- 3 Press the ACTION button to display the Audio Adjustment Menu

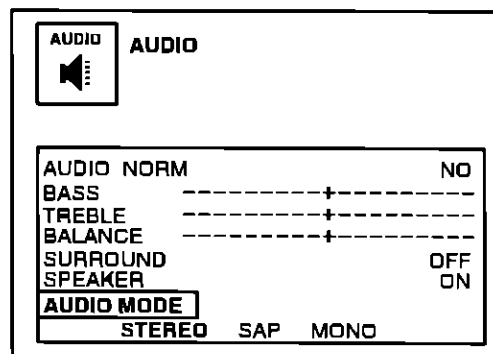


- 4 Press the CH UP or DOWN button to highlight “SPEAKER”
- 5 Press the VOL LEFT or RIGHT button to select TV Speakers ON or OFF
- 6 Press the ACTION button twice to exit

Audio Mode Stereo/SAP/Mono

When Audio is broadcast in Stereo or SAP an On Screen Display will appear on initial “Turn On” and “Channel Change” The available choices will be indicated in red

- 1 Press the ACTION button to display the Main Menu
- 2 Press the CH UP/DOWN and VOL LEFT/RIGHT buttons to highlight the Audio Icon
- 3 Press the ACTION button to display the Audio Adjustment Menu



- 4 Press the CH UP or DOWN button to highlight “AUDIO MODE”
- 5 Press the VOL LEFT or RIGHT button to select Stereo, SAP (Second Audio Programming) or Mono The selected mode will be highlighted
- 6 Press the ACTION button twice to exit

* **Note:** Remote Control must be set to TV Mode

Helpful Hints:

STEREO – Two channel Audio reception

SAP – Second Audio Programming (typically used for bilingual audio)

MONO – Use when stereo signal is weak

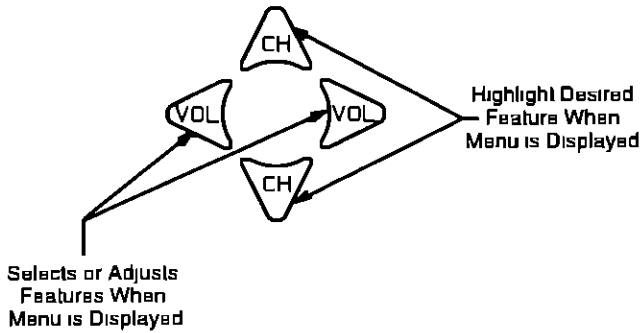
PIP Features

- PIP OFF/ON
- PIP Size (When PIP frame is Displayed)

Displays and Exits Menus

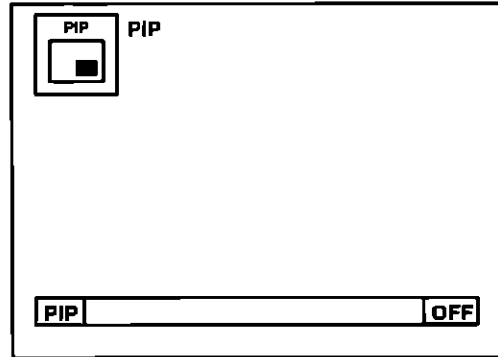


Located On Remote Control



PIP (Off/ON)

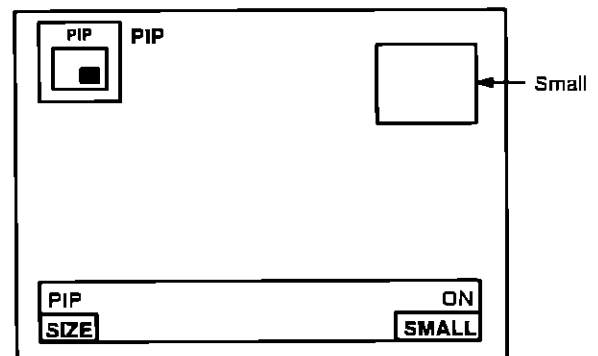
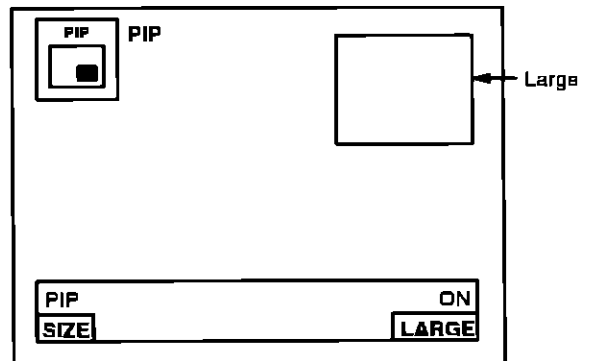
- 1 Press the ACTION button to display the Main Menu
- 2 Press the CH UP/DOWN and VOL LEFT/RIGHT buttons to highlight the PIP Icon
- 3 Press the ACTION button to display the PIP Selection Menu



- 4 Press the CH UP or DOWN button to highlight "PIP"
- 5 Press the VOL LEFT or RIGHT button to select PIP OFF or ON

PIP Size (Large/Small)

- 1 Press the PIP button to display the PIP frame
- 2 Press the ACTION button to display the Main Menu
- 3 Press the CH UP/DOWN and VOL LEFT/RIGHT buttons to highlight the PIP Icon
- 4 Press the ACTION button to display the PIP Selection Menu
- 5 Press the CH UP or DOWN button to highlight "SIZE" (when the PIP frame is displayed)
- 6 Press the VOL LEFT or RIGHT button to select PIP frame LARGE or SMALL
- 7 Press the ACTION button twice to exit



* Note: Remote Control must be set to TV Mode

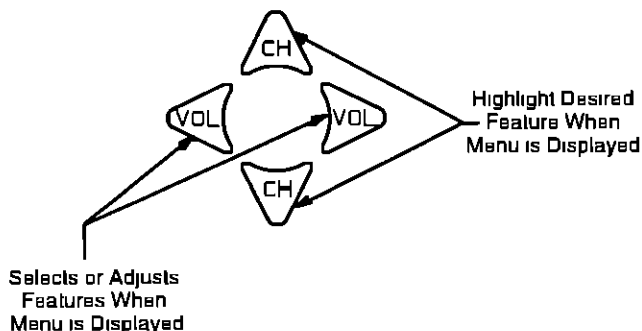
Input Select

- Main Picture Input Selection
- PIP (Picture in Picture) Input Selection
(When the PIP frame is displayed)

Displays and Exits Menus



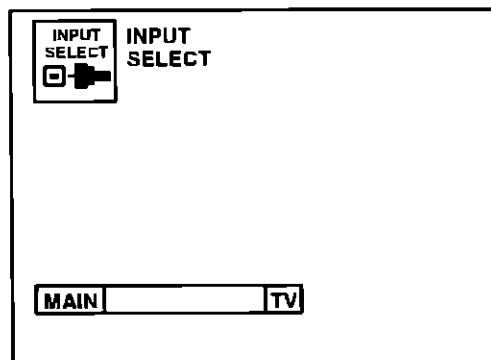
Located On Remote Control



Main (Picture) Input Selection

This feature is used to select TV Mode Operation or one of two Video Inputs (used with optional accessory Video equipment)

- 1 Press the ACTION button to display the Main Menu
- 2 Press the CH UP/DOWN and VOL LEFT/RIGHT buttons to highlight the Input Select Icon
- 3 Press the ACTION button to display the Input Select Menu

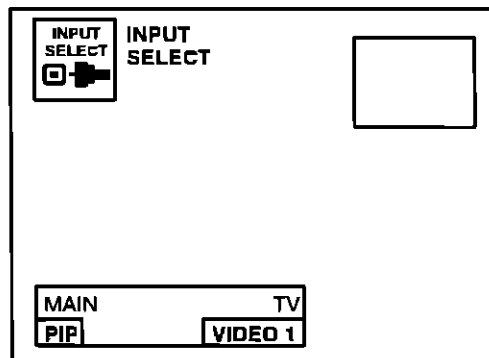


- 4 Press the VOL LEFT or RIGHT button to select TV, Video 1 or Video 2 for Main Picture Input
- 5 Press the ACTION button twice to exit

PIP (Picture in Picture) Input Selection

This feature is used to select TV Mode Operation or one of two Video Inputs for the PIP (Picture in Picture) frame (used with optional accessory Video equipment)

- 1 Press the PIP button to display the PIP frame
- 2 Press the ACTION button to display the Main Menu
- 3 Press the CH UP/DOWN and VOL LEFT/RIGHT buttons to highlight the Input Select Icon
- 4 Press the ACTION button to display the Input Select Menu



- 5 Press the CH UP or DOWN button to highlight "PIP"
- 6 Press the VOL LEFT or RIGHT button to select TV, Video 1 or Video 2 for the PIP frame Input
- 7 Press the ACTION button twice to exit

* Note: Remote Control must be set to TV Mode

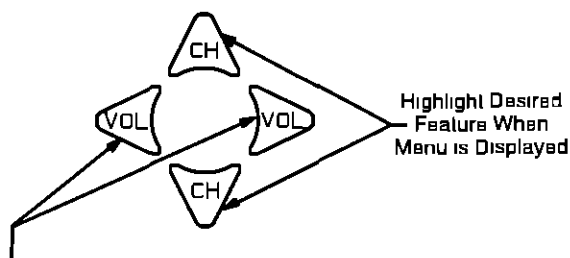
Timer Feature

- Sleep
- (Dual Program) Timer

Displays and Exits Menus



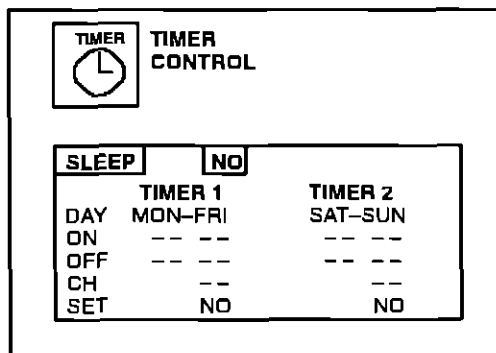
Located On Remote Control



Selects or Adjusts Features When Menu is Displayed

Sleep (Timer) – This feature is used for automatic turn OFF in 30, 60 or 90 minutes as desired
NOTE: Display will flash 3, 2 and 1 to indicate the last three remaining minutes prior to turn OFF

- 1 Press the ACTION button to display the Main Menu
- 2 Press the CH UP/DOWN and VOL LEFT/RIGHT buttons to highlight the Timer Icon
- 3 Press the ACTION button to display the Timer Control Menu



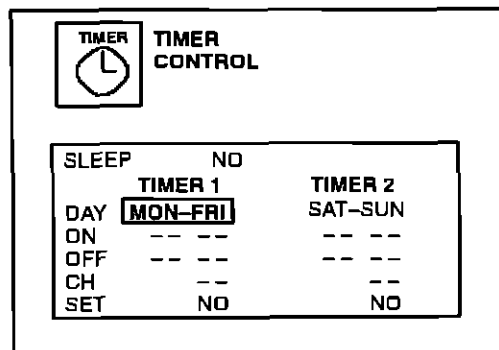
- 4 Press the VOL RIGHT button to select 30, 60 or 90 (minutes) for Sleep Timer to be activated
- 5 Press the ACTION button twice to exit

NOTE: To deactivate Sleep Timer repeat steps 1 through 4 In step 4, select "NO" instead of minutes

(Program) Timer – The (Dual Program) Timer feature is capable of turning the TV ON to a desired channel and then turning the set OFF at a predetermined time

NOTE: The clock and day must be set for this feature to operate (Refer to Set Up Menu to Set Time & Day)

- 1 Press the ACTION button to display the Main Menu
- 2 Press the CH UP/DOWN and VOL LEFT/RIGHT buttons to highlight the Timer Icon
- 3 Press the ACTION button to display the Timer Control Menu



Helpful Hints:

- The Program Timer overrides the Sleep Timer
- Program Timer can only access channels in Program Channel memory
- "Set Time First" will appear on screen when trying to set Timer Day Option without the clock being set
- If the Program Timer "ON" functions while the set is operating the set will automatically tune to the channel designated in the Timer Program

* Note: Remote Control must be set to TV Mode

- 4 Press the CH UP or DOWN button to highlight the TIMER 1 or TIMER 2 setting
 - Day or days you wish the Timer to activate
 - ON (time) – hours and minutes
 - OFF (time) – hours and minutes
 - CH (channel) you want tuned when the Timer activates
 - SET – NO (Timer feature will not activate)
 - YES (Timer feature will activate)
- 5 Highlight the Timer 1 Day/Days option
- 6 Press the VOL LEFT or RIGHT button to set the day or days you wish the Receiver to turn ON

The options for setting day are (MON–FRI), (SAT–SUN), (DAILY), (SUN), (MON), (TUE), (WED), (THR), (FRI), (SAT), (EVR SUN), (EVR MON), (EVR TUE), (EVR WED), (EVR THR), (EVR FRI), (EVR SAT)
- 7 Press the CH DOWN button to highlight the ON (Hours/Minutes) position
- 8 Press the VOL LEFT or RIGHT button to set the time you wish the Receiver to turn ON
- 9 Press the CH DOWN button to highlight the OFF (Hours/Minutes) position
- 10 Press the VOL LEFT or RIGHT button to set the time you wish the Receiver to turn OFF
- 11 Press the CH DOWN button to highlight the CH position
- 12 Press the VOL LEFT or RIGHT button to select a channel (from Program Channel Memory) that you want to be tuned to when the set turns ON
- 13 Press the CH DOWN button to highlight the SET position
- 14 Press the VOL RIGHT button to activate or LEFT button to deactivate Timer 1
 - YES=Feature is activated
 - NO=Feature is not activated
- 15 Press the CH DOWN button to set Timer 2 (if desired) Follow Steps 6 through 14
- 16 Press the ACTION button twice to exit

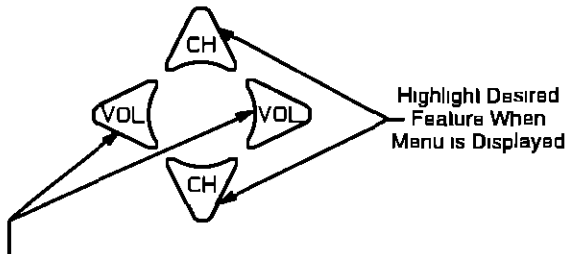
Lockout Features

- Game Lockout
- Channel Lockout
- All Channels plus Video Inputs Lockout

Displays and Exits Menus



Located On Remote Control



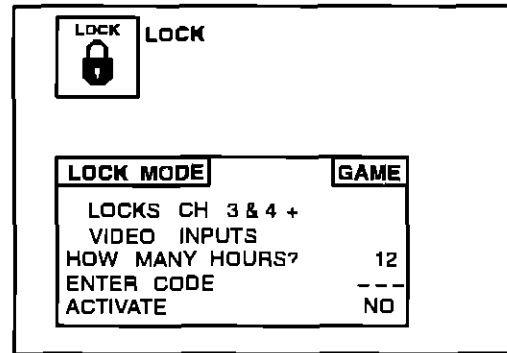
Selects or Adjusts Features When Menu is Displayed

Lockout – This feature allows you to lockout

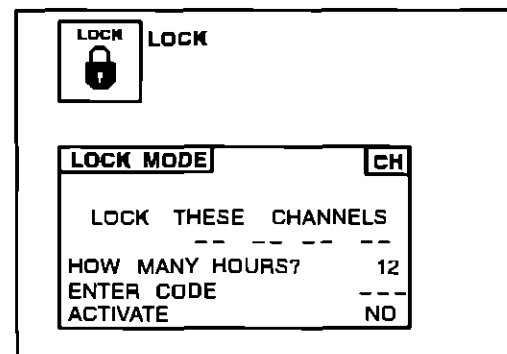
- Game – (Lockout Channel 3 & 4 plus Video Inputs)
- Channel – (Lockout up to 4 Channels)
- All – (Lockout All Channels plus Video Inputs)

NOTE: This feature will Lockout your selection for up to 48 hours. Be sure to understand this feature before attempting its use. **Use a code that you will easily remember.**

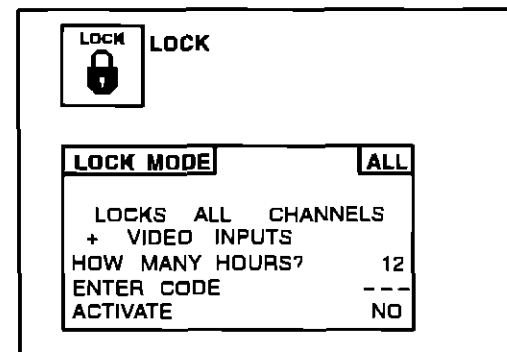
- 1 Press the ACTION button to display the Main Menu
 - 2 Press the CH UP/DOWN and VOL LEFT/RIGHT buttons to highlight the Lock Icon
 - 3 Press the ACTION button to display the Lock Menu
- NOTE:** When the Lockout Menu is displayed, the Game Lock option will be highlighted
- 4 Press the VOL LEFT or RIGHT button to select GAME, CH (CHANNEL) or ALL



Game Lockout Menu
(Channels 3 & 4 plus Video Inputs)



Channels Lockout Menu
(up to 4 Channels)



All Lockout Menu
(All Channels plus Video Inputs)

* Note: Remote Control must be set to TV Mode

Helpful Hints:

NOTE: If you see a red "PG" in the upper right hand corner the Channel or Video mode you have selected has been locked out.

NOTE When the CH LOCK MODE is selected, perform procedure Steps A through D

Step A

When CH is selected press the CH DOWN button to highlight "LOCK THESE CHANNELS"

Step B

Then use the Remote Control Keyboard to select a channel you desire to lockout

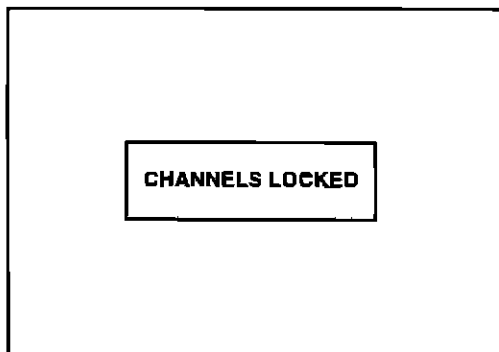
Step C

Press the CH DOWN button to select next Channel position

Step D

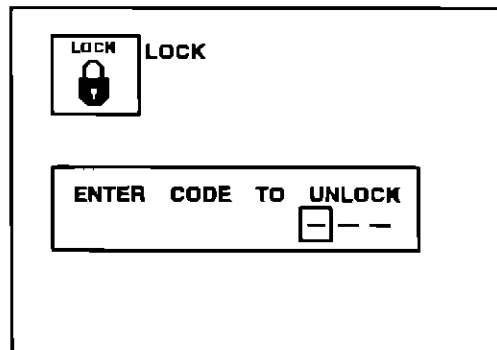
Then repeat Step B & C until desired Channels are locked out (up to 4 Channels)

- 5 Press the CH DOWN button to highlight "HOW MANY HOURS"
- 6 Press the VOL LEFT or RIGHT button to select 12, 24 or 48 (hours lockout time)
- 7 Press the CH DOWN button to highlight "ENTER CODE" then enter a 3 digit code by using the Remote Control Keyboard **IMPORTANT NOTE: Use a code you can easily remember.**
- 8 Press the VOL RIGHT button to select "YES" for Lock feature to be activated "CHANNELS LOCKED" will display On Screen

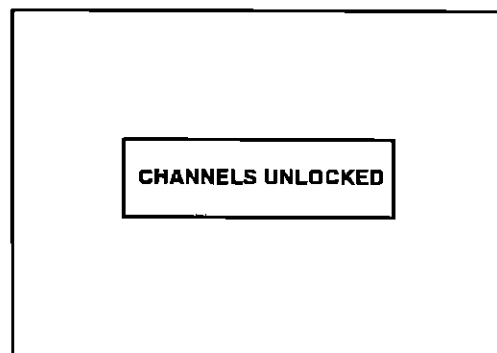


Lock Feature Activated

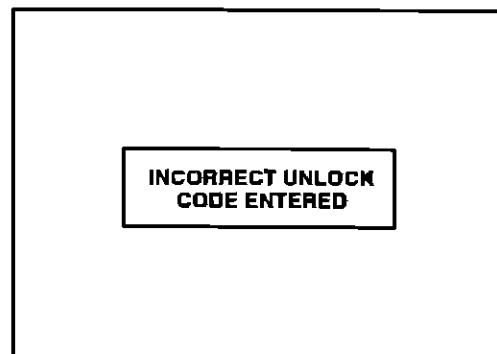
To Unlock the Lockout feature: follow Steps 1 through 3 and enter same 3 digit code as in Step 7 Channel Unlocked display will appear



ENTER SAME 3 DIGIT CODE



IF 3 DIGIT CODE IS THE SAME



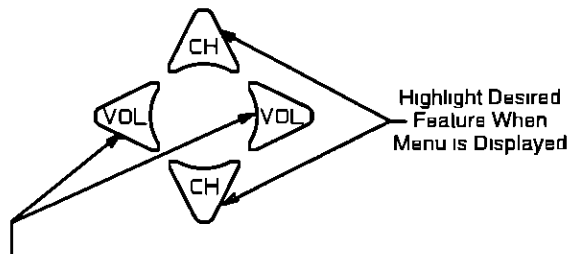
IF 3 DIGIT CODE IS NOT THE SAME

* **Note:** Remote Control must be set to TV Mode

Favorite Channel Feature

- Chan (Channel) Scan All or Fav
- Fav CH (Favorite Channel) Select

Displays and Exits Menus



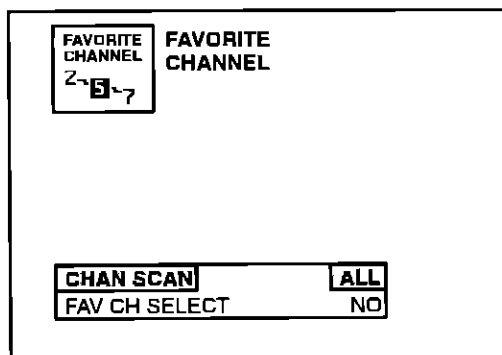
Selects or Adjusts Features When Menu is Displayed

Located On Remote Control

Channel Scan – This feature is used to select which Channels will be accessed when using CH UP and DOWN buttons, ALL or FAV (Favorite Channels)

NOTE: Channels must be programmed into Favorite Channel Select Memory first

- 1 Press the ACTION button to display the Main Menu
- 2 Press the CH UP/DOWN and VOL LEFT/RIGHT buttons to highlight the Favorite Channel Icon
- 3 Press the ACTION button to display the Favorite Channel Menu



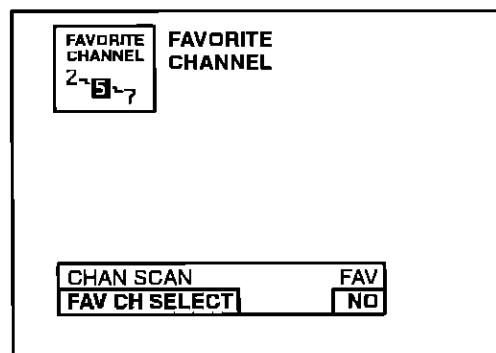
- 4 Press the CH UP/DOWN to highlight "CHAN SCAN"
- 5 Press the VOL LEFT or RIGHT button to select ALL or FAV (Favorite)
 - ALL – The CH UP/DOWN buttons will access all channels in Channel memory
 - FAV – The CH UP/DOWN buttons will only access channels in Favorite Channel Select memory
- 6 Press the ACTION button twice to exit

Helpful Hints:

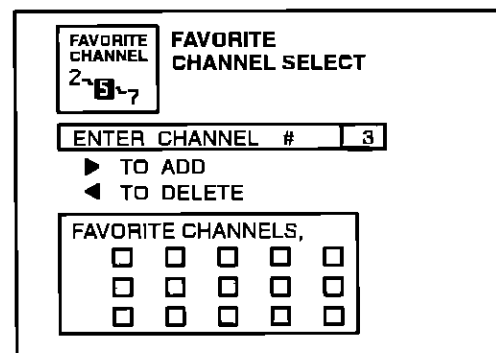
- After Auto Channel Program the first 15 channels selected will automatically be put into Favorite Channel memory, if space is available
- To access Channels in Favorite Channel memory, select "FAV" for Chan Scan

Favorite Channel Select – The Favorite Channel Programming feature allows you to program up to 15 of your favorite channels into your personal channel scan memory. Use the CH buttons on the Remote Control to scan channels without going through channels you don't normally view. Favorite Channel will effect both regular channel selection and PIP Channel selection

- 1 Press the ACTION button to display the Main Menu
- 2 Press the CH UP/DOWN and VOL LEFT/RIGHT buttons to highlight the Favorite Channel Icon
- 3 Press the ACTION button to display the Favorite Channel Menu



- 4 Press the CH UP or DOWN button to highlight "FAV CH SELECT"
- 5 Press the VOL LEFT or RIGHT button to display the Favorite Channel Select Menu



- 6 Enter the channel number you wish to add or delete from Favorite Channel memory (using the Remote Keyboard or CH UP/DOWN buttons)
- 7 Press the VOL RIGHT button to add or press the LEFT button to delete channel(s) from Favorite Channel memory
- 8 Repeat Steps 6 and 7 to continue adding or deleting channels (up to 15 channels may be stored in Favorite Channel memory)
- 9 When your desired channels have been programmed, press the ACTION button twice to exit
- 10 Press the CH UP or DOWN button to scan thru the Favorite Channels you programmed

* **Note:** Remote Control must be set to TV Mode

Channel Caption Feature

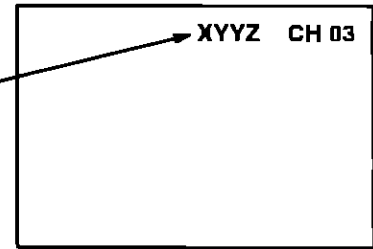
Channel Caption (Station Identifier) –

The Channel Caption (Station Identifier) allows you to input the call names of up to 30 stations into memory (using up to 4 characters). The call name will then display, along with the channel number when changing channels or pressing RECALL.

Displays and Exits Menus

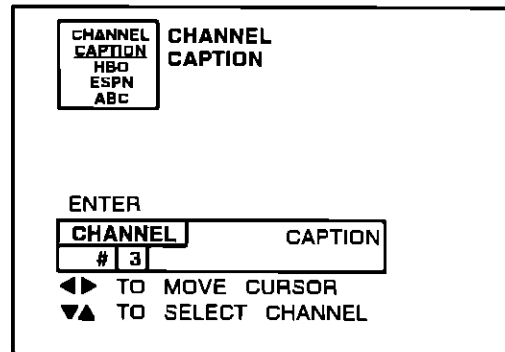
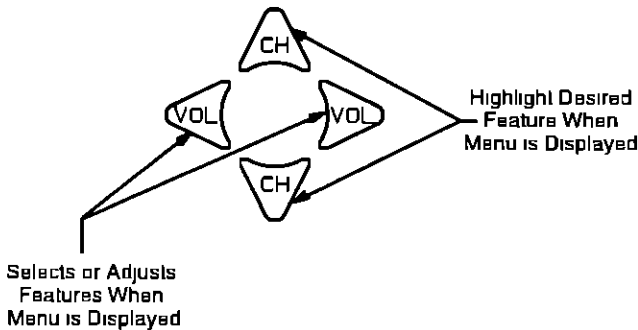


Channel Caption
(Station Identifier)

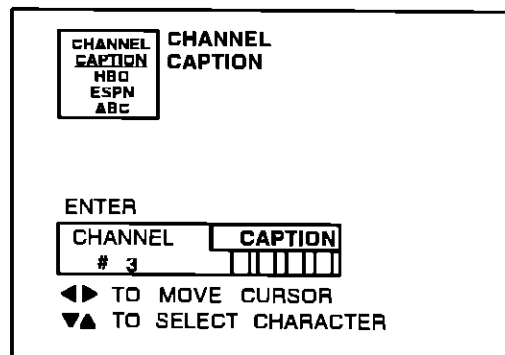


- 1 Press the ACTION button to display the Main Menu
- 2 Press the CH UP/DOWN and VOL LEFT/RIGHT buttons to highlight the Channel Caption Icon
- 3 Press the ACTION button to display the Channel Caption Menu

Located On Remote Control



- 4 Use Remote Keyboard or CH UP/DOWN buttons to enter channel number you wish to assign a Station Identifier (see Helpful Hints)
- 5 Press the VOL RIGHT button to Select CAPTION position
- 6 Press the CH UP/DOWN button to select first character in Station Identifier, press VOL RIGHT button to move to second position and repeat until the complete Station Identifier is entered (up to 4 characters)



- 7 Press the VOL RIGHT button repeatedly to select channel number position. Repeat steps 4 through 7 to continue adding Channel Station Identifier
- 8 Press the ACTION button twice to exit

* Note Remote Control must be set to TV Mode

Helpful Hints:

To select the desired channels for the Station Identifier feature press two digits on the Remote Keyboard (Example press 0, then 5 for channel 05). If cable channel over 100 is desired press three required digits on Remote Keyboard.

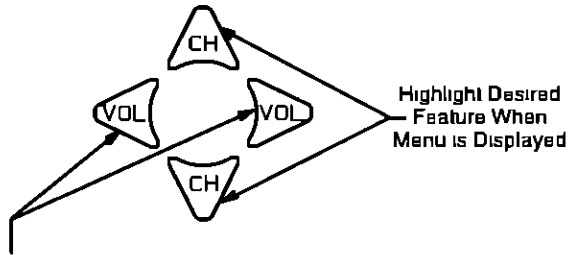
Closed Caption

- CC Mode
- CC Field
- CC On Mute

Displays and Exits Menus



Located On Remote Control

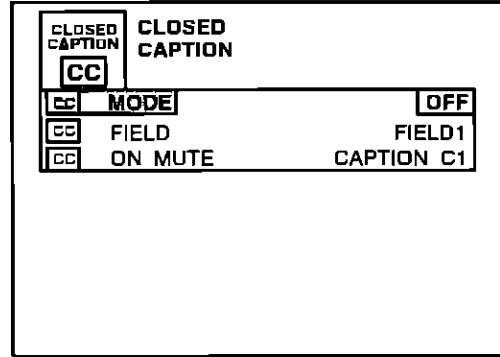


Selects or Adjusts Features When Menu is Displayed

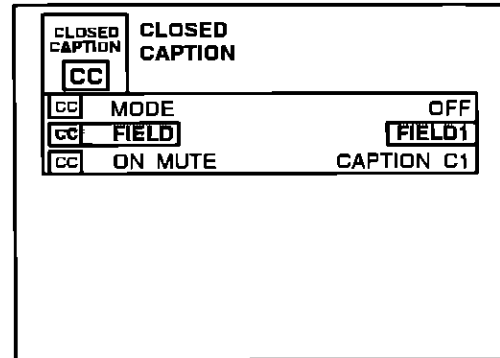
Highlight Desired Feature When Menu is Displayed

Closed Caption/Field Mode — This Receiver has a built in decoder that provides a visual depiction of the audio portion of a television program in the form of written words across the screen (White or Colored letters on a black background) It allows the viewer to read the dialogue of a television program or other information

- 1 Press the ACTION button to display the Main Menu
- 2 Press the CH UP/DOWN and VOL LEFT/RIGHT buttons to highlight the Closed Caption Icon
- 3 Press the ACTION button to display the Closed Caption Menu



- 4 Press the CH UP or DOWN button to highlight "CC MODE"
- 5 Press the VOL LEFT or RIGHT button to select OFF, CAPTION C1, TEXT C1, CAPTION C2 or TEXT C2
- 6 Press CH DOWN button to select FIELD



- 7 Press the VOL LEFT or RIGHT button to select "FIELD 1" or "FIELD 2"
- 8 Press the ACTION button twice to EXIT
 - CAPTION OFF – Recommended mode when you do not wish to view Closed Caption
 - CAPTION C1 – For video related information that can be displayed (up to 4 lines of script strategically placed on the television screen so that it does not obstruct relevant parts of the picture) Script can be in any language
 - TEXT C1 – Blanks out a large portion of the picture on the television screen, and displays program guide or any other information currently being transmitted
 - CAPTION C2 – Another mode used for video related information that can be displayed (up to 4 lines of script strategically placed on the television screen so that it does not obstruct relevant parts of the picture)
 - TEXT C2 – Another mode which displays information and blanks out a large portion of the picture on the television screen

* Note Remote Control must be set to TV Mode

Helpful Hints:

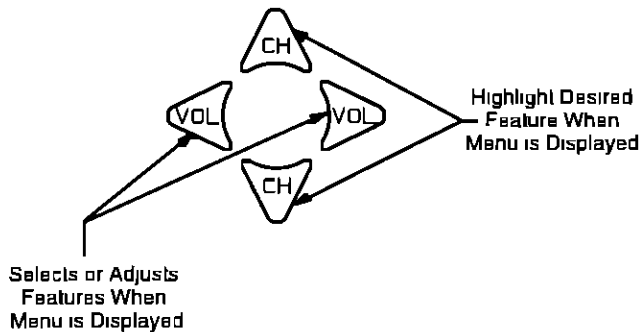
- Closed Caption information may be transmitted on either or both Caption Fields
- Most Closed Caption information is transmitted on Field 1 in Caption C1 Mode
- De-select Text mode if large portion of the picture is blanked out
- Press the ACTION button twice to exit the Closed Caption Menu

CC (Closed Caption) On Mute

Displays and Exits Menus



Located On Remote Control

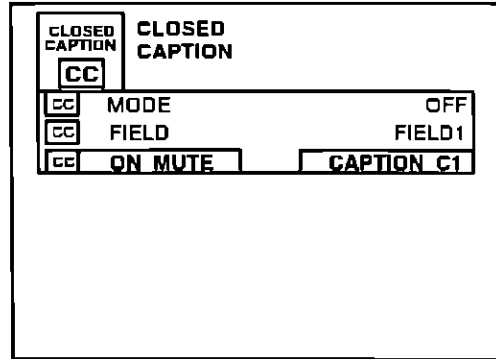


Closed Caption with Mute Button

Activates the On Screen Closed Caption feature when the MUTE button on the Remote Control is pressed. To deactivate press the MUTE button again.

NOTE: This feature only functions when the Closed Caption Mode is in the "OFF" position. The program being viewed must be broadcast with Closed Caption. (Refer to your local TV guide.)

- 1 Press the ACTION button to display the Main Menu
- 2 Press the CH UP/DOWN and VOL LEFT/RIGHT buttons to highlight the Closed Caption Icon
- 3 Press the ACTION button to display the Closed Caption Menu



- 4 Press the CH UP or DOWN button to highlight "CC ON MUTE"
- 5 Press the VOL LEFT or RIGHT button to select NO (OFF), CAPTION C1 or CAPTION C2

Recommended Set Up for Closed Caption when using Mute Button.

- CC MODE OFF
- CC FIELD FIELD 1
- CC ON MUTE CAPTION C1

- 6 Press the ACTION button twice to exit
- 7 Press the MUTE button when the program being viewed is broadcast with Closed Caption to activate

NOTE: Press the MUTE button again to deactivate

* Note: Remote Control must be set to TV Mode

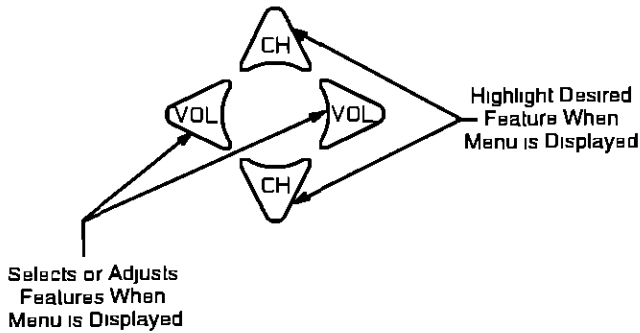
Language Menu System

- Three Languages

Displays and Exits Menus



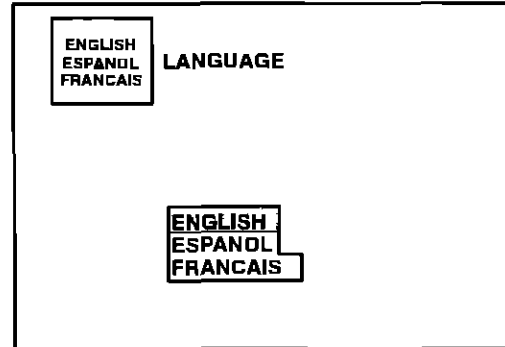
Located On Remote Control



Language Selection (English/Spanish/French)

The Language Menu is factory set to ENGLISH. Follow these instructions to change the Language Menu to Spanish or French and back to English.

- 1 Press the ACTION button to display the Main Menu
- 2 Press the CH UP/DOWN and VOL LEFT/RIGHT buttons to highlight the Language ENGLISH/ESPANOL (Spanish)/FRANCAIS (French) icon
- 3 Press the ACTION button to display the LANGUAGE select Menu



- 4 Press the CH UP or DOWN button to select ENGLISH, SPANISH or FRENCH for the Language Menu
- 5 Press the ACTION button twice to exit

* Note: Remote Control must be set to TV Mode

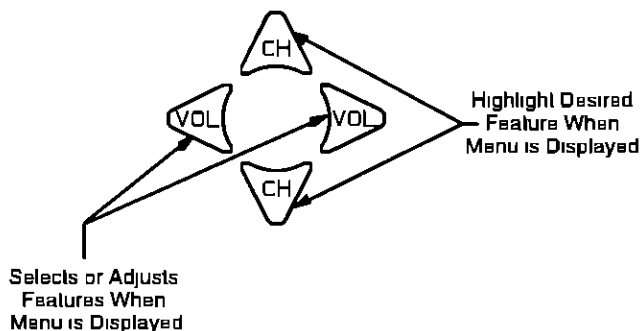
Set Up Features

- Set Time
- Set Day
- Antenna (TV or Cable)
- Auto Program
- Manual Program

Displays and Exits Menus

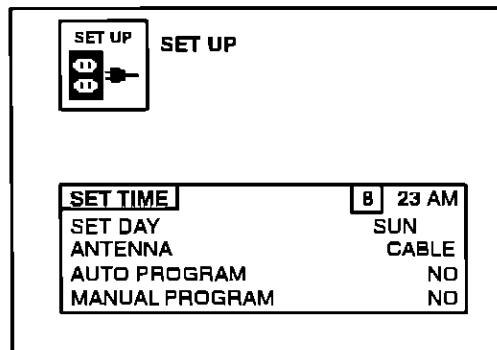


Located On Remote Control



Set Time (Clock) – Clock (when set) will display On Screen at initial turn on, after a channel change and when pressing Recall button. It must be set in order to operate the Dual Timer feature

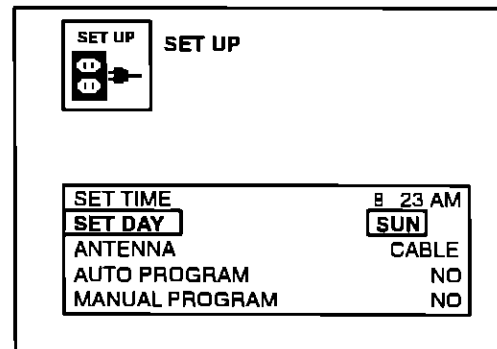
- 1 Press the ACTION button to display the Main Menu
- 2 Press the CH UP/DOWN and VOL LEFT/RIGHT buttons to highlight the Set Up Icon
- 3 Press the ACTION button to display the Set Up Menu



- 4 Press the CH UP or DOWN button to highlight "SET TIME" position, then select hours position by pressing CH UP button if necessary
- 5 Press the VOL LEFT or RIGHT button to Set Hours (set AM/PM accordingly)
- 6 Press the CH DOWN button to highlight minutes position
- 7 Press the VOL LEFT or RIGHT button to set minutes
- 8 Press the ACTION button twice to exit

Set Day – The day of the week must be set in order to operate the Dual Timer feature

- 1 Press the ACTION button to display the Main Menu
- 2 Press the CH UP/DOWN and VOL LEFT/RIGHT button to highlight the Set Up Icon
- 3 Press the ACTION button to display the Set Up Menu



- 4 Press the CH UP or DOWN button to highlight "SET DAY"
- 5 Press the VOL LEFT or RIGHT button to select proper day of the week
- 6 Press the ACTION button twice to exit

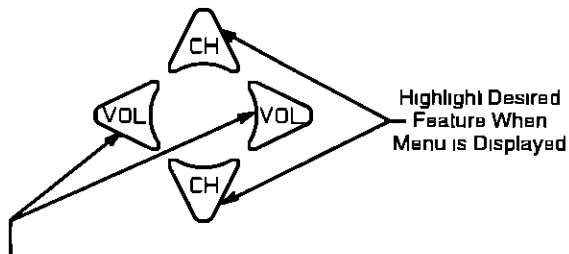
* **Note.** Remote Control must be set to TV Mode

Antenna Mode (TV or Cable)

Displays and Exits Menus



Located On Remote Control



Selects or Adjusts Features When Menu is Displayed

Highlight Desired Feature When Menu is Displayed

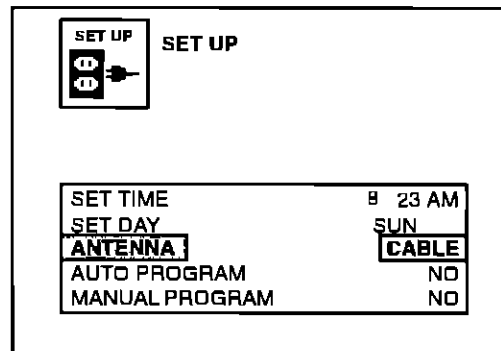
Antenna (TV or Cable Tuning Mode)

IMPORTANT NOTE: The proper input mode must be selected to match the type of signal at the antenna input (Cable or TV).

- CABLE is used when the Receiver is connected to a Cable TV System and you are not using a cable company converter box (Channels 01–125)
- TV is used when the Receiver is not connected to a Cable TV System, for example, when using a VHF/UHF antenna (Channels 02–69)

NOTE: Some Cable TV Systems encode (scramble) program material on specific channels. A cable company supplied decoder is required to reproduce an acceptable picture. Certain Cable TV Systems offset some channels to reduce interference. It will be necessary to use the cable company supplied converter to receive these specific channels.

- 1 Press the ACTION button to display the Main Menu
- 2 Press the CH UP/DOWN and VOL LEFT/RIGHT buttons to highlight the Set Up Icon
- 3 Press the ACTION button to display the Set Up Menu



- 4 Press the CH UP or DOWN button to highlight "ANTENNA"
- 5 Press the VOL LEFT or RIGHT button to select TV or CABLE
- 6 Press the ACTION button twice to exit

* Note. Remote Control must be set to TV Mode

Helpful Hints:

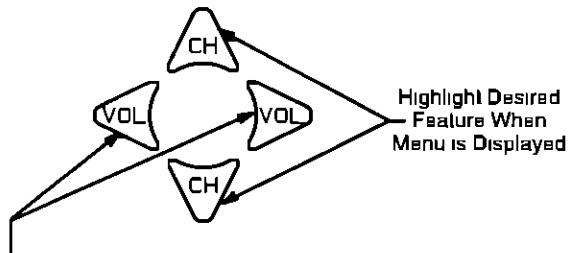
The Antenna Mode Selection also affects the PIP frame channels

Auto Program

Displays and Exits Menus



Located On Remote Control



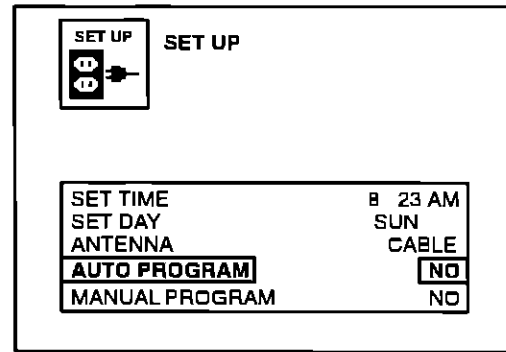
Selects or Adjusts Features When Menu is Displayed

Highlight Desired Feature When Menu is Displayed

Auto Programming – The Auto Programming feature allows you to place all channels with a video signal into Channel Scan Memory when you press the CHANNEL UP or DOWN button

NOTE: Antenna (TV or Cable) Tuning mode must be set properly for your system

- 1 Press the ACTION button to display the Main Menu
- 2 Press the CH UP/DOWN and VOL LEFT/RIGHT button to highlight the Set Up Icon
- 3 Press the ACTION button to display the Set Up Menu



- 4 Press the CH UP or DOWN button to highlight "AUTO PROGRAM"
- 5 Press the VOL LEFT or RIGHT button to start Auto Programming Scan Channels will automatically advance until all channels have been scanned
 - Channel numbers with video signal present will turn blue which indicates stored in Channel Scan memory
- 6 Press the ACTION button twice to exit

NOTE: Some channels with very weak signals may be locked into memory These must be deleted manually using the Manual Program feature

Helpful Hints:

After Auto Programming:

Blue channel number indicates channel is in Channel Scan memory

All channels are available by direct access using the Keyboard numbers "0 through 9"

After Auto Programming Scan has completed, up to 15 channels will be programmed into the FAVORITE Channel Scan if space is available Any original channels that were programmed into FAV CHANNEL will remain (Refer to Favorite Channel Scan for deleting unwanted channels)

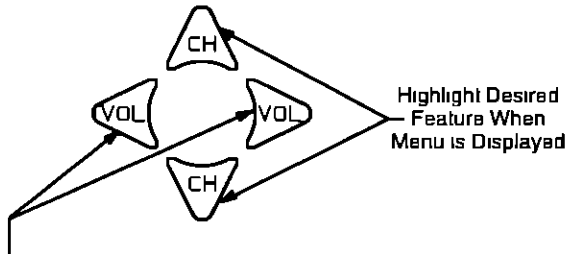
* **Note:** Remote Control must be set to TV Mode

Manual Program

Displays and Exits Menu



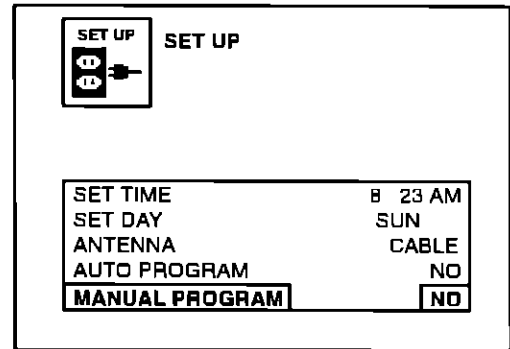
Located On Remote Control



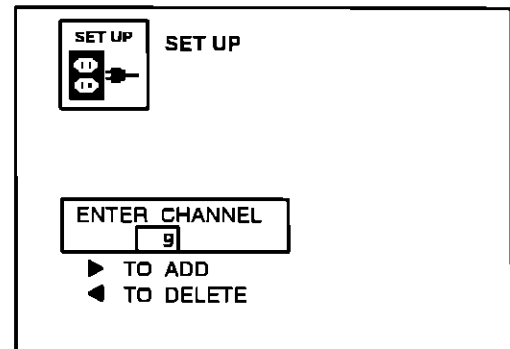
Selects or Adjusts Features When Menu is Displayed

Manual Programming – This feature allows you to select which channels are placed into Channel Scan memory so when you press the CHANNEL UP or DOWN button only those channels you desire will be accessed

- 1 Press the ACTION button to display the Main Menu
- 2 Press the CH UP/DOWN and VOL LEFT/RIGHT buttons to highlight the Set Up Icon
- 3 Press the ACTION button to display the Set Up Menu



- 4 Press the CH UP or DOWN button to highlight "MANUAL PROGRAM"
- 5 Press the VOL LEFT or RIGHT button to display Manual Programming Sub Menu



- 6 Use Remote Keyboard numbers "0 through 9" or CH UP/DOWN buttons to select channels
- 7 Press the VOL RIGHT button to add channel(s) to memory (blue) Press the VOL LEFT button to delete channel(s) from memory (yellow)
- 8 Repeat Steps 6 and 7 to continue adding or deleting channels
- 9 Press the ACTION button twice to exit

* **Note:** Remote Control must be set to TV Mode

Programming The Remote Control Using Access Codes

The remote control can be preset for other manufacturers, by utilizing the **MODE SELECTION BUTTONS** for **CABLE**, **DSS**, **VCR**, **RCVR** (a Receiver or Amplifier), **CD**, **LD**, and **AUX** (for **Cassette Players** or a **DVD**)

Procedure – Code Known

Procedure for setting up the remote using the numerical buttons

- Determine brand of device
- Identify code(s) associated with the brand in the infrared code index (located in this manual on pages 40 thru 43) Record all possible codes
- Confirm the device is plugged in and operating properly

1 Press and hold the **(ACTN)** button, then the **(POWER)** button so that both are pressed at the same time for at least 5 seconds.

2 Press the desired Mode button

3 Enter the three digit code, by using the Remote Control Keyboard "0 through 9" buttons.

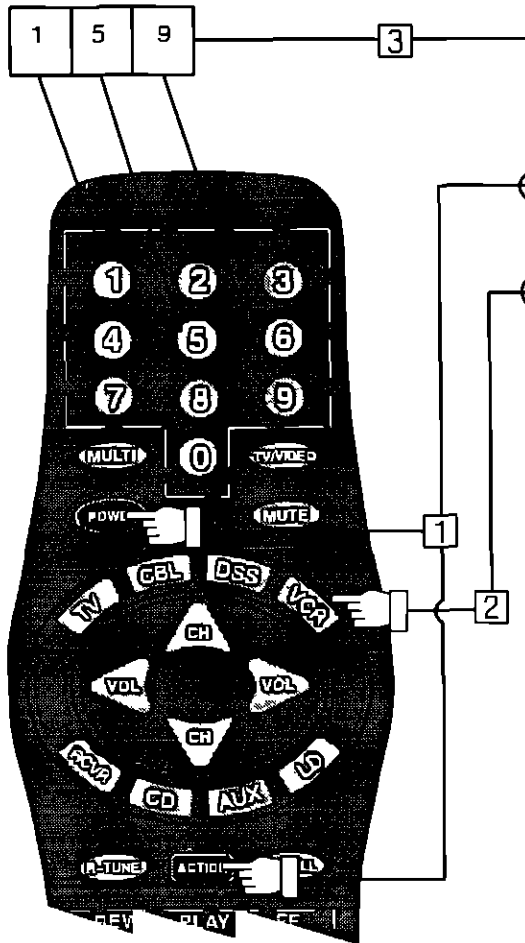
Now your remote is set for this code.

4 Press **(POWER)** to test your device

NOTE. Some brands have multiple codes. Repeat the procedure using each listed code until the device responds correctly.

- If you enter an unlisted code, or if you do not complete your entry within 30 seconds, the settings will not change

Code From Index Sheet



Infrared Remote Codes for Specific Components

Helpful Hint: Write down the code numbers for your components in the space provided below. This will serve as a handy reference whenever you need to reprogram your remote control.

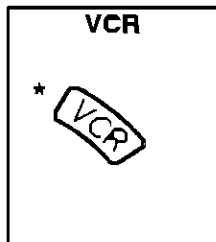
CABLE Cable TV Converter Box	<input style="width: 20px; height: 20px;" type="text"/> <input style="width: 20px; height: 20px;" type="text"/> <input style="width: 20px; height: 20px;" type="text"/>	VCR Video Cassette Recorder	<input style="width: 20px; height: 20px;" type="text"/> <input style="width: 20px; height: 20px;" type="text"/> <input style="width: 20px; height: 20px;" type="text"/>	CD Compact Disc Player	<input style="width: 20px; height: 20px;" type="text"/> <input style="width: 20px; height: 20px;" type="text"/> <input style="width: 20px; height: 20px;" type="text"/>
DSS Digital Satellite System	<input style="width: 20px; height: 20px;" type="text"/> <input style="width: 20px; height: 20px;" type="text"/> <input style="width: 20px; height: 20px;" type="text"/>	RCVR Receiver or Amplifier	<input style="width: 20px; height: 20px;" type="text"/> <input style="width: 20px; height: 20px;" type="text"/> <input style="width: 20px; height: 20px;" type="text"/>	LD Laser Disc Player	<input style="width: 20px; height: 20px;" type="text"/> <input style="width: 20px; height: 20px;" type="text"/> <input style="width: 20px; height: 20px;" type="text"/>
_____ Other Component	<input style="width: 20px; height: 20px;" type="text"/> <input style="width: 20px; height: 20px;" type="text"/> <input style="width: 20px; height: 20px;" type="text"/>	_____ Other Component	<input style="width: 20px; height: 20px;" type="text"/> <input style="width: 20px; height: 20px;" type="text"/> <input style="width: 20px; height: 20px;" type="text"/>	_____ Other Component	<input style="width: 20px; height: 20px;" type="text"/> <input style="width: 20px; height: 20px;" type="text"/> <input style="width: 20px; height: 20px;" type="text"/>
_____ Other Component	<input style="width: 20px; height: 20px;" type="text"/> <input style="width: 20px; height: 20px;" type="text"/> <input style="width: 20px; height: 20px;" type="text"/>	_____ Other Component	<input style="width: 20px; height: 20px;" type="text"/> <input style="width: 20px; height: 20px;" type="text"/> <input style="width: 20px; height: 20px;" type="text"/>	_____ Other Component	<input style="width: 20px; height: 20px;" type="text"/> <input style="width: 20px; height: 20px;" type="text"/> <input style="width: 20px; height: 20px;" type="text"/>

VCR Infrared Codes Index

The Universal Infrared Remote Control is capable of operating many brands of VCRs. Refer to page 39 for programming procedures.

NOTE: The Universal Remote Control memory is limited. Some models of VCRs may not operate. The Universal Remote Control is not designed to control all features that are available in all models.

NOTE: After entering the proper infrared code, press the Remote VCR Selection Mode button (*). To operate the Remote VCR function buttons, refer to pages 12 and 13 for Remote Control Key Functions.



Code Index For VCRs

VCR Brand	Code(s)	VCR Brand	Code(s)
Adventura	000	MTC	000, 240
Aiko	278	Multitech	000, 072
Aiwa	000	NEC	038, 041, 067
Akai	041, 061	Nikko	037
American High	035	Noblex	240
Asha	240	Olympus	035
Audiovox	037	Optimus	037, 048, 104
Beaumont	240	Panasonic	035, 162, 225, 454
Bell & Howell	104	Penney	035, 037, 038, 042
Broksonic	121, 184		240
Calix	037	Pentax	042
Canon	035	Philco	035
Carver	081	Philips	035, 081
CCE	072, 278	Pilot	037
Citizen	037, 278	Pioneer	067
Colt	072	Protec	072
Craig	037, 047, 072, 240	Pulsar	039
Curtis Mathes	035, 041, 060	Quarter	046
Cybernet	240	Quartz	046
Daewoo	045, 278	Quasar	035
Dynatech	000	Radio Shack	000, 037
Electrohome	037	Radix	037
Electrohome	037	Randax	037
Emerex	032	RCA	042, 060
Emerson	000, 002, 037, 043, 061, 121, 184, 278	Realistic	000, 035, 037, 046 047, 048, 104, 240
Fisher	047, 104	Ricoh	034
Fuji	033, 035	Runco	039
Funai	000	Samsung	045, 240
Garrard	000	Sanky	039, 048
GE	035, 060	Sansui	041, 067
Goldstar	037, 038	Sanyo	046, 047, 104, 240
Gradiente	000	Scott	043, 045, 121, 184
Harley Davidson	000	Sears	035, 037, 042, 046, 047, 104
Harman/Kardon	038	Sharp	048
Harwood	072	Shintom	072
Headquarter	046	Shogun	240
HI-Q	047	Singer	072
Hitachi	041, 042	Sony	032, 033, 034, 035
Jensen	041	STS	042
JVC	041, 067	Sylvania	000, 035, 043, 081
Kenwood	038, 041, 067	Symphonic	000
KLH	072	Tatung	041
Kodak	035, 037	Teac	000, 041
Lloyd	000	Technics	035, 162
Logik	072	Teknika	000, 035, 037
LXI	037	TMK	240
Magnavox	035, 039, 081	Toshiba	043, 045
Magnin	240	Totevision	037, 240
Marantz	035, 081	Unitech	240
Marta	037	Vector	045
Matsushita	035	Vector Research	038
MEI	035	Video Concepts	045, 061
Memorex	000, 035, 037, 039, 046, 047, 048, 104 240	Videosonic	240
MGA	043, 061	Wards	000, 035, 042, 047, 048, 072, 240
MGN Technology	240	XR-1000	000, 035, 072
Minolta	042	Yamaha	038
Mitsubishi	043, 061, 067	Zenith	033, 034, 039
Motorola	035, 048		

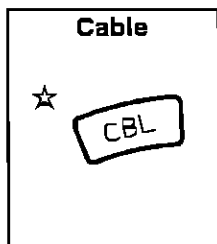
CABLE CONVERTER BOX AND CD PLAYERS

Infrared Codes Index

The Universal Infrared Remote Control is capable of operating many brands of Cable Converter Boxes, and CD Players Refer to page 39 for programming procedures

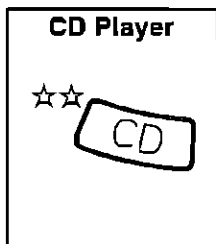
NOTE: The Universal Remote Control memory is limited. Some models of Cable Converter Boxes and CD Players may not operate. The Universal Remote Control is not designed to control all features that are available in all models.

NOTE: After entering the proper infrared code, press the Remote **CBL** Selection Mode button (☆) To operate the Remote Cable function buttons, refer to pages 12 and 13 for Remote Control Key Functions



Codes For Cable Converter Box			
Brand of Cable-TV Box	Code(s)	Brand of Cable-TV Box	Code(s)
ABC	003, 007, 008, 011, 013, 014, 017	Pioneer	144, 533
Archer	153	Pulsar	000
Century	153	RCA	021
Citizen	153	Regal	020, 259
Contec	019	Rembrandt	011
Das Ryung	008	Runco	000
Garrard	153	Samsung	144
Gemini	015	Scientific Atlanta	008, 017, 477
General Instrument	011, 476	Signal	015
Goldstar	144	Signature	011
Hamlin	009, 020, 259	Sprucer	021
Hitachi	011	Starcorn	003, 015
Hytex	007	Stargate	015
Jasco	153	Starquest	015
Jerrold	003, 011, 012, 014, 015, 476	Tocom	012, 013
Memorex	000	Toshiba	000
Oak	007, 019	Tusa	015
Panasonic	000, 021, 107	Unika	153
Paragon	000	United Artists	007
Philips	153	United Cable	003
		Universal	153
		Zenith	000, 525

NOTE: After entering the proper infrared code press the Remote **CD** Selection Mode button (☆☆) To operate the Remote CD Player function buttons, refer to pages 12 and 13 for Remote Control Key Functions



Codes For CD Players			
Brand of CD Players	Code(s)	Brand of CD Players	Code(s)
Aiwa	124, 157	Onkyo	101
CA Audio Lab	029	Optimus	000, 032, 037, 305, 426, 468
Carver	157	Panasonic	029, 367
Denon	003	Philips	157
DKK	000	Pioneer	032, 468
Emerson	305	Proton	157
Fisher	048	QED	157
Genexxa	032, 305	Quasar	029
Harman-Kardon	426	RCA	305
Hitachi	032	Rotel	157
JVC	072	SAE	157
Kenwood	028, 037, 048, 190	Sansui	157, 305
Krell	157	Scott	305
LXI	305	Sears	305
Magnavox	157	Sharp	037
Marantz	029, 157	Sherwood	426
MCS	029	Sony	000
Mission	157	Technics	029, 303
Nakamichi	147	Victor	072
NSM	157		

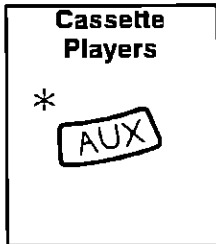
CASSETTE PLAYERS, RECEIVERS, and AMPLIFIERS

Infrared Codes Index

The Universal Infrared Remote Control is capable of operating many brands of Cassette Players, Receivers, or Amplifiers. Refer to page 39 for programming procedures.

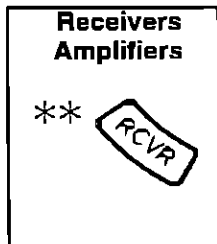
NOTE: The Universal Remote Control memory is limited. Some models of Cassette Players, Receivers, and Amplifiers may not operate. The Universal Remote Control is not designed to control all features that are available in all models.

NOTE: After entering the proper infrared code, press the Remote **AUX** Selection Mode button (*). To operate the Remote Cassette Player function buttons, refer to pages 12 and 13 for Remote Control Key Functions.



Code Index For Cassette Players			
Brand of Cassette Players	Code(s)	Brand of Cassette Players	Code(s)
Aiwa	029	Panasonic	272
Carver	029	Philips	029
Denon	076	Pioneer	027, 220
Kenwood	070	Sansui	029
Magnavox	029	Sherwood	337, 338
Marantz	029	Sony	170, 243
Nakamichi	147	Technics	229
Optimus	027, 220, 337, 338	Wards	027
		Yamaha	094, 097

NOTE: After entering the proper infrared code, press the Remote **RCVR** Selection Mode button (**). To operate the Remote Receiver or Amplifier function buttons, refer to pages 12 and 13 for Remote Control Key Functions.



Code Index For Receivers And Amplifiers			
Brand of Receiver / Amplifier	Code(s)	Brand of Receiver / Amplifier	Code(s)
ADC	531	Panasonic	039
Aiwa	121, 158, 189	Pennay	195
Carver	008, 042, 189, 269	Philips	189, 269
Casio	195	Pioneer	013, 014, 080, 300, 531
Clannette	195	Quasar	039
Denon	004	RCA	531
Fisher	042, 219	Realistic	195
JVC	074	Sansui	189, 321
Kenwood	027, 186	Sanyo	219
Lloyd's	195	Sharp	186
Magnavox	189, 195, 269, 531	Sherwood	502
Marantz	039, 189, 269, 321	Sony	158
MCS	039	Technics	039, 208, 308, 309, 518
Modulaire	195	Victor	074
NAD	320	Wards	013, 014, 042, 080, 158, 189
Nakamichi	321, 347	Yamaha	176, 186, 354
Onkyo	135	Yon	195
Optimus	013, 080, 186, 219, 300, 531		

LASER DISC, DSS (Digital Satellite System), and DVD (Digital Videodisc) Infrared Codes Index

The Universal Infrared Remote Control is capable of operating selected brands of Laser Disc, DSS Digital Satellite System, and DVD (Digital Videodisc). Refer to page 39 for programming procedures.

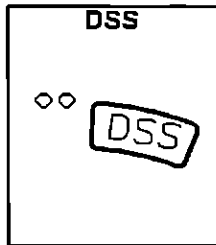
NOTE: The Universal Remote Control memory is limited. Some models of Laser Disc, DSS Digital Satellite System, and DVD (Digital Videodisc) may not operate. The Universal Remote Control is not designed to control all features that are available in all models.

NOTE: After entering the proper infrared code, press the Remote LD Selection Mode button (◊). To operate the Remote Laser Disc function buttons, refer to pages 12 and 13 for Remote Control Key Functions.



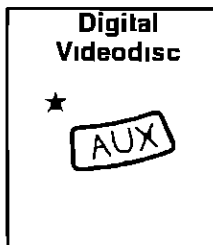
Codes For Laser Disc	
Brand of Laser Disc	Code(s)
Mitsubishi	059
NAD	059
Panasonic	204
Pioneer	059
Quasar	204
Sony	201

NOTE: After entering the proper infrared code, press the Remote DSS Selection Mode button (◊◊). To operate the Remote Satellite function buttons, refer to pages 12 and 13 for Remote Control Key Functions.



Codes For DSS (Digital Satellite System)	
Brand of Satellite	Code(s)
Panasonic	701
RCA	566
Sony	639

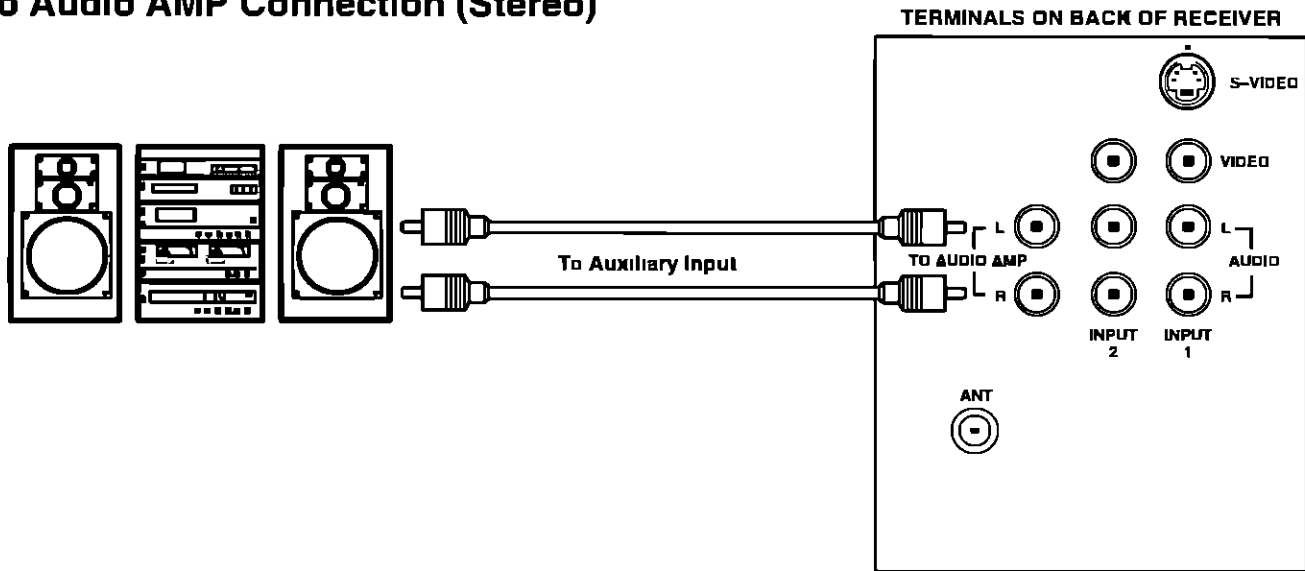
NOTE: After entering the proper infrared code, press the Remote AUX Selection Mode button (★). To operate the Remote DVD (Digital Videodisc) function buttons, refer to pages 12 and 13 for Remote Control Key Functions.



Codes For DVD (Digital Videodisc)	
Brand of DVD	Code(s)
Panasonic	490

Optional Equipment Connection and Operation

To Audio AMP Connection (Stereo)



• To Audio AMP

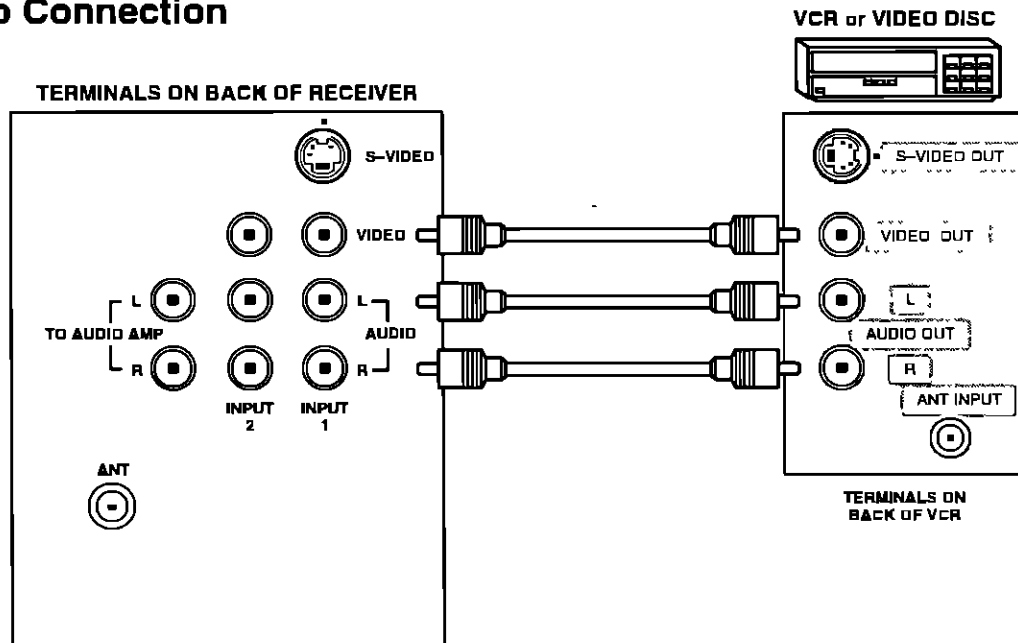
Connect to an external audio amp auxiliary input for monitoring sound through a stereo system

NOTE: "TO AUDIO AMP" terminals cannot be used for external speakers

Adjustment – When an audio amp is connected to "TO AUDIO AMP" terminals

- 1 Select INT SPEAKERS "ON" Mode (Refer to the Audio Menu [TV] Speakers section)
- 2 Set volume of audio amp to near minimum
- 3 Adjust volume of TV to desired listening level
- 4 Adjust volume of audio amp to match the level of TV
- 5 Select INT SPEAKERS "OFF" Mode (Refer to the Audio Menu [TV] Speakers section)
- 6 Audio bass, treble, balance, volume and mute can now be controlled by the TV Remote Control

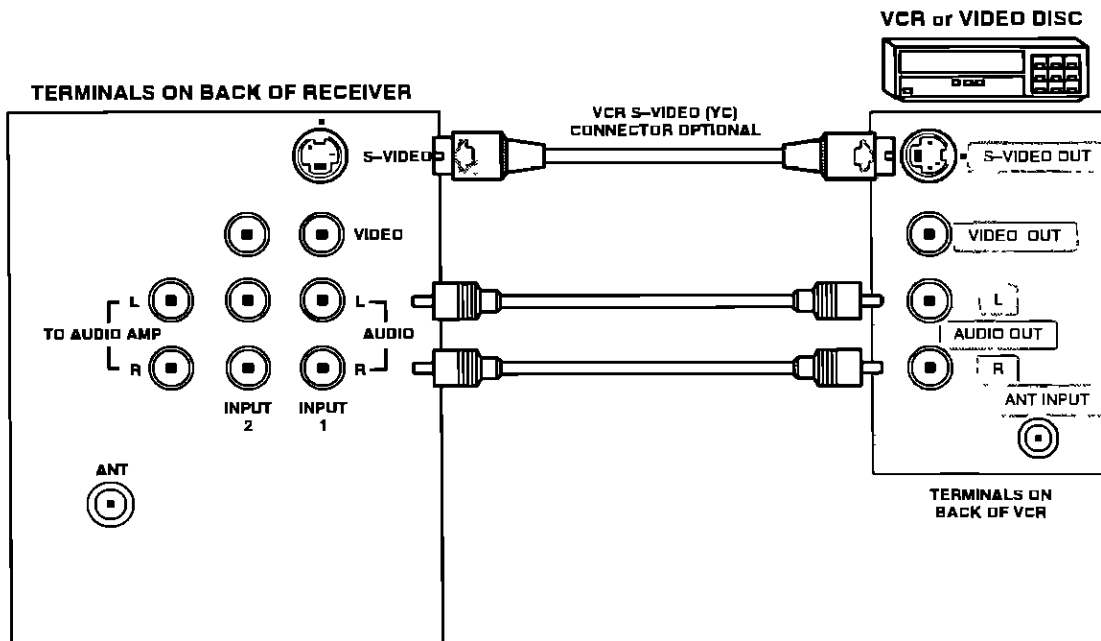
Video/Audio Connection



Operation

- 1 Connect optional equipment as shown to INPUT 1 or 2
- 2 Select the desired Video mode by pressing the TV/VIDEO button (or refer to the Input Selection Menu)
NOTE You must select the same Video Mode that the equipment is connected to
- 3 Operate optional equipment (VCR–VDP) as instructed in Optional Equipment Manual

S-Video Connection



Operation

- 1 Connect S-Video (YC) connector to S-Video Terminal
- 2 Make connections to L and R Audio Input 1 jacks
- 3 Select Video1 mode by pressing the TV/VIDEO button (or refer to the Input Selection Menu)
- 4 Operate optional equipment (VCR-VDP) as instructed in Optional Equipment Manual

NOTE:

- You must select the same VIDEO Mode that the equipment is connected to
- Connection of optional S-VIDEO jack automatically disconnects the Normal VIDEO INPUT 1 jack

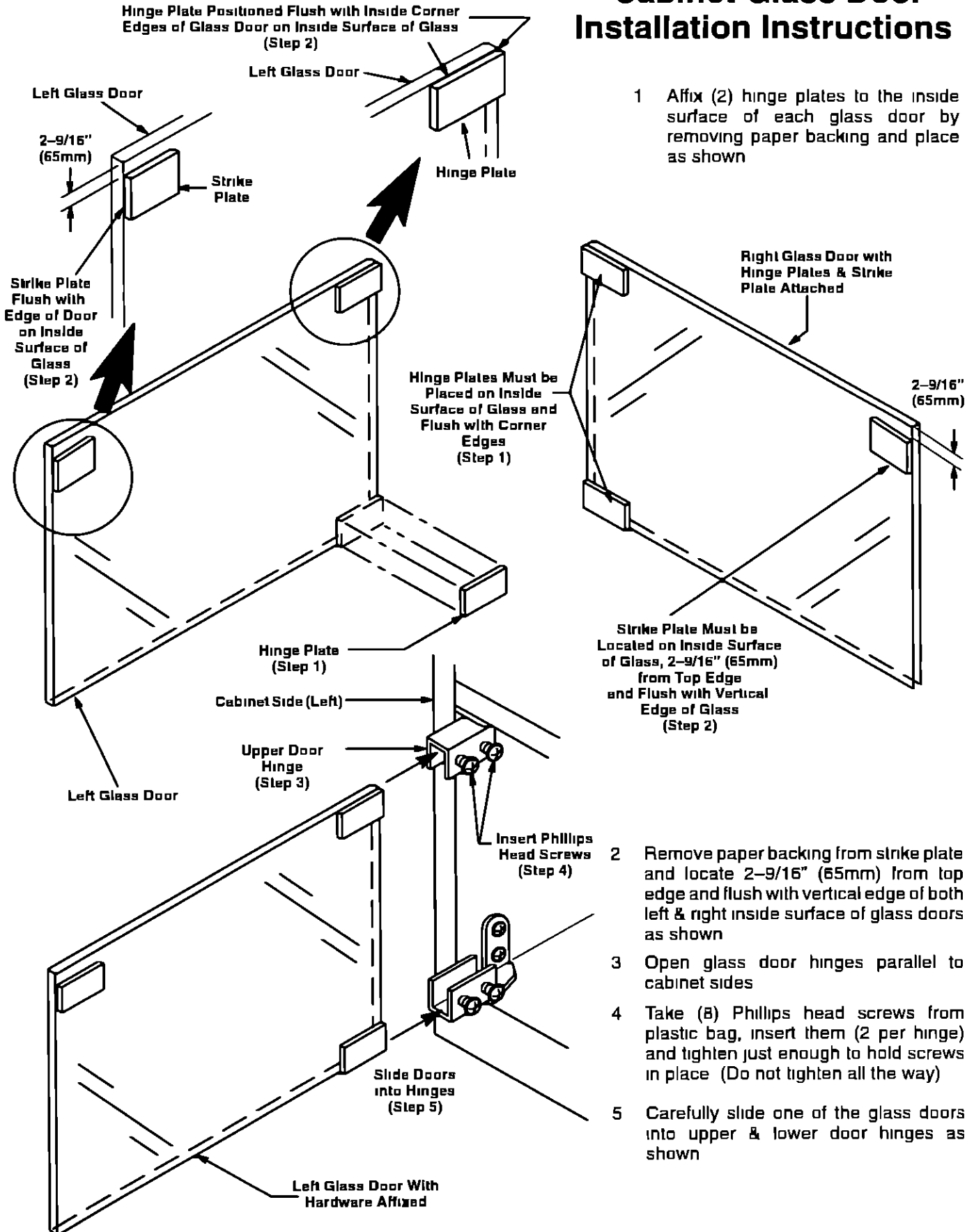
Power Loss

Prolonged power interruption causes the following features to reset to their factory preset state.

FEATURE	FACTORY PRESET STATE	FEATURE	FACTORY PRESET STATE
POWER	OFF	CLOCK	NOT SET
VOLUME	APPROX -1/3	SLEEP TIMER	NO/OFF
CHANNEL	CH 03	TIMER	NO/OFF
PROGRAM MEMORY	UNPROGRAMMED	ANTENNA TV or CABLE	CABLE
VIDEO MENUS	NORMALIZED	TV/VIDEO	TV
AUDIO MENUS	NORMALIZED	NOISE REDUCTION	OFF
STEREO/SAP/MONO	STEREO	PIP FEATURES	OFF
MENU LANGUAGE	ENGLISH		

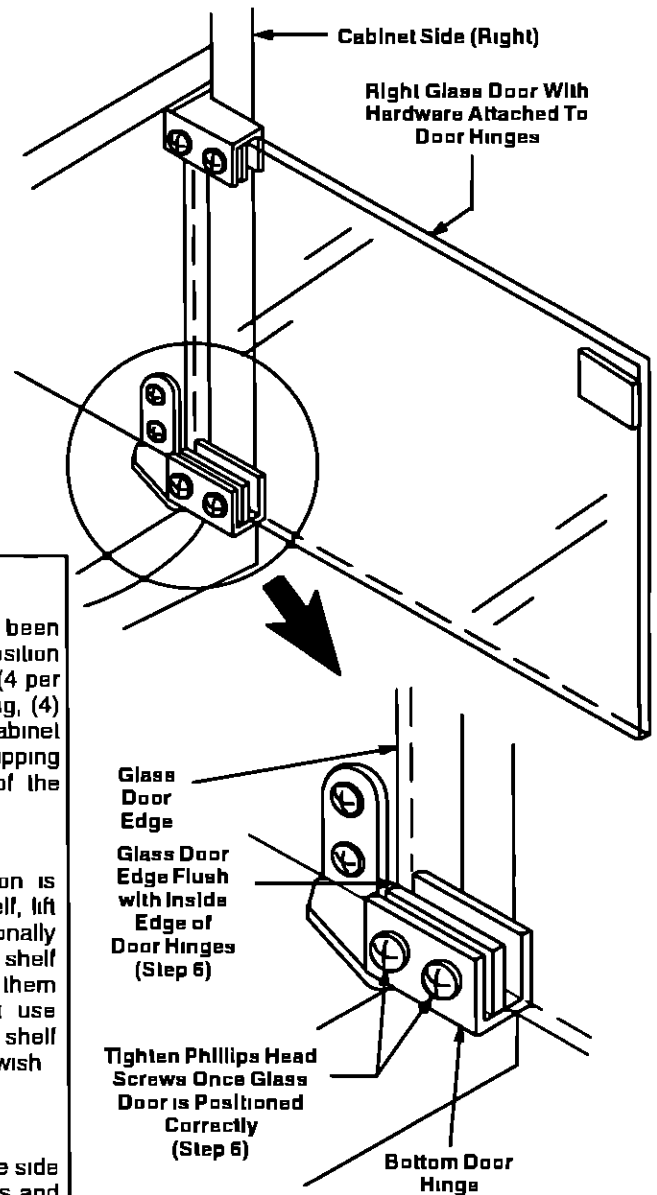
Cabinet Glass Door Installation Instructions

- 1 Affix (2) hinge plates to the inside surface of each glass door by removing paper backing and place as shown

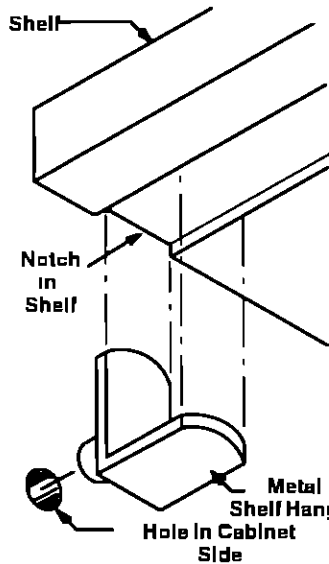


- 2 Remove paper backing from strike plate and locate 2-9/16" (65mm) from top edge and flush with vertical edge of both left & right inside surface of glass doors as shown
- 3 Open glass door hinges parallel to cabinet sides
- 4 Take (8) Phillips head screws from plastic bag, insert them (2 per hinge) and tighten just enough to hold screws in place (Do not tighten all the way)
- 5 Carefully slide one of the glass doors into upper & lower door hinges as shown

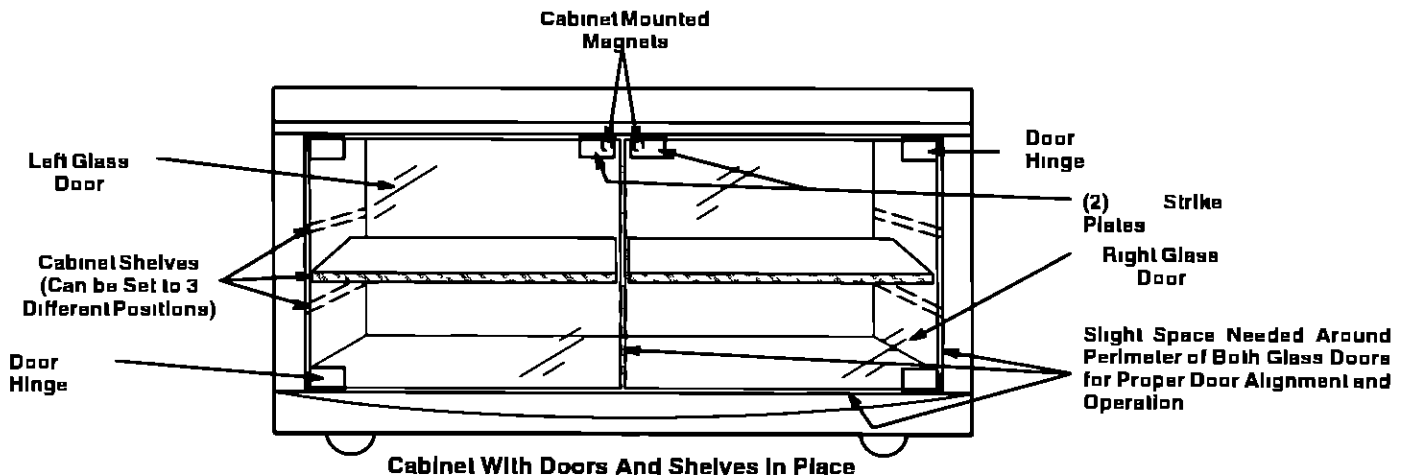
- 6 Hold glass door in place with the back edge of glass flush with inside back edge of upper & lower door hinges and against top of the upper hinge, then tighten (4) hinge screws per glass door
- 7 Repeat Steps 6 & 7 for the other glass door
- 8 Once both glass doors are attached, close them slowly to ensure doors are aligned properly and the (2) strike plates catch on to the cabinet mounted magnetic latches
- 9 If the glass doors are binding anywhere against the cabinet or each other they are mis-aligned and must be corrected
- 10 To do so, simply loosen the Phillips head screws on the side(s) that is not aligned and adjust (move) glass door(s) accordingly and re-tighten screws



Shelves Mounting Instructions











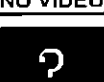











- 1 The two cabinet shelves have been mounted in the middle shelf position with (8) metal shelf hangers (4 per cabinet shelf) and for shipping, (4) shipping blocks (2 per cabinet shelf) Remove these (4) shipping blocks for free movement of the shelves
- 2 If the top or bottom position is desired for mounting the shelf, lift and hold or rest the shelf diagonally while removing the (4) metal shelf hangers and reposition them accordingly **NOTE:** Do not use glue, so you can change shelf position at a later time if you wish
- 3 Next, lift and rest shelf on one side of the cabinets' shelf hangers and then lower it down on the opposite side



Troubleshooting Chart

Before you call for service, determine the symptoms and make a few simple checks shown below

Symptoms		Check
Picture	Sound	
 SNOWY PICTURE	 NOISY SOUND	<ul style="list-style-type: none"> - ANTENNA LOCATION AND/OR CONNECTION
 MULTIPLE IMAGE	 NORMAL SOUND	<ul style="list-style-type: none"> - ANTENNA DIRECTION AND/OR LOCATION - ANTENNA LEAD-IN WIRE
 INTERFERENCE	 NOISY SOUND	<ul style="list-style-type: none"> - ELECTRICAL APPLIANCES, LIGHTS, CARS AND TRUCKS - DIATHERMY AND OTHER MEDICAL EQUIPMENT
 NORMAL PICTURE	 NO SOUND	<ul style="list-style-type: none"> - VOLUME CONTROL SETTING - MUTE CONTROL (IF APPLICABLE) - DOLBY CENTER IN (IF APPLICABLE) IN ON POSITION - TRY ANOTHER CHANNEL
 NO VIDEO	 NOISY SOUND	<ul style="list-style-type: none"> - ANTENNA (TV OR CABLE) TUNING SYSTEM SET TO PROPER SETTING - ANTENNA INPUT MODE INCORRECT
 NO PICTURE	 NO SOUND	<ul style="list-style-type: none"> - CHECK THAT AC POWER LINE IS PLUGGED INTO AC OUTLET AND POWER BUTTON IS ON - BRIGHTNESS & AUDIO CONTROLS SET PROPERLY - TRY ANOTHER CHANNEL
 NO COLOR	 NORMAL SOUND	<ul style="list-style-type: none"> - COLOR CONTROL SETTINGS - TRY ANOTHER CHANNEL
 BLACK PICTURE	 NO SOUND	<ul style="list-style-type: none"> - RECEIVER IN VIDEO MODE WITH NO SIGNAL
 NO VIDEO	 NOISY SOUND	<ul style="list-style-type: none"> - CHANNEL LOCKOUT FEATURE ACTIVATED
 BLACK BOX IN PICTURE	 SOUND	<ul style="list-style-type: none"> - CC (CLOSED CAPTION) IN TEXT MODE - PUT IN CAPTION OFF MODE TO ELIMINATE BLACK BOX

Should this unit turn ON momentarily and then turn OFF, or fail to operate, unplug the AC cord, and contact your Authorized Servicer for repairs

Matsushita Consumer Electronics Company, Division of Matsushita Electric Corporation of America
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Secaucus, New Jersey 07094

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