



Dear VIZIO Customer,

Congratulations on your new VIZIO VF550XVT1A High Definition LCD Television purchase. Thank you for your support. For maximum benefit of your set, please read these instructions before making any adjustments, and retain them for future reference. We hope you will experience many years of enjoyment from your new VIZIO HDTV.

For assistance, please call (877) 668-8462 or visit us at www.vizio.com

To purchase or inquire about accessories and installation services for your VIZIO LCD HDTV, please visit our website at www.vizio.com or call toll free at **(888) 849-4623**.

We recommend you register your VIZIO HDTV either at our website www.VIZIO.com or fill in your registration card and mail it in. For peace of mind and to protect your investment beyond the standard warranty, VIZIO offers on-site extended warranty service plans. These plans give additional coverage during the standard warranty period. Visit our website or call us to purchase a plan.

Write down the serial number located on the back of your HDTV.

Purchase Date _____

*VIZIO is a registered trademark of VIZIO, Inc. dba V, Inc.
HDMI logo and "High Definition Multimedia Interface" are registered trademarks of HDMI Licensing LLC.
Manufactured under license from Dolby Laboratories.
Dolby and the double-D symbol are trademarks of Dolby Laboratories.*



TruSurround HD and **TruVolume** are trademarks of SRS Labs, Inc.
TruSurround HD and TruVolume technologies are incorporated under license from SRS Labs, Inc.

THE TRADEMARKS SHOWN HEREIN ARE THE PROPERTY OF THEIR RESPECTIVE OWNERS; IMAGES USED ARE FOR ILLUSTRATION PURPOSES ONLY. BRAVO, VIZIO AND THE V LOGO AND WHERE VISION MEETS VALUE AND OTHER VIZIO TRADEMARKS ARE THE INTELLECTUAL PROPERTY OF VIZIO INC. PRODUCT SPECIFICATIONS ARE SUBJECT TO CHANGE WITHOUT NOTICE OR OBLIGATION. © 2008 VIZIO INC. ALL RIGHTS RESERVED.



1.1 Important Safety Instructions

Your HDTV is designed and manufactured to operate within defined design limits, and misuse may result in electric shock or fire. To prevent your HDTV from being damaged, the following rules should be observed for the installation, use, and maintenance of your HDTV. Read the following safety instructions before operating your HDTV. Keep these instructions in a safe place for future reference.

- To reduce the risk of electric shock or component damage, switch off the power before connecting other components to your HDTV.
- Unplug the power cord before cleaning your HDTV. A damp cloth is sufficient for cleaning your HDTV. Do not use a liquid or a spray cleaner for cleaning your HDTV. Do not use abrasive cleaners.
- Always use the accessories recommended by the manufacturer to insure compatibility.
- When moving your HDTV from an area of low temperature to an area of high temperature, condensation may form in the housing. Wait before turning on your HDTV to avoid causing fire, electric shock, or component damage.
- Use only with the cart, stand, tripod, bracket, or table specified by manufacturer or sold with your HDTV. When a cart is used, use caution when moving the cart/HDTV combination to avoid injury from tip-over. Do not place your HDTV on an unstable cart, stand, or table. If your HDTV falls, it can injure a person and cause serious damage to your HDTV. Use only a cart or stand recommended by the manufacturer or sold with your HDTV.
- A distance of at least 3 feet should be maintained between your HDTV and any heat source, such as a radiator, heater, oven, amplifier etc. Do not install your HDTV close to smoke. Operating your HDTV close to smoke or moisture may cause fire or electric shock.
- Slots and openings in the back and bottom of the cabinet are provided for ventilation. To ensure reliable operation of your HDTV and to protect it from overheating, be sure these openings are not blocked or covered. Do not place your HDTV in a bookcase or cabinet unless proper ventilation is provided.
- Never push any object into the slots and openings on your HDTV cabinet. Do not place any objects on the top of your HDTV. Doing so could short circuit parts causing a fire or electric shock. Never spill liquids on your HDTV.
- Your HDTV should be operated only from the type of power source indicated on the label. If you are not sure of the type of power supplied to your home, consult your dealer or local power company.
- Do not apply pressure or throw objects at your HDTV. This may compromise the integrity of the display. The manufacturer's warranty does not cover user abuse or improper installations.
- The power cord must be replaced when using different voltage than the voltage specified. For more information, contact your dealer.
- Your HDTV is equipped with a **three-pronged grounded plug (a plug with a third grounding pin)**. This plug will fit only into a grounded power outlet. This is a safety feature. If your outlet does not accommodate the three-pronged, have an electrician install the correct outlet, or use an adapter to ground your HDTV safely. **Do not defeat the safety purpose of the grounded plug.**
- When connected to a power outlet, power is always flowing into your HDTV. To totally disconnect power, unplug the power cord.



- The lightning flash with arrowhead symbol within an equilateral triangle is intended to alert the user to the presence of un-isolated, dangerous voltage within the inside of your HDTV that may be of sufficient magnitude to constitute a risk of electric shock to persons.



- The exclamation point within an equilateral triangle is intended to alert the user to



the presence of important operating and servicing instructions in the literature accompanying your HDTV.

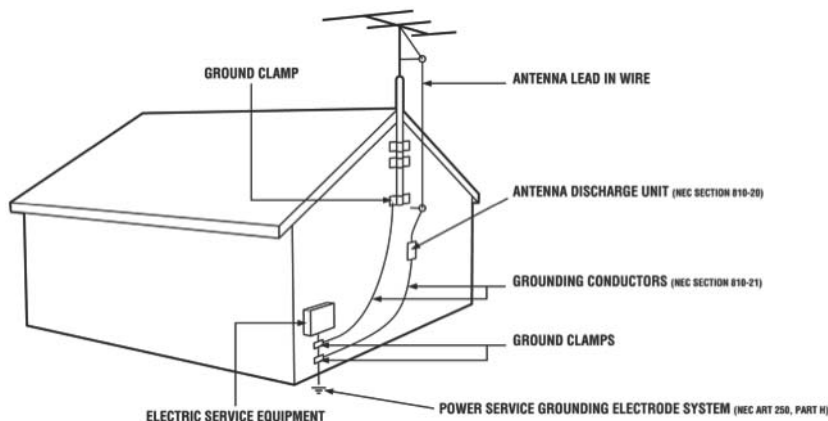
- Do not overload power strips and extension cords. Overloading can result in fire or electric shock.
- The wall socket should be installed near your HDTV and easily accessible.
- Only power of the marked voltage can be used for your HDTV. Any other voltage than the specified voltage may cause fire or electric shock
- Do not touch the power cord during lightning. To avoid electric shock, avoid handling the power cord during electrical storms.
- Unplug your HDTV during a lightning storm or when it will not be used for long period of time. This will protect your HDTV from damage due to power surges.
- Do not attempt to repair or service your HDTV yourself. Opening or removing the back cover may expose you to high voltages, electric shock, and other hazards. If repair is required, contact your dealer and refer all servicing to qualified service personnel.
- Keep your HDTV away from moisture. Do not expose your HDTV to rain or moisture. If water penetrates into your HDTV, unplug the power cord and contact your dealer. Continuous use in this case may result in fire or electric shock.
- Do not use your HDTV if any abnormality occurs. If any smoke or odor becomes apparent, unplug the power cord and contact your dealer immediately. Do not try to repair your HDTV yourself.
- Avoid using dropped or damaged appliances. If your HDTV is dropped and the housing is damaged, the internal components may function abnormally. Unplug the power cord immediately and contact your dealer for repair. Continued use of your HDTV may cause fire or electric shock.
- Do not install your HDTV in an area with heavy dust or high humidity. Operating your HDTV in environments with heavy dust or high humidity may cause fire or electric shock.
- Follow instructions for moving your HDTV. Ensure that the power cord and any other cables are unplugged before moving your HDTV.
- When unplugging your HDTV, hold the power plug, not the cord. Pulling on the power cord may damage the wires inside the cord and cause fire or electric shock. When your HDTV will not be used for an extended period of time, unplug the power cord.
- To reduce risk of electric shock, do not touch the connector with wet hands.
- Insert batteries in accordance with instructions. Incorrect polarities may cause the batteries to leak which can damage the remote control or injure the operator.
- If any of the following occurs, contact the dealer:
 - The power cord fails or frays.
 - Liquid sprays or any object drops into your HDTV.
 - Your HDTV is exposed to rain or other moisture.
 - Your HDTV is dropped or damaged in any way.
 - The performance of your HDTV changes substantially.



Television Antenna Connection Protection External Television Antenna Grounding

If an outside antenna/satellite dish or cable system is to be connected to the TV, make sure that the antenna or cable system is electrically grounded to provide some protection against voltage surges and static charges.

Article 810 of the National Electrical Code, ANSI/NFPA 70, provides information with regard to proper grounding of the mast and supporting structure, grounding of the lead-in wire to an antenna discharge unit, size of the grounding conductors, location of antenna discharge unit, connection to grounding electrodes, and requirements of the grounding electrode.



Lightning Protection

For added protection of the TV during a lightning storm or when it is left unattended or unused for long periods of time, unplug the TV from the wall outlet and disconnect the antenna or cable system.

Power Lines

Do not locate the antenna near overhead light or power circuits, or where it could fall into such power lines or circuits.

Remember, the screen of the coaxial cable is intended to be connected to earth in the building installation.

FCC Bulletin for New TV Owners

After February 17, 2009, a television receiver with only an analog broadcast tuner will require a converter box to receive full power over-the-air broadcasts with an antenna because of the Nation's transition to digital broadcasting. Analog-only TVs should continue to work as before to receive low power, Class A or translator television stations and with cable and satellite TV services, gaming consoles, VCRs, DVD players, and similar products.

Information about the DTV transition is available from <http://www.DTV.gov> or this manufacturer at 877 MY VIZIO (877-698-4946), and from <http://www.dtv2009.gov> or 1-888-DTV-2009 for information about subsidized coupons for digital-to-analog converter boxes.

Your HDTV comes with a built-in tuner capable of processing digital broadcasts, making it easier for you to receive this type of signal without the need of an extra converter box.



Opening the Package

Your VIZIO HDTV and accessories are carefully packed in a cardboard carton that has been designed to protect it from transportation damage. Now you have opened the carton check that your HDTV is in good condition and that all of the accessories are included.

The HDTV weighs approximately 86lbs and about 54" wide x 30" tall we strongly advise that you have at least 2 people to unpack and install the HDTV.

The screen can easily be scratched or broken so please handle the product gently and never place the HDTV with the glass facing downwards on a surface without protective padding.

IMPORTANT: Save the carton and packing material for future shipping.

Package Contents

VIZIO VF550XVT1A

VIZIO Remote Control VUR8P

HDMI Cable

Power Cord

Safety Strap

Screen Cleaning Cloth

This User Manual

Quick Setup Guide

Registration Card

VIP Services Brochure

2 AA Batteries for the Remote Control



Caution: Do not apply pressure to the screen or throw objects at your HDTV. This may compromise the integrity of the display. The manufacturer's warranty does not cover user abuse or improper installations.



Additional certified accessories sold separately

Wall Mounts

High Definition Cables

Extra or replacement Remote

VIZIO also offers Installation Services and Extended Warranty Services for your VIZIO HDTV.

To purchase or inquire about additional accessories and services for your VIZIO product, visit our web site at www.VIZIO.com or call us toll free at 888-VIZIOCE (888-849-4623).

Installation Preparation

Please read this user manual carefully before installing your VIZIO HDTV.

The power consumption of the TV is about 244W (AVG), please use the power cord designated for TV. When an extension cord is required, use one with the correct power rating. The cord must be grounded and the grounding feature must not be defeated.

The TV should be installed on a flat surface to avoid tipping. For proper ventilation, you must allow space between the back of the TV and the wall. If you would like to mount your TV on the wall, please see below 'Preparing Your LCD HDTV for Wall Mounting' for additional information. Avoid installing the TV in places with high humidity, dust or smoke so as not to shorten the service life of the electronic components.

Install the TV in landscape orientation; any 90° clockwise or counter-clockwise installation may induce poor ventilation and excessive component damage.

The HDTV can either be kept on the stand base or mounted on the wall for viewing. If you choose to mount your HDTV on the wall, please refer to "Preparing your LCD HDTV for Wall Mounting" on page 7.

VIZIO offers professional installation services. Please contact VIZIO for more information on these services at 888-VIZIOCE (888-849-4623) or www.VIZIO.com.

Attaching the safety strap

For when your HDTV is not mounted on the wall with a Wall Mount, a Safety Strap has been included to attach the HDTV to the wall to reduce the chance of the HDTV being pulled over. The Safety Strap should be used with common sense practice such as ensuring that children (or adults) do not climb up, grabbing the top of the HDTV and pulling it onto themselves.

1. Fix one end of the strap to the wall. If you have a drywall finish it is preferable to fix it to a stud, using a washer underneath the screw head. If you have a solid wall you should use a lag bolt, again using a washer under the nut.



2. Fix the other end of the Safety Strap to one of the upper wall mounting holes on the back of the HDTV, using a washer under the screw head.



Preparing your LCD HDTV for Wall Mounting

The VIZIO VF550XVT1A can either be kept on the stand base or mounted on the wall for viewing. If you choose to mount the TV on the wall, please follow the instructions below for removing the stand.

To remove the stand:

1. Unplug all cables from the HDTV.
2. Place your HDTV face down on a soft and flat surface (blanket, foam, cloth, etc) to prevent any damage to the TV.
3. Remove the total of eight (8) screws holding the stand to the TV.
4. Carefully remove the stand, pulling the base towards you.



The TV can fit securely to a mount (sold separately) by utilizing the mounting holes in the center of the back panel of the TV. Please make sure to read the instructions of your specific mount to properly hang your TV. The pitch of the mounting holes is 400mm horizontally and 200mm vertically. The screw type required is metric M8, 1.25mm pitch. The length of the screws will depend on the thickness plate being attached to the TV.



To find the perfect mount for your HDTV, browse VIZIO's certified mount selection at www.VIZIO.com or call directly 888-VIZIOCE (888-849-4623).



Table of Contents

1.1 Important Safety Instructions.....	2
Chapter 1 Basic Controls and Connections	10
Front Panel.....	10
Side Panel Controls.....	10
Rear Panel Connections	11
Right-Side Panel Connection	12
VIZIO Universal Remote Control.....	13
Insertion of Batteries in the Remote Control.....	16
Remote Control Range.....	17
VIZIO Remote Control Precautions	17
Chapter 2 Connecting Equipment	18
Which Video Connection Should I Use?.....	18
Connecting Your Cable or Satellite Box	19
Using HDMI	19
Using Component Video.....	21
Connecting Coaxial (RF).....	22
Using Your Antenna or Digital Cable for DTV.....	22
Using Your Antenna or Cable for TV	23
Using the Antenna or Cable through your VCR.....	23
Connecting Your DVD Player.....	24
Using HDMI	24
Using Component Video.....	26
Using S-Video (AV1)	27
Using Composite (AV) Video	28
Connecting Your VCR or Video Camera.....	29
Connecting an external Receiver/Amp.....	30
Optical Output of Audio received with HD Programs	30
Connecting a PC (Computer).....	31
Preset PC Resolutions	32
Resolution (1920x1080) through RGB (15-Pin VGA) Input.....	32
Chapter 3 Setting Up to Watch Television	33
Basic LCD HDTV Start Up	33
Watching a TV Program	38
Adjusting Basic HDTV Settings	39
Program Information.....	40
Chapter 4 Advanced Adjustment.....	41
Using the On Screen Display (OSD)	41
Picture Adjustment	42
Picture Mode	42
Backlight.....	42
Brightness.....	42
Contrast.....	43
Color.....	43
Tint	43
Sharpness	44
Advanced Video Features	44
Reset Picture Mode	47
Audio Adjustment.....	48
Audio Mode	48
Equalizer.....	48
Balance.....	49
SRS TruVolume™	49
Digital Audio Out.....	49
Speakers	50
Analog Audio Out	50
Lip Sync.....	50
DTV / TV Tuner Setup.....	52
Setup Wizard.....	52
Press OK to confirm your choice	52



Tuner Mode	55
Auto Search.....	55
Partial Channel Search.....	56
Skip Channel	56
MTS (Multichannel Television Sound).....	57
Time Zone	57
Daylight Saving.....	57
DTV / TV Input Setup	58
Language.....	58
PIP (Picture-in-Picture).....	58
Sleep Timer	61
Input Naming	62
CC (Closed Caption)	63
H/V Position.....	65
DTV / TV Input Parental Control	66
Rating Enable	67
Channel Block	67
US TV Rating.....	68
US Movie Rating.....	69
Canadian English Rating	69
French Canadian Rating.....	70
Check for DTV Rating.....	70
Block Unrated Programming.....	71
Access Code Edit (Change Password).....	71
Reset All Settings	72
H/V Position and Size.....	73
Auto Phase (Component input)	74
Video Input Parental Control	74
PC (Computer) Input Picture Adjustment	75
Picture Mode	75
Auto Adjust	75
Backlight	75
Brightness.....	76
Contrast.....	76
SIZE and POSITION OPTIONS	77
This option allows fine tuning of the display for optimum fit within the display area.....	77
H-SIZE.....	77
H-Position	77
V-Position	77
Fine Tune	78
PC Input Audio Adjustment	78
PC Input Setup.....	78
Understanding Viewing Modes.....	79
Viewing Modes	79
Chapter 5 Programming the VIZIO Universal Remote Control	80
Programming for VCR	80
Programming for Cable or Satellite Set-Top Box.....	80
Programming for DVD Player	81
Programming for Audio Amp/Receiver	81
Searching for Component Codes	82
Using a Cable or Satellite Remote	82
Chapter 6 Maintenance and Troubleshooting	83
Maintenance.....	83
Troubleshooting Guide	83
Telephone & Technical Support	85
Compliance	86
FCC Class B Radio Interference Statement.....	86
Chapter 7 Miscellaneous Information	87
Specifications	87
Glossary – Standard Definitions	88
Index	92
Component Program Codes.....	94



Chapter 1 Basic Controls and Connections

Front Panel

POWER 'VIZIO' LIGHT– The VIZIO name lights white when powered on and orange when powered off.

REMOTE CONTROL SENSOR – This is the window through which all of the remote control signals pass to the sensor. Point the remote control directly at this window for the best response to the remote signal.

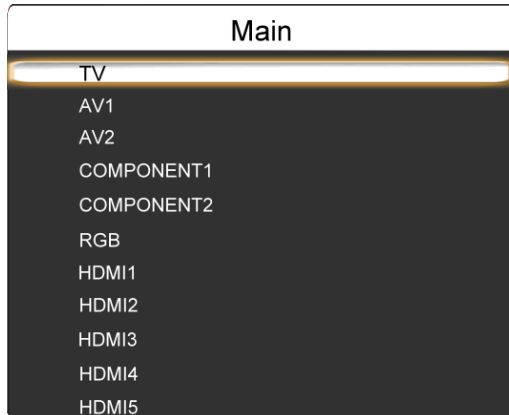


Side Panel Controls

POWER (⏻) – Power the TV on by pressing this button once. Press the button again to power the TV off.

MENU – This button activates the On Screen Display (OSD). If a sub-menu is active, pressing this button will return to the previous menu level.

INPUT (ENTER) – Repeated pressing of this button steps through the input sources in the following sequence: TV, AV1, AV2 (S-Video), Component 1, Component 2, RGB, HDMI1, HDMI2, HDMI3, HDMI4 and HDMI5. Once you have stepped through the entire sequence, you will return to the beginning of the sequence.



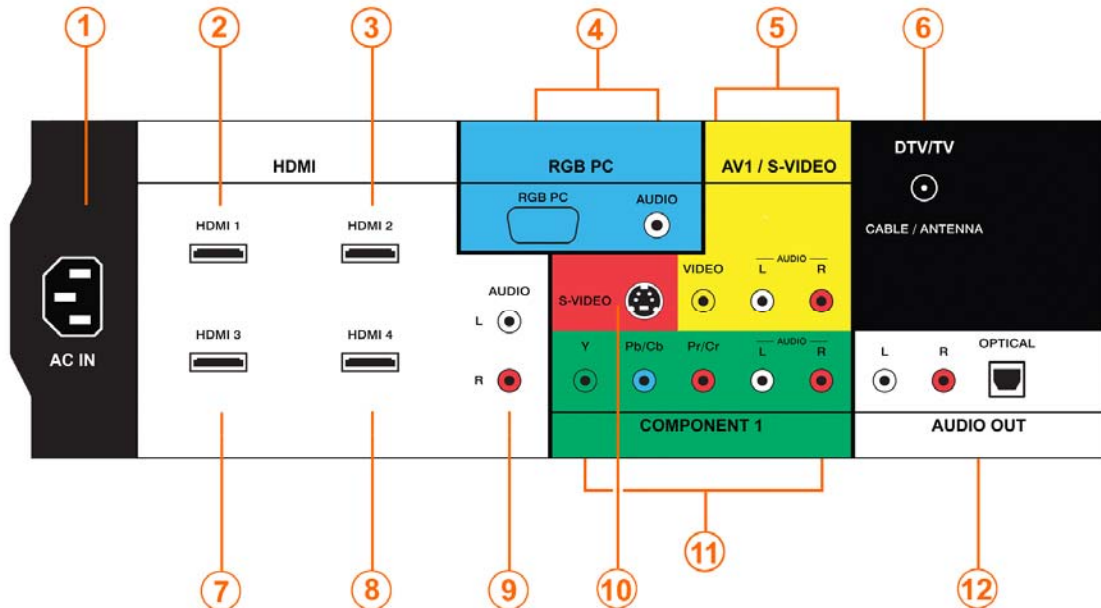
Additionally, when the OSD is active, this button confirms the menu function to be adjusted. When the OSD is not active, this button will show the current input selections.

CH ▲▼ - – Use these buttons to step up or down the TV channels. While the OSD is active, these buttons function as up and down controls in the OSD menus.

VOL ◀▶ – Use these buttons to increase or decrease to the speaker volume. While the OSD is active, these buttons function as left and right controls in the OSD menus.



Rear Panel Connections



1. **AC IN** – Plug in your power cable here.
2. **HDMI 1** – Connect the primary source for digital video such as a DVD multimedia player or set top box through this all digital connector. The white color band on the rear of the TV indicates this connection.
3. **HDMI 2** – Connect a secondary source for digital video such as a DVD multimedia player or set top box through this all digital connector. The white color band on the rear of the TV indicates this connection. For users who want to connect to a DVI enabled device, use a DVI-HDMI cable and connect the Analog Audio output of the device to the L+R AUDIO here. Your VIZIO Certified HDMI and HDMI-DVI cables are available for purchase from www.VIZIO.com or by calling 888-VIZIOCE (888-849-4623).
4. **RGB PC** – Connect the video and audio from a computer here. The blue color band on the rear of the TV indicates this connection. A cable with a 1/8" mini plug stereo connector at the end connecting to the TV is needed if sound is also transmitted with this signal.
5. **AV1/S-VIDEO IN** – Connect the primary source for composite video devices, such as a VCR or video game. Use the white and red connectors to connect the external audio from the same source. The yellow color band on the rear of the TV indicates this connection.
6. **DTV/TV** – Connect to an antenna or digital cable (no Cable Box) for Digital TV.*
* For digital TV stations in your area visit www.antennaweb.org.
7. **HDMI 3** - Connect the third source for digital video such as a DVD multimedia player or set top box through this all digital connector.
8. **HDMI 4** - Connect the fourth source for digital video such as a DVD multimedia player or set top box through this all digital connector.
9. **AUDIO IN** – (ANALOG L/R) Connect the associated audio from a device outputting DVI Video.
10. **S-VIDEO IN** – Connect the primary source for S-Video devices, such as a VCR or video game or Camcorder. Use the white and red connectors to connect the external audio from the same source.

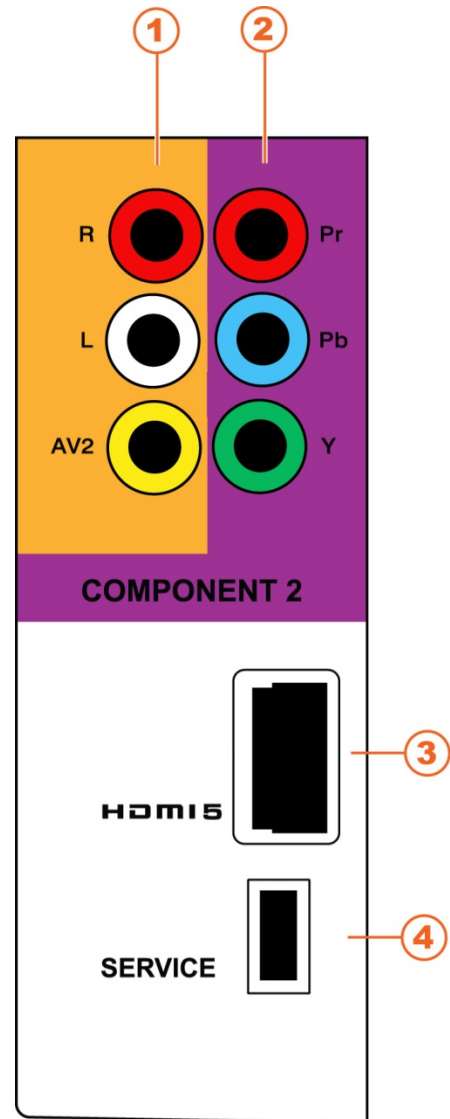


11. **COMPONENT 1 (YPb/CbPr/Cr with Audio L/R)** – Connect the primary source for component video devices such as a DVD Player or set top box here. From left to right use Green for Y, Blue for Pb (or Cb), and Red for Pr (or Cr) inputs, white for left audio and red for right audio.

12. **AUDIO OUT** – (ANALOG L/R) Connect the audio from the LCD HDTV to an external device, such as a home theatre system, external amplifier or stereo. Speakers can not be connected directly to here. (OPTICAL) When the DTV input is selected for viewing, the audio associated with the programming will be available on the SPDIF Optical connector for connection to your home theatre system.

Right-Side Panel Connection

1. **AV2** – Connect the secondary source for composite video devices, such as a VCR or video game. Use the white and red connectors to connect the external audio from the same source, and then use the yellow connector to connect the external video from the same source. *Note:* The red and white audio connectors are shared between AV2 and COMPONENT2.
2. **COMPONENT2 (YPb/CbPr/Cr with Audio L/R)** - Connect the secondary source for component video devices such as a DVD Player or set top box here. From top to bottom, use red for Pr (or Cr), blue for Pb (or Cb), and green for Y. Then connect R (red) for right audio and L (white) left audio inputs. *Note:* The red and white audio connectors are shared between AV2 and COMPONENT2.
3. **HDMI 5** - Connect the fifth source for digital video such as a DVD multimedia player or set top box through this all digital connector.
4. **Service** – For firmware update only. Do not plug any other USB device into this port.



Certified HDMI and HDMI-DVI cables are available for purchase from www.VIZIO.com or by calling 888-VIZIOCE (888-849-4623)



VIZIO Universal Remote Control

The VIZIO Universal Remote Control is a comprehensive remote that can be used to control up to four different devices. The remote button functions are explained on the following pages.

Remote LED – Blinks when the remote operates.



SET - This button starts all programming of the Remote Control.



POWER - Press this button to turn the device on from the Standby mode. Press it again to return to the Standby mode.



DVD - This button selects a programmed DVD player.



AUDIO - This button selects a programmed Audio Receiver/Amp/Home Theatre System.



CABLE - This button selects a programmed cable TV set-top box or a satellite TV set-top box.



TV - This button has been pre-programmed to select the codes to operate the VIZIO HDTV.



1 thru 0 - Use these buttons to select a channel or enter a password.

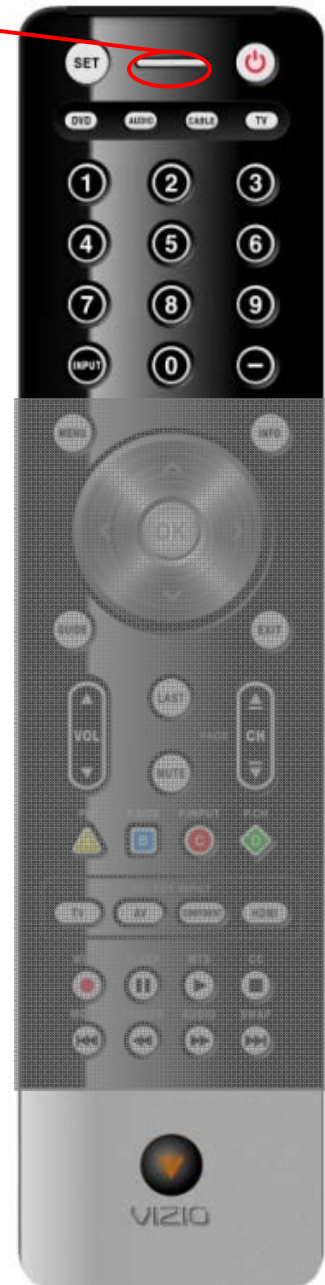


INPUT - This button allows the user to cycle through the inputs.



– The DASH button is for the DTV mode. When selecting a digital channel directly use this button for the separation of main and sub-channels. For example, channel 28-2 would be selected by the button sequence 2 8 DASH 2.

***NOTE:** This is a programmable remote supporting up to 4 devices (see TV, VCR, CABLE, DVD buttons at the top of the remote). If the remote is not working with your VIZIO TV, press the TV button on the remote to set the functions back to TV.





MENU – Use this button for the On-Screen Display (OSD) menus.



INFO – This button turns the image and system information display on or off.



Use the Wheel to navigate the On-Screen Display (OSD) after it has been activated by pressing the **MENU** button.

Use the **OK** button to select your chosen option in the On-Screen Display (OSD) menus.



GUIDE – This button displays program information banner. Please see page 40 for details. Note: this button is only functional for DTV.



EXIT – This button exits the On-Screen Display (OSD) menus.



VOL (+ or -) – These buttons turn the volume up or down.



LAST – This button recalls the previously viewed channel.



MUTE – This button turns the sound on and off.



CH (+ or -) – These buttons change the channels up or down.





A/PIP — When CABLE is selected and the code to match your Cable Box has been entered, this button will operate the Cable Box the same as this button on your Cable Remote. When used with the TV, this button is used to select PIP (Picture-in-Picture), POP (Picture-on-Picture) and Off.



B/P.SIZE — When CABLE is selected and the code to match your Cable Box has been entered, this button will operate the Cable Box the same as this button on your Cable Remote. When used with the TV, this button is used to select PIP Size: Small, Medium or Large.



C/P.INPUT — When CABLE is selected and the code to match your Cable Box has been entered, this button will operate the Cable Box the same as this button on your Cable Remote. If you have a Satellite Box and the code to match your Satellite Box has been entered, this button will operate the Satellite Box the same as this button on your Satellite Remote. When used the TV, this button is used to select PIP Input. Please refer to page 61 for PIP Input combinations.



D/P.CH — When CABLE is selected and the code to match your Satellite Box has been entered, this button will operate the Satellite Box the same as this button on your Satellite Remote. When used with the TV, this button is used to select PIP channel when TV is selected as the PIP source.



TV — Press this button to select TV Tuner input.



AV — Repeated pressing of this button will switch between AV1 and AV2 inputs.



COMPONENT — Repeated pressing of this button will switch between Component 1 and Component 2 inputs.



HDMI — Repeated pressing of this button will cycle through HDMI 1, HDMI 2, HDMI 3, HDMI 4 and HDMI 5.



WIDE/RECORD — This button cycles through the available screen formats. The options are Wide, Normal, Zoom, Panoramic. Note: in RGB/PC and HDMI modes the options are 4:3 and 16:9. This button also starts recording when using the remote to control your Cable/Satellite Box or VCR.



SLEEP/PAUSE — This button allows the user to select the sleep options by adjusting the timer in 30-minute increments up to 120 minutes. This button also pauses playback when using the remote to control your Cable/Satellite Box DVR, VCR or DVD Player.



MTS/PLAY — This button will select the MTS options of Stereo, SAP or Mono in standard TV mode and alternate audio channels, where available, in DTV mode. This button also starts Playback when using the remote to control your Cable/Satellite Box DVR, VCR or DVD Player.





CC/STOP – This button will select the Closed Caption mode. The options are OFF, CC1, CC2, CC3, CC4, TEXT1, TEXT2, TEXT3 OR TEXT4. This button also Stops playback/recording when using the remote to control your Cable/Satellite Box DVR, VCR or DVD Player.



FREEZE/REV – Press this button to “Freeze-Frame” the current screen. Press this button again to display live video. This button also applies reverse play when using the remote to control your Cable/Satellite Box DVR, VCR or DVD Player.



FREEZE MODE/LAST – Pressing this button repeatedly toggles the through the picture **presets**. This button also applies reverse play when using the remote to control your Cable/Satellite Box DVR, VCR or DVD Player



AUDIO/FF – Press this button to switch the audio from the main screen to the sub-screen while in PIP or POP mode. This button also applies fast play when using the remote to control your Cable/Satellite Box DVR, VCR or DVD Player.



SWAP/NEXT – While in PIP/POP mode used to swap the inputs from the main screen and the sub-screen. This button also skips to the next chapter when using the remote to control your Cable/Satellite Box DVR, or DVD Player or FF when using the remote to control your VCR.

Insertion of Batteries in the Remote Control

Insert two AA batteries into the remote control. Make sure that you match the (+) and (-) symbols on the batteries with the (+) and (-) symbols inside the battery compartment. Re-attach the battery cover.

Precautionary Tips for Inserting the Batteries:

Only use the specified AA batteries.

Do not mix new and old batteries. This may result in cracking or leakage that may pose a fire risk or lead to personal injury.

Inserting the batteries incorrectly may also result in cracking or leakage that may pose a fire risk or lead to personal injury.

Dispose of the batteries in accordance with local laws and regulations.

Keep the batteries away from children and pets.



Remote Control Range

Point the remote control at the remote control sensor to transmit the commands.

Do not place any obstacles between the remote control and the receiver window.

The effective range of the remote control is approximately 30 feet (10 meters) from the front of the receiver window, 30° to the left and right, 20° up and down.

VIZIO Remote Control Precautions

The remote control should be kept dry and away from heat sources. Avoid humidity.

If the TV responds erratically to the remote control or does not respond at all, check the batteries. If the batteries are low or exhausted, replace them with fresh batteries.

When not using the remote control for a long period of time, remove the batteries.

Do not take the batteries apart, heat them, or throw them into a fire.

Do not subject the remote control to undue physical stress, such as striking or dropping it.

Do not attempt to clean the remote control with a volatile solvent. Wipe it with a clean, damp cloth.

Cleaning the Housing and Remote Control







1. Use the VIZIO soft cloth (included) for cleaning.
2. If the housing or remote control is seriously contaminated, use a soft cloth moistened with diluted neutral cleaner to clean the display. Wring water out of the cloth before cleaning to prevent water from penetrating into the housing. Wipe the display with a dry cloth after cleaning.



Chapter 2 Connecting Equipment

Which Video Connection Should I Use?

Your HDTV has six different ways to connect your video equipment from a basic connection to the most advanced for digital signals.

Connection Quality (type)	Connector	Rear Panel Color Codes	Description
Best (digital)		White and Side of TV	HDMI (High-Definition Multimedia Interface) - It is the first and only industry-supported, uncompressed, all-digital audio/video interface. HDMI provides an interface between any audio/video source, such as a set-top box, DVD player, or A/V receiver and an audio and/or video monitor, such as a digital television (DTV), over a single cable.
Best (digital) ----- Good (analog)		Black	DTV Coaxial RF. When used for MPEG2 encoded bit streams from ATSC broadcast programming, this input takes advantage of the High Definition content. TV Coaxial RF. This is the connection for standard NTSC TV using antenna or cable.
Best (analog)		Blue	RGB PC (VGA) – This video input has separate red, green and blue color components. The signal carries horizontal and vertical sync information on the green signal. This is most commonly used for PC input.
Better (analog)		Green and Side of TV	Component 1/2 - The video signal is separated into three signals, one containing the black-and-white information and the other two containing the color information. This enhancement over S-Video takes advantage of the superior picture provided by progressive scan DVD players and HDTV formats.
Good (analog)		Red	S-Video (AV1) - The video signal is separated into two signals, one containing the black-and-white information and the other containing the color information. Separating the color in this way avoids 'cross color' effects where closely spaced black and white lines are erroneously displayed in color. It also enables text to be displayed more sharply.
Good (analog)		Yellow and Side of TV	AV1/2(Composite) - The complete video signal is carried through this single pin connector. This is the most commonly used video connection.

Note: For more information, please refer to the Quick Start Guide



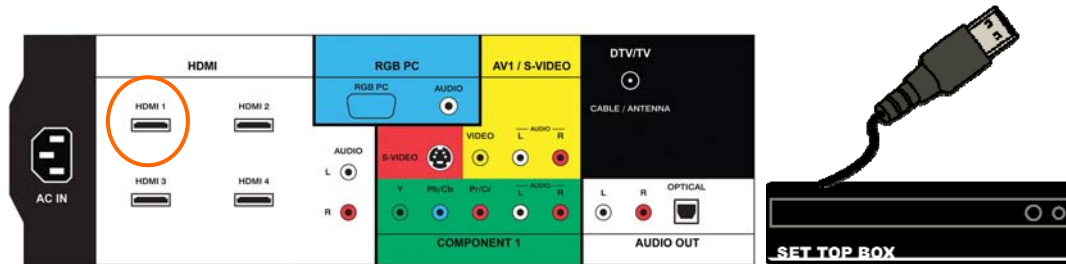
Connecting Your Cable or Satellite Box

Using HDMI

Cable and Satellite Boxes that have a HDMI digital interface should be connected to the HDMI input of the LCD HDTV for optimal results.

Note: To maintain the display quality, use a VIZIO certified HDMI cable. Length is available up to 10 Meters. See www.vizio.com or call 1-888-VIZIOCE (1-888-849-4623) for details.

Connecting your Cable or Satellite Box (Best)



1. Turn off the power to the LCD HDTV and HDTV Set-Top Box.
2. Connect a HDMI cable to the HDMI output of your HDTV Set-Top Box and the other end to the HDMI Input (white color area) at the rear of the LCD HDTV.
3. Turn on the power to the LCD HDTV and HDTV Set-Top Box.
4. Select HDMI using the INPUT button on the remote or side of the LCD HDTV, or directly by pressing the HDMI button on the Remote Control.

Note:

- The HDMI input on the LCD TV supports High-bandwidth Digital Content Protection (HDCP). HDCP encrypts the transmission between the video source and the digital display for added security and protection.
- If you are already using the HDMI1 input for another component, or you do not want to use the HDMI1 input for the Set-Top Box, you can connect the Set-Top Box to the HDMI2, HDMI3, HDMI4 or HDMI5 connection.
- Refer to your HDTV Set-Top Box user manual for more information about the video output requirements of the product or consult your cable or satellite operator.



For Cable or Satellite Boxes with DVI:



1. Turn off the power to the LCD HDTV and HDTV Set-Top Box.
2. Using a HDMI-DVI cable, connect the DVI end to your HDTV Set-Top Box and the HDMI end to the HDMI2 Input (white color area) at the rear of the LCD HDTV.
3. Using an audio cable (white and red connectors), connect the cable to the audio output connectors associated with the DVI output on your HDTV Set-Top Box and connect the other end to the audio connectors associated with the HDMI input (white area) at the rear of the LCD HDTV.
4. Turn on the power to the LCD HDTV and HDTV Set-Top Box.
5. Select HDMI2 using the INPUT button on the remote or side of the LCD HDTV, or directly by pressing the HDMI button on the Remote Control.

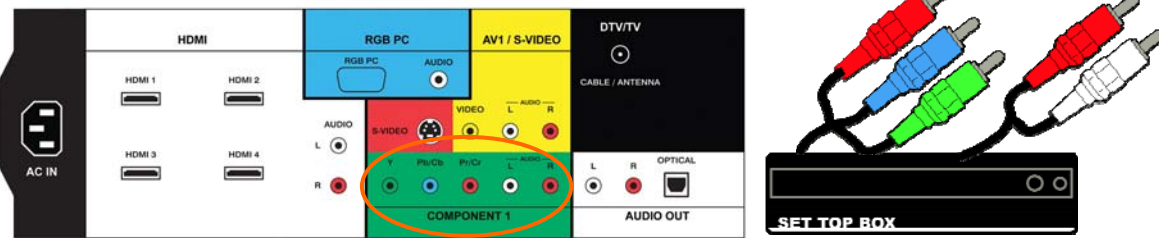
Note:

- The HDMI input on the LCD TV supports High-bandwidth Digital Content Protection (HDCP). HDCP encrypts the transmission between the video source and the digital display for added security and protection.
- If you are already using the HDMI2 input for another component, or you do not want to use the HDMI2 input for the Set-Top Box, you can connect the Set-Top Box to the HDMI1, HDMI3, HDMI4 or HDMI5 connection. The LCD TV will recognize the DVI connection and obtain audio information from the audio connectors near HDMI2 input.
- Refer to your HDTV Set-Top Box user manual for more information about the video output requirements of the product or consult your cable or satellite operator.



Using Component Video

Connecting your Cable or Satellite Box (Better)



1. Turn off the power to the LCD HDTV and HDTV Set-Top Box.
2. Connect the Y (green color) connector on your HDTV Set-Top Box to the corresponding Y (green color) connector in the Component 1 group (green color area - row of connectors nearest to you when viewing from the rear of the TV) at the rear of the LCD HDTV.
3. Connect the PbCb (blue color) connector on your HDTV Set-Top Box to the corresponding Pb (blue color) connector in the Component 1 group (green color area - row of connectors nearest to you when viewing from the rear of the TV) at the rear of the LCD HDTV.
4. Connect the PrCr (red color) connector on your HDTV Set-Top Box to the corresponding Pr Cr (red color) connector in the Component 1 group (green color area - row of connectors nearest to you when viewing from the rear of the TV) at the rear of the LCD HDTV.
5. Using an audio cable (white and red connectors), connect the cable to the audio output connectors associated with the Component output on your HDTV Set-Top Box and connect the other end to the audio connectors associated with the Component 1 input (green color area) at the rear of the LCD HDTV.
6. Turn on the power to the LCD HDTV and HDTV Set-Top Box.
7. Select Component 1 using the INPUT button on the remote or side of the LCD HDTV, or directly by pressing the COMP button on the Remote Control.

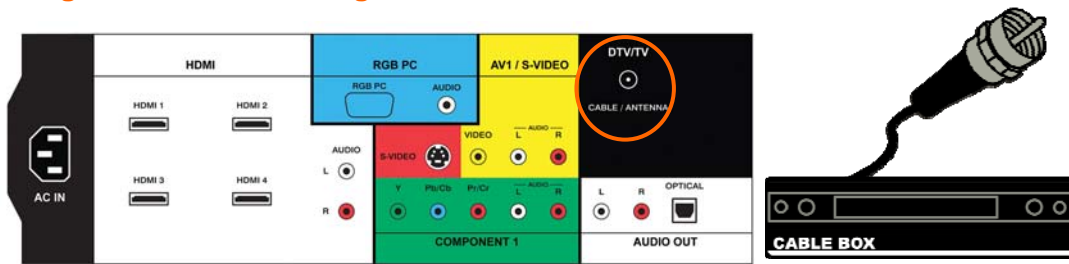
Note:

- If you are already using the Component 1 input for another component, or you do not want to use the Component 1 input for the Set-Top Box, you can connect the Set-Top Box to the Component 2 connections on the side of the TV.
- Refer to your HDTV Set-Top Box user manual for more information about the video output requirements of the product or consult your cable or satellite operator.



Connecting Coaxial (RF)

Using Your Antenna or Digital Cable for DTV



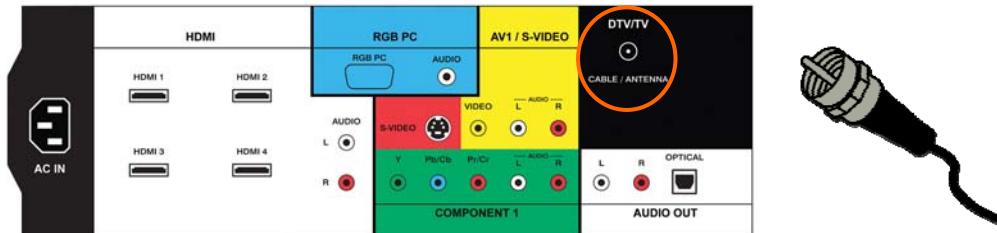
1. Turn off the power to the LCD HDTV.
2. Connect the coaxial (RF) connector from your antenna or digital cable to the DTV/TV CABLE/ANTENNA connector at the rear of the LCD HDTV.
3. Turn on the power to the LCD HDTV.
4. Select TV using the INPUT button on the remote or side of the LCD HDTV, or directly by pressing the TV button on the Remote Control.

Note:

- Not all digital TV broadcasts are High Definition (HD). Refer to the program guides, or consult your cable, satellite or TV station operator.
- Digital broadcasts are not available in all areas. Refer to www.antennaweb.org for detailed information.
- Make sure the antenna and coaxial cable are correctly grounded.

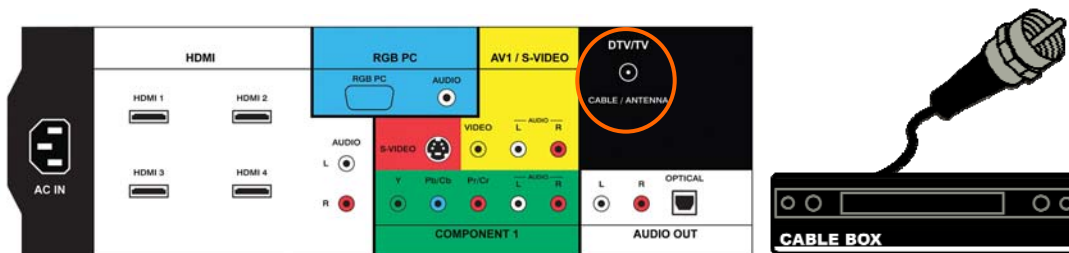


Using Your Antenna or Cable for TV



1. Turn off the power to the LCD HDTV.
2. Connect the coaxial (RF) connector from your antenna or cable to the DTV/TV CABLE/ANTENNA connector at the rear of the LCD HDTV
3. Turn on the power to the LCD HDTV.
4. Select TV using the INPUT button on the remote or side of the LCD HDTV, or directly by pressing the TV button on the Remote Control.

Using the Antenna or Cable through your VCR



1. Turn off the power to the LCD HDTV and VCR.
2. Connect the “Output to TV”, “RF Out” or “Antenna Out” connector on the rear of your VCR to the DTV/TV CABLE/ANTENNA connector at the rear of the LCD HDTV.
3. Turn on the power to the LCD HDTV and VCR.
4. Select TV using the INPUT button on the remote or side of the LCD HDTV, or directly by pressing the TV button on the Remote Control.

Note: If you have an off-air antenna or cable TV, connect it to the “Antenna In” connector on the rear of your VCR.



Connecting Your DVD Player

You have several options for connecting your DVD player to your VF550XVT1A – HDMI, Component, S-Video and Composite (AV) inputs. Based on your home theater configuration, you can decide which option is the right one for you.

Using HDMI

DVD players that have a digital interface such as HDMI (High Definition Multimedia Interface) should be connected to the HDMI input of the VIZIO VF550XVT1A for optimal results.

Note: To maintain the display quality, use a VIZIO certified HDMI cable. Length is available up to 10 meters. See www.VIZIO.com or call 1-888-VIZIOCE (1-888-849-4623) for details.

Connecting your DVD Player (Best):



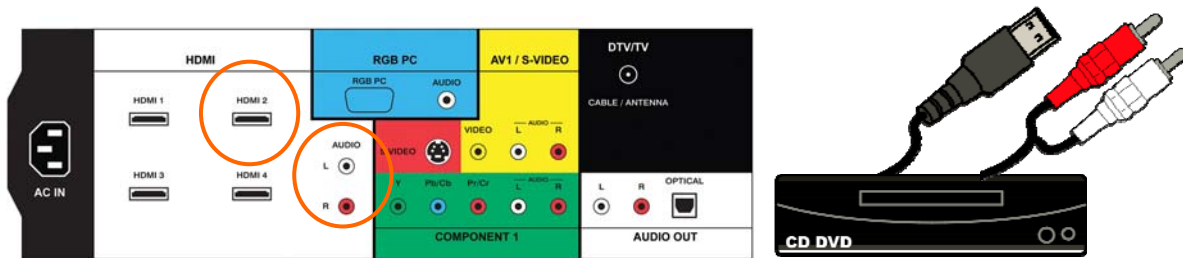
1. Turn off the power to the LCD HDTV and DVD player.
2. Connect a HDMI cable to the HDMI output of your DVD player and the other end to the HDMI Input (white color area) at the rear of the LCD HDTV.
3. Turn on the power to the LCD HDTV and your DVD player.
4. Select HDMI using the INPUT button on the remote or side of the LCD HDTV, or directly by pressing the HDMI button on the Remote Control.

Note:

- If you are already using the HDMI1 input for another component, or you do not want to use the HDMI 1 input for the DVD player, you can connect the DVD player to the HDMI2, HDMI3, HDMI4 or HDMI5 connection.
- Refer to your DVD player user manual for more information about the video output requirements of the product.



For DVD Players with DVI:



1. Turn off the power to the LCD HDTV and DVD player.
2. Using a HDMI-DVI cable, connect the DVI end to your DVD player and the HDMI end to the HDMI2 Input (white color area) at the rear of the LCD HDTV.
3. Using an audio cable (white and red connectors), connect the cable to the audio output connectors associated with the DVI output on your DVD player and connect the other end to the audio connectors associated with the HDMI input (white area) at the rear of the LCD HDTV.
4. Turn on the power to the LCD HDTV and your DVD player.
5. Select HDMI 2 using the INPUT button on the remote or side of the LCD HDTV, or directly by pressing the HDMI button on the Remote Control.

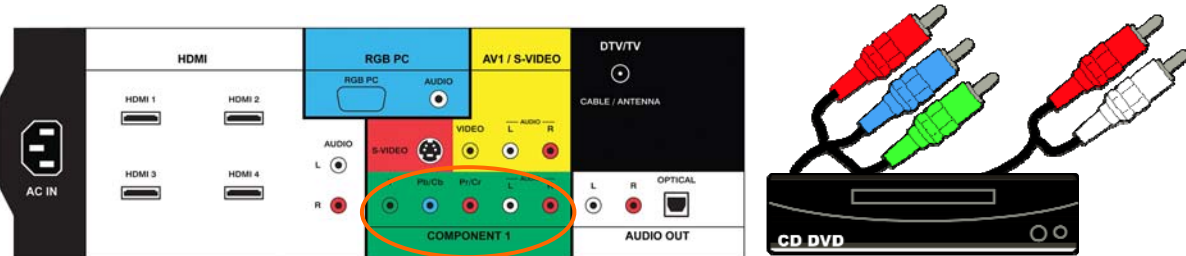
Note:

- If you are already using the HDMI2 input for another component, or you do not want to use the HDMI 2 input for the DVD Player, you can connect the DVD player to the HDMI1, HDMI3 or HDMI4 connection. The LCD TV will recognize the DVI connection and obtain audio information from the audio connectors near HDMI2 input.
- Refer to your DVD player user manual for more information about the video output requirements of the product.



Using Component Video

Connecting your DVD Player (Better):



1. Turn off the power to the LCD HDTV and DVD player.
2. Connect the Y (green color) connector on your DVD player to the corresponding Y (green color) connector in the Component 1 group (green color area - row of connectors nearest to you when viewing from the rear of the TV) at the rear of the LCD HDTV.
3. Connect the PbCb (blue color) connector on your DVD player to the corresponding PbCb (blue color) connector in the Component 1 group (green color area - row of connectors nearest to you when viewing from the rear of the TV) at the rear of the LCD HDTV.
4. Connect the PrCr (red color) connector on your DVD player to the corresponding PrCr (red color) connector in the Component 1 group (green color area - row of connectors nearest to you when viewing from the rear of the TV) at the rear of the LCD HDTV.
5. Using an audio cable (white and red connectors), connect the cable to the audio output connectors associated with the Component output on your DVD player and connect the other end to the audio connectors associated with the Component 1 input (green color area) at the rear of the LCD HDTV.
6. Turn on the power to the LCD HDTV and DVD player.
7. Select Component 1 using the INPUT button on the remote or side of the LCD HDTV, or directly by pressing the COMP button on the Remote Control.

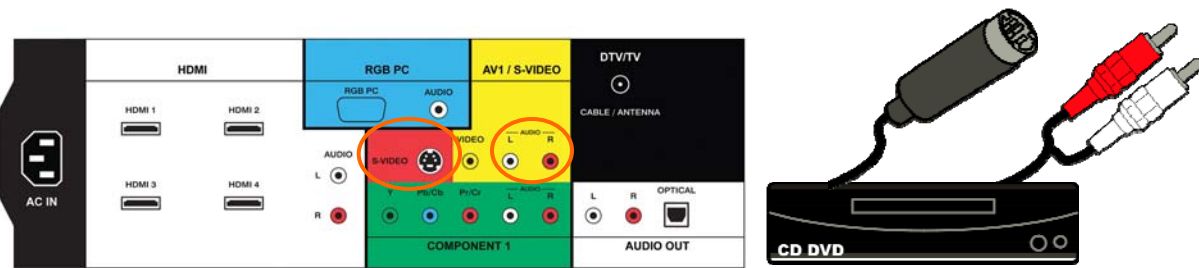
Note:

- If you are already using the Component 1 input for another component, or you do not want to use the Component 1 input for the DVD player, you can connect the DVD player to the Component 2 connections on the side of the TV.
- Refer to your DVD player user manual for more information about the video output requirements of the product.



Using S-Video (AV1)

Connecting your DVD Player (Good):

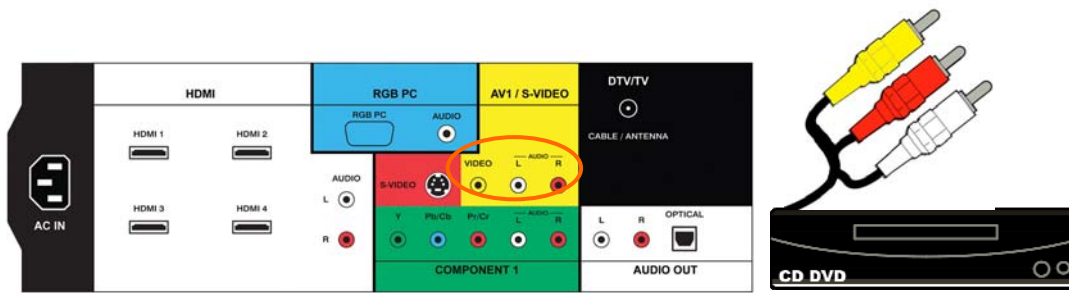


1. Turn off the power to the LCD HDTV and DVD player.
2. Connect the S-Video jack on the rear of your DVD player to the S-Video jack in the AV1 at the rear of the LCD HDTV.
3. Using an audio cable (white and red connectors), connect the cable to the audio output connectors associated with the S-Video output on your DVD player and connect the other end to the audio connectors associated with the AV1 input at the rear of the LCD HDTV.
4. Turn on the power to the LCD HDTV and DVD player.
5. Select AV1 using the INPUT button on the remote or side of the LCD HDTV, or directly by pressing the AV button on the Remote Control.

Note: Refer to your DVD player user manual for more information about the video output requirements of the product.



Using Composite (AV) Video



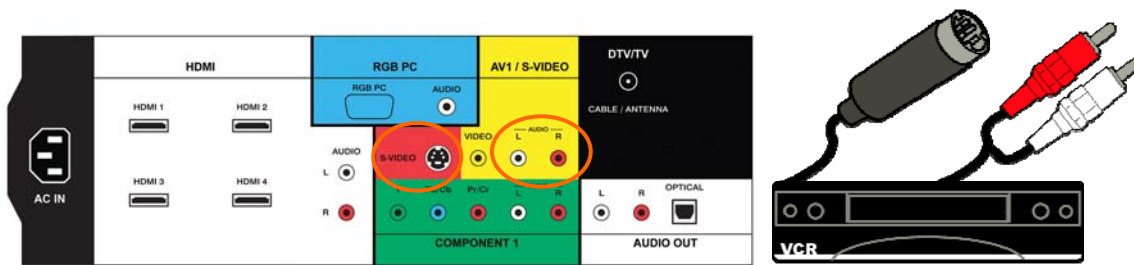
Connecting your DVD Player (Good):

1. Turn off the power to the LCD HDTV and DVD player.
2. Connect the Video (yellow color) connector on your DVD player to the Video (yellow color) connector in the AV1 input row (yellow color area) of connectors at the rear of the LCD HDTV.
3. Connect the R (red color) and L (white color) audio connectors on your DVD player to the corresponding R (red color) and L (white color) audio input connectors in the AV input (yellow color area) row of connectors at the rear of the LCD HDTV.
4. Turn on the power to the LCD HDTV and DVD Player.
5. Select AV1 using the INPUT button on the remote or side of the LCD HDTV, or directly by pressing the AV button on the Remote Control.

Note: Refer to your DVD player user manual for more information about the video output requirements of the product.



Connecting Your VCR or Video Camera

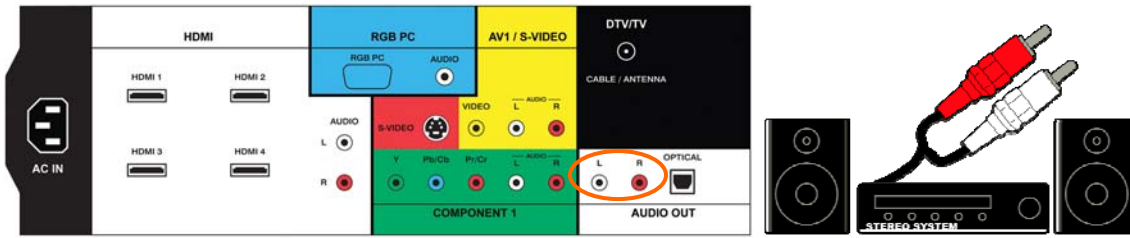


1. Turn off the power to the LCD HDTV and VCR or Video Camera.
2. Connect the S-Video jack on the rear of your VCR or Video Camera to the S-Video jack in the AV1 group (red area color) at the back of the LCD HDTV.
3. Using an audio cable (white and red connectors), connect the cable to the audio output connectors associated with the S-Video output on your VCR or Video Camera and connect the other end to the audio connectors associated with the AV1 input (red color area) at the rear of the LCD HDTV.
4. Turn on the power to the LCD HDTV and VCR or Video Camera.
5. Select AV1 using the INPUT button on the remote or side of the LCD HDTV, or directly by pressing the AV button on the Remote Control.

Note: Refer to your VCR or Video Camera user manual for more information about the video output requirements of the product.



Connecting an external Receiver/Amp



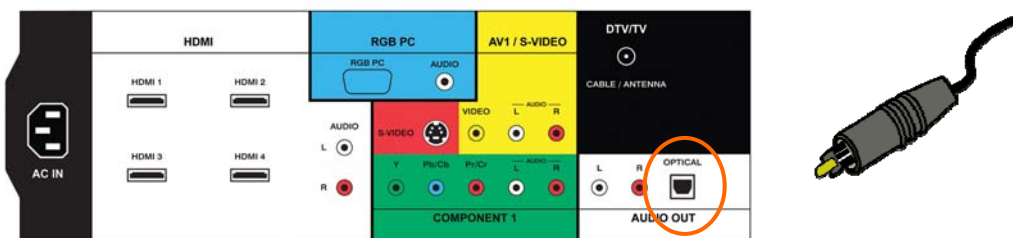
1. Turn off the power to the HDTV and Receiver/Amp.
2. Using an audio cable (white and red connectors), connect the cable to the audio input connectors on the Receiver/Amp and connect the other end to the ANALOG OUT (white area) audio connectors at the rear of the LCD HDTV.
3. Turn on the power to the HDTV and Receiver/Amp.
4. Then press the **MENU** button on the remote control to bring up the On-Screen Display (OSD) menu.
5. Press **▼** button on the remote control to select the Audio menu.
6. Press **OK** on the remote control to enter the Audio sub-menu. Press the **▼** button to highlight SPEAKERS.
7. Press **▶** select Off so that the sound from the TV will now be routed through your Receiver/Amp system.



Note:

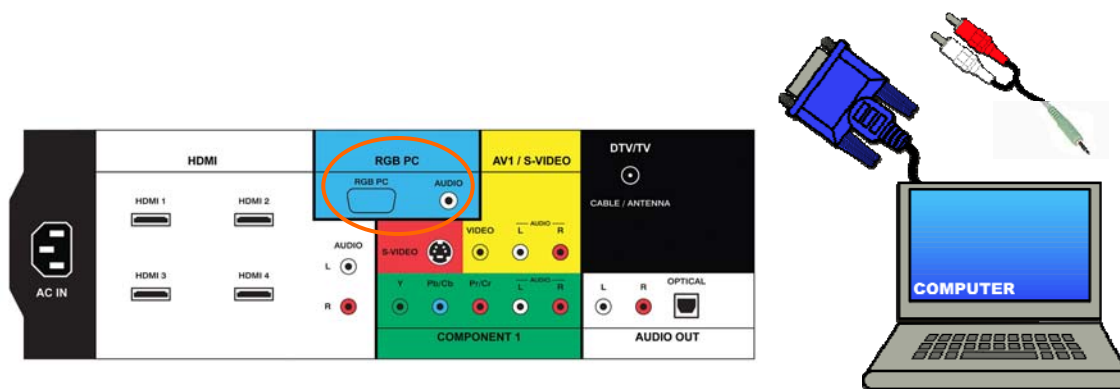
- Refer to your Receiver/Amp user manual to select the corresponding audio input.
- The audio output is not amplified and cannot be connected directly to external speakers.

Optical Output of Audio received with HD Programs



If your sound system has a SPDIF (optical) digital audio input you can connect it to the optical DIGITAL AUDIO OUT (white area) at the rear of the TV. This is active when receiving audio with the programs being viewed no matter what input is being used.





Connecting a PC (Computer)

1. Turn off the power to the LCD HDTV and PC Computer.
2. Connect a 15-pin D-Sub RGB (VGA) cable to the RGB output of your pc computer and the other end to the RGB PC input (blue area) at the rear of the LCD HDTV.
3. Connect the Audio Out on your pc computer to the RGB PC Audio input (blue area) at the rear of the LCD HDTV.
4. Turn on the power to the LCD HDTV and PC Computer.
5. Select RGB using the INPUT button on the remote or side of the LCD HDTV.

Note:

- For a better picture quality when connecting a pc computer through RGB PC, set your pc computer timing mode to VESA 1366x768 at 60Hz. For the best picture quality, please refer to the pc or graphic card's user guide to find out if it is capable of an output of 1920x1080 at 60Hz resolution when using the parameters and values given to you on Section 2.7.2 of this User's Manual by way of VESA Reduce Blanking timing.
- Refer to your pc computer user manual for more information about the video output requirements of the product.
- A RGB (VGA) cable and stereo mini jack cable are not included and can be purchased at an electronics store.



Preset PC Resolutions

If connecting to a PC through the RGB PC input, set the TV timing mode to VESA 1920x1080 at 60Hz for better picture quality (refer to the graphic card's user guide for questions on how to set this timing mode). Please see the table below for the factory preset resolutions. Also see chart in Section 2.7.2, for the best resolution that can be obtained through RGB PC input when video card supports 1920x1080 resolution.

Mode No.	Resolution	Refresh (Hz)	H.Freq (kHz)	V.Freq (Hz)	H.Sync	V.Sync	Pixel Freq (MHz)
1	640x480	60	31.46	59.94	N	N	25.17
2	640x480	75	37.50	75.00	N	N	31.50
3	*720x400	70	31.46	70.08	N	P	28.32
4	800x600	60	37.87	60.31	P	P	40.00
5	800x600	72	48.07	72.18	P	P	50.00
6	800X600	75	46.87	75	P	P	49.50
7	1024x768	60	48.36	60	N	N	65.00
8	1024x768	70	56.47	70.06	N	N	75.00
9	1024x768	75	60.02	75.03	P	P	78.75
10	**1920x1080	60	66.65	60.00	P	P	136.50

NOTES: N = Negative, P = Positive, * = In DOS Mode only, ** = Primary Mode.

Resolution (1920x1080) through RGB (15-Pin VGA) Input

If your PC supports VESA Reduce Blanking timing via the VGA card drive program (usually offered by the VGA Card Manufacturer), your TV set is equipped to have the 1920X1080 resolution display through this connection using the following timing 136.5MHz. The following parameters are often the values required by the software or programs to set up the display:

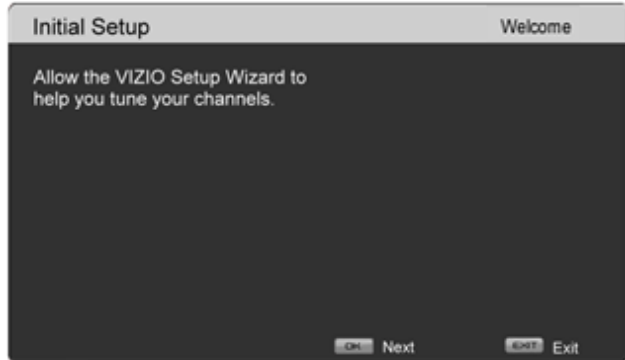
Parameters	Horizontal Values (Pixels)	Vertical Values (Lines)
Address	1920	1080
Front Porch	32	1
Sync Width	32	3
Back Porch	64	27
Total	2048	1111
Frequency	66.7 kHz	60 Hz
Sync Polarity	P	P
Pixel Rate (MHz)	136.5	
Refresh Rate (Hz)	60	



Chapter 3 Setting Up to Watch Television

Basic LCD HDTV Start Up

- 1. Connecting the Power Cable**
Connect the power cord to the power cord connector on the back of the HDTV, and then plug the power cord into an AC wall socket.
- 2. Connect Audio and Video Cables to the HDTV**
(see pages 18 – 29 for detailed steps)
- 3. Turning Power On**
Once the components are connected, press the Power ON button on the side of the HDTV, or press the Power button on the remote control.



- 4. Initial Setup**
After powering on the TV, the Initial Setup screen will come up. Please press the **OK** button on the remote control.

The Language choice screen will be displayed. The default English option is highlighted. If you wish to change the OSD language to Español or Français, Press the ▼ button on the remote control to select the desired language.



Press the **OK** button on the remote to go to the next screen. The Mode Setting screen will be displayed. Press the **OK** button to accept the Home Mode or press the ▼ button to select the Retail Mode.

Note: Retail Mode uses the “Vivid” picture setting.

This enhances the TV picture while on display under high ambient lighting. The Home Mode uses the “Custom” picture setting, which is the more appropriate choice for the average home environment.



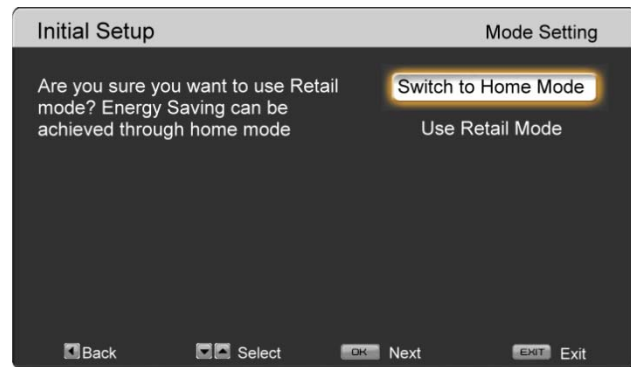
Note: References to the **OK** button on the remote in the instructions refer to the button at the center of the Navigation wheel.



If Retail Mode is selected, a second Mode Setting screen will be displayed, advising you of energy saving potential.

Press the **OK** button on the remote control to switch to Home Mode, or press the **▼** button on the remote control to continue to use the Retail Mode, and then press the **OK** button to continue.

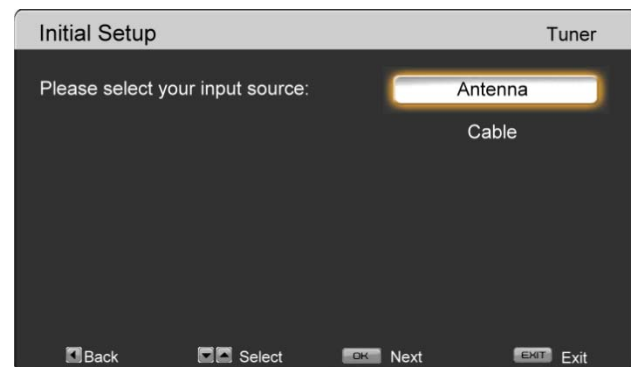
Note: You can change the Picture Mode later as desired using the Picture Menu.



At this point, if a Set-Top Box from your Cable or Satellite Service Company or equipment other than a direct connection of an Antenna or Cable to the DTV input is used, please press the **EXIT** key on the remote control and skip to Step 5. Otherwise, continue to the next step.

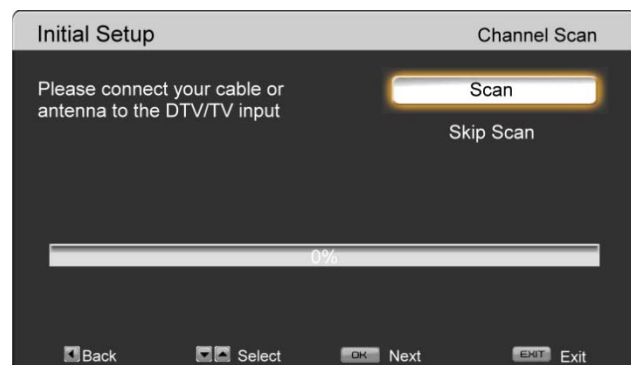
The Tuner screen will be displayed. The default choice is Antenna. If you are using Cable (No Box, cable connected directly to the DTV input – see P22), press the **▼** button on the remote control to highlight CABLE.

Press the **OK** button on the remote to go to the next screen.



- a. The Channel Scan screen will be displayed; default choice is Scan. Press the **OK** button on the remote control to commence the search for available channels to be stored into memory.

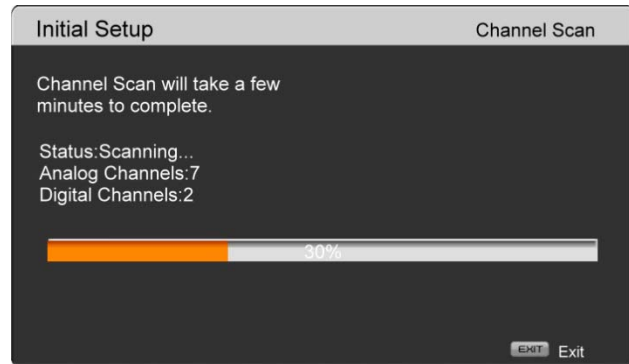
If you do not want to scan for channels at this time, press the **▼** button on the remote to highlight Skip Scan and then press the **OK** button.



Note: If you select Skip Scan, you can scan channels at a later time by selecting TV input, then go to the Menu and select the Auto Search option in the **TV** menu.



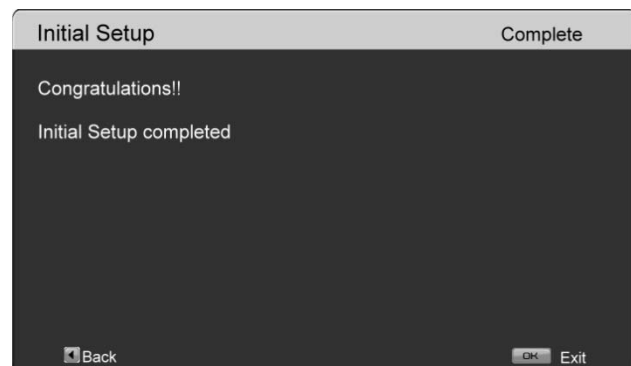
- b. When **Scan** is selected, the screen will now change to show the progress of the search for Analog (NTSC) and Digital (ATSC) channels.



Note: DTV digital broadcast is not available in all areas. Refer to www.antennaweb.org to get information about availability in your area, type of antenna and in which direction to point your antenna. The channel availability through cable depends upon which channels your cable operator supplies in Clear QAM. Consult your cable operator for more information.

- c. When finished, the Complete screen will be displayed to inform you that the HDTV has completed the Initial Setup.

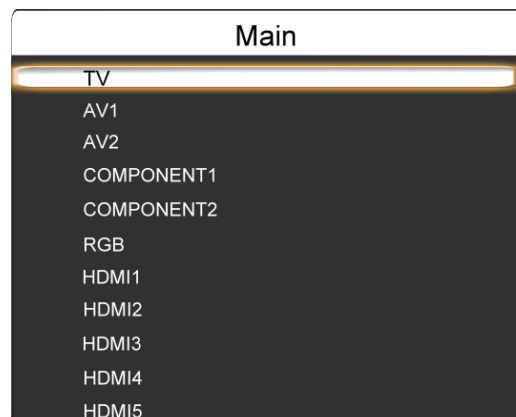
Press the **OK** button on the remote control to exit and begin watching TV programming



5. Select Input Source

Select the Input Source for the HDTV by performing one of the following actions:

- a. Press the INPUT button on the side of the TV repeatedly to step through the Input list on the screen, stopping at the desired input.
- b. Press the INPUT button on remote repeatedly to step through the Input list on the screen, stopping at the desired input



Pressing this button will cycle you through the following options:

TV
AV1/S-VIDEO, AV2, Component 1, Component 2, RGB,
HDMI1, HDMI2, HDMI3, HDMI4 and HDMI5.

- c. Press the INPUT button on remote, then press the ▼ or ▲ buttons to step through the Input list on the screen, stopping at the desired input, then press the **OK** button to select the choice.
- d. Press one of the four direct input buttons to cycle through the following options:



TV



AV1/S-VIDEO, AV2,



Component 1, Component 2



HDMI1, HDMI2, HDMI3, HDMI4, HDMI5.

Please refer to the following procedures to display programs from a signal source (External Set Top Box, VCR, Cable Box or Satellite Receiver), using different inputs of the HDTV.

- a. Select the correct input connection. RF (DTV/TV) connector, Composite (Yellow, Red and White) connectors, Component (Red, Green, Blue plus Red and White) connectors, HDMI connectors or Separate-Video (S-Video) plus Red and White connectors (if applicable). Make the physical connection or hook up. Please refer to pages 19-29 for assistance.

If you have HD Cable or Satellite service, you must use the HDMI (best) or Component (better) connection in order to display HD. Please refer to pages 19-21 for details.

Note: Composite (AV) and S-Video Cables can only be used for SD (480i) content.

- b. Turn on your Cable Box, VCR, External Set Top Box or Satellite Receiver and you will see a picture on your TV. If there is no picture, please verify the correct input has been selected on the TV.
- c. If the selected input is RF (DTV input), please verify the TV is tuned to either channel 3 or 4, matching the channel which has been selected on the back of the VCR, Cable Box or Satellite Receiver; please refer to the device User Manual for details. This type of configuration is most common with older SD (480i) receivers.

Note: When connected via any type of input OTHER than RF, the TV will display the station or program selected by the Cable Box, VCR, External Set Top Box or Satellite Receiver. Channels cannot be selected with CH+/CH- buttons or direct channel input from the TV remote. This is controlled by the equipment sending the signal, unless the remote has been programmed to control that device (see page 81). **If the service being used is the one which setup includes a box with two different outputs for two different (distant) rooms, then scanning channels would help you to find the signal. Be aware that the channel to be selected varies from provider to provider; meaning that, you may have to call your provider company so they could provide you the specific channel when using high definition made TV sets. Some examples of these channels are: 105, 106, 115 and 116.**



6. Fine Tuning your TV set for Home Use.

After completing Procedure 4 or Procedure 5, please follow the steps below to optimize your TV display:

- Press the **MENU** key to bring up the OSD display. The **Picture** option will be highlighted. Press the **OK** button to select.
- press the **▼** or **▲** button to highlight **Advanced Video** and press the **OK** button to select
- press the **▼** or **▲** button to highlight **Color Temperature**. Use the **▶** button to change setting to **Normal**.
- Press the **MENU** key 3 times to return to the **Picture** menu.
- Press either **◀** or **▶** button to change the **Picture Mode** option to **Standard**.
- Press the **EXIT** key to exit the OSD.



Note: If Procedure 4 had been performed, please verify the correct program times are shown when pressing the Guide key:

- Press the **Menu** key, this will bring up the picture mode menu.
- Press the **▼** button to scroll to the **TV** option. Press the **OK** button to select.
- press the **▼** or **▲** button to highlight Time Zone.
- Press either **◀** or **▶** button to choose the proper Time Zone in your area.
- Press the **▼** button to scroll down to the **Daylight Saving** option. Press either **◀** or **▶** button to choose **On** or **Off**.
- Press the **EXIT** key once to return to your program when completed.



Watching a TV Program

Before you start watching TV, please verify that all cables or antenna connections are secure, and the power cord is plugged into a correctly grounded electrical outlet or surge protector.

1. Press the power button on the remote or on the side of the HDTV. The VIZIO logo on the front will change from orange to white.
2. There are 3 options for selecting your programming (refer to page 35 for more information):
 - a. If you are using an antenna or cable connected through the DTV/TV CABLE/ANTENNA input, you can select TV directly by pressing the TV button on the remote, or by pressing the INPUT button on the remote or on the side of the HDTV.
 - b. If you are watching broadcasts through a cable or satellite set-top box connected by an HDMI cable, select HDMI directly by pressing the HDMI button on the remote, or by pressing the INPUT button on the remote or on the side of the HDTV.
 - c. If you are watching broadcasts through a cable or satellite set-top box connected by a Component (YPbPr) cable, select Component directly by pressing the Component button on the remote, or by pressing the INPUT button on the remote or on the side of the HDTV.

Note: You should be able to see a picture. If you do not, make sure that all of the HDTV connections are secure and you have selected the correct video input source.

3. When using option 2a, press the Channel buttons on the remote or the CH+ / CH- buttons on the side of the HDTV to change the channel. **Note:** The Channel buttons, on the side of the HDTV and on the remote, control will not work if you are watching a program using HDMI, Component and AV inputs.



Adjusting Basic HDTV Settings



Volume

To adjust the volume, press and hold the VOL+ or VOL- button on the side of the LCD HDTV or remote control until the desired level is reached.

TV Channels

To step up or down through the available TV channels, press the CH+ or CH- button on the side of the HDTV or remote control once for the next or previous channel, or hold it depressed until the desired channel is reached.

Note: Channel up and down will only operate in DTV and TV modes. Pressing CH+ or CH- while in any other input will go to the TV mode, at the last channel number viewed in that mode.

Wide (Picture Aspect)

Using this feature, you can watch video content in different size modes on the HDTV. **Note:** The available modes differ based on the input mode in use.

Repeatedly pressing the **WIDE** button on the remote will cycle through the available modes. To set the mode using the OSD:

- Press the **MENU** button on the remote control to bring up the OSD screen.
- Press the ▼ button and scroll down to **Setup**.
- Press the **OK** button to select this option.
- Press the ▼ button and scroll down to **Wide**.
- Press either the ◀ or ▶ button to select among the modes.

For more information see Viewing Modes, on page 79.



Program Information

When using the DTV input, the On Screen Display will function as follows:

When a channel is selected, an information header is shown over the picture for a few seconds.



When you press the INFO or GUIDE button on the remote, the information header and a short summary of the program content, when available from the broadcaster, is displayed.



Zanku taps the services of the insidious Alchemist (John Kassir) to weaken the nerves of the sisters in a poly to gain control of the Book of Shandows. Meanwhile, Darryl struggles to keep Insp. Sheridan (Jenya Lano) in the dark about the Charmed Ones. Zan

This information consists of the channel number and name, the format in which the program is broadcast (480i SD, 480P SD, 720P HD, 1080i HD), audio channel 1/2 or 2/2 (omitted if alternate channel is not broadcast), language, program title, program start and end time, program rating and if CC is available.

Press the INFO or GUIDE button one more time and this display will disappear.



Chapter 4 Advanced Adjustment

Using the On Screen Display (OSD)

The On Screen Display (OSD) allows you to navigate to and adjust all settings. The TV will save changes made to the settings, even after the TV is turned off.

The OSD consists of several menu options: Picture Adjust, Audio Adjust, TV Tuner Setup and Global Setup. The main menu options vary depending on the selected input source.

Note: Some of the main menu options may have additional submenus, such as the TV Rating submenu for Parental Controls.

Press the **MENU** button on the remote control or the side of the TV and the Picture menu will be shown on the screen.

Press the **▼** or **▲** button on the remote control or the **CH +** or **CH –** button on the side of the HDTV to select one of the menu options:

Once the menu option is displayed, press the **◀** or **▶** button on the remote control or the **VOL +** or **VOL –** button on the side of the TV to change the global settings of the Picture or Audio modes, or to enter the sub-menus of the TV or Setup modes.

Picture (Picture Adjust)

Audio Mode (Audio Adjust)

TV (TV Tuner Setup)

Setup (Global Settings)



Once the menu option is displayed, press the **◀** or **▶** button on the remote control or the **VOL +** or **VOL –** button on the side of the TV to change the global settings of the Picture or Audio modes, or to enter the sub-menus of the TV or Setup modes

Press **OK** to enter the submenu for the selected mode for detailed adjustments and settings.

Press the **MENU** key once to return to the previous screen if in a submenu or press the **EXIT** key to return to your program after the desired adjustment has been completed.



Picture Adjustment

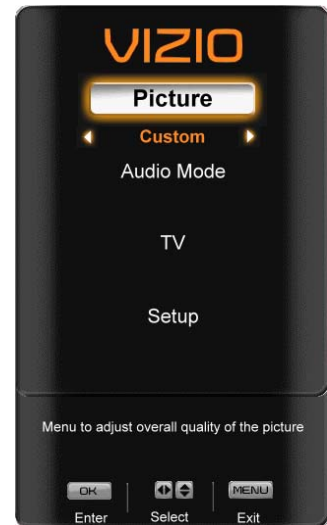
Picture Mode

When the **MENU** button is pressed, the On Screen Display (OSD) appears. PICTURE adjustment is the default.

Use the ◀ or ▶ buttons to choose from Custom, Standard, Movie, Game, Vivid, Football, Golf, Basketball and Baseball. These global settings use different values for Backlight, Brightness, Sharpness, Color Enhancement, and Adaptive Luma to represent presets most appropriate to viewing those type of programs.

Press the **OK** button to enter the Picture Mode submenu.

Picture adjustments are available within the submenu as described below, allowing you to set them to your personal preferences.



Backlight

Press the ▼ button to highlight the Backlight selection.

Use the ◀ or ▶ button to adjust the level.

The Backlight level does not affect the Brightness (black level) or Contrast (white level) of the picture, it adjusts the lamp current and this affects the overall brilliance of the picture.

Once the adjustments are completed press the **EXIT** button to exit the OSD completely.

Note: If the OSD shows "Not Available" when attempting to adjust Backlight level, please scroll to Advanced Video, then select DCR option then press the ▶ button to select Off. Backlight Adjustment will now be available.

(Please refer to Page 45 for details).



Brightness

Press the ▼ button to highlight the Brightness selection.

Use the ◀ or ▶ button to adjust the level.

The Brightness adjusts the black level in the picture. If the brightness is too low you will not be able to see the detail in darker parts of the picture and if the brightness is too high the picture will look washed out.

Once the adjustments are completed press the **EXIT** button to exit the OSD completely.



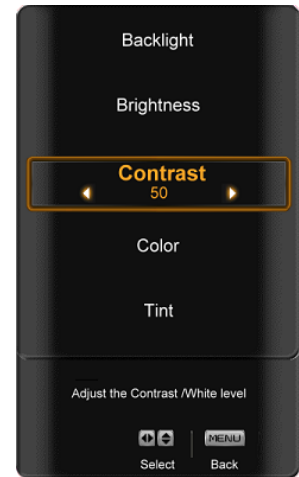
Contrast

Press the ▼ button to highlight the Contrast selection.

Use the ◀ or ▶ button to adjust the level.

The Contrast adjusts the white level in the picture. If the contrast is too low the picture will look washed out and if the contrast is too high you will not be able to see any detail in the bright parts of a picture.

Once the adjustments are completed press the **EXIT** button to exit the OSD completely.



Color

Press the ▼ button to highlight the Color selection.

Use the ◀ or ▶ button to adjust the level.

The Color adjusts the amount of color in the picture.

Once the adjustments are completed press the **EXIT** button to exit the OSD completely.



Tint

Press the ▼ button to highlight the Tint selection.

Use the ◀ or ▶ button to adjust the hue.

The Tint adjusts the hue of the picture. The easiest way to set tint is to look at flesh tones and adjust for a realistic appearance. In most cases, the default middle position is correct. If people's faces look too orange try reducing the level of color first as the case of this is often too much color.

Once the adjustments are completed press the **EXIT** button to exit the OSD completely.



Sharpness

Press the ▼ button to highlight the Sharpness selection.

Use the ◀ or ▶ button to adjust the level.

The Sharpness adjustment adjusts the sharpness of the edges of elements in the picture. It does not produce detail that otherwise does not exist. This adjustment is helpful when viewing SD (Standard Definition) sources, as it provides only contour peaking, and should be at a low setting with HD sources

Once the adjustments are completed press the **EXIT** button to exit the OSD completely.



Advanced Video Features

Press the ▼ button to highlight the option for Advanced Video. Press the ▶ button or the **OK** button to select. The submenu will be displayed showing the advanced functions available for fine tuning of the picture.

Noise Reduction

Press the ▼ button to highlight Noise Reduction Use this feature to diminish picture artifacts caused by the digitizing of image motion content that may be present in the picture.

Press the ◀ or ▶ button to choose from the Off, Low, Medium or Strong setting.

Once the adjustments are completed press the **EXIT** button to exit the OSD completely.



Color Enhancement

Press the ▼ button to highlight Color Enhancement. Use this feature to change the picture reproduction performance by reducing oversaturation of certain colors and improving fleshtones.

Press the ◀ or ▶ button to choose from Off, Normal, Rich Color, Green/Flesh and Green/Blue.

Once the adjustments are completed press the **EXIT** button to exit the OSD completely.

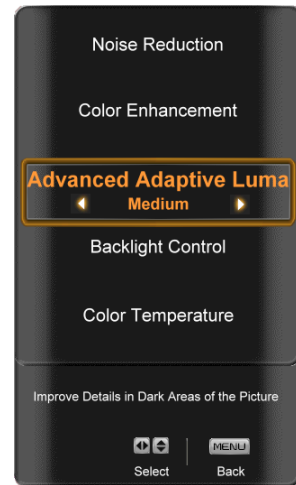


Advanced Adaptive Luma

Press the ▼ button to highlight Advanced Adaptive Luma. Large areas of brightness in the picture will result in a higher Average Picture Level (APL) and the overall picture will look too light. This feature will lower the APL to counteract this effect.

Press the ◀ or ▶ button to choose from the Off, Low, Medium, Strong or Extend setting.

Once the adjustments are completed press the **EXIT** button to exit the OSD completely.



Backlight Control

Press the ▼ button to highlight Backlight Control. Mega DCR (Dynamic Contrast Ratio) Improves the black level performance and increases Contrast Ratio. OPC (Optimum Power Control) Reduces power consumption while maintaining the same picture brightness.

Press the ◀ or ▶ button to set to Off, Mega DCR or OPC.

Once the adjustments are completed press the **EXIT** button to exit the OSD completely.

Color Temperature

Press the ▼ button to highlight the Color Temperature option.

Color Temperature is the “warmness” or “coolness” of the white areas of the picture.

Press the ◀ or ▶ button if you want to select from the preset options described below.

Normal: The setting for Television Broadcasting.

Custom: Allows the user to establish a preset calibrated for a white point to suit individual preference.

Cool: Biases the white point towards a display bluer than Computer setting.

Computer: Sets the white point at a value of 9300K, which is the established setting for a PC display.

Each preset may also be adjusted for a customized setting.

Press the ▼ button to highlight a primary color: Red, Green or Blue.

Press the ◀ or ▶ button to adjust the color.

Repeat the procedure to adjust the other colors if desired.

Once the adjustments are completed press the **EXIT** button to exit the OSD completely.



Smooth Motion™ Effect

The Smooth Motion™ Effect option activates Motion Estimation/Motion Compensation (ME/MC), which suppresses motion judder. Judder is often observed as a “stuttering” of the image when the camera pans across a scene, or there is horizontal motion in the scene.

Film is typically shot at 24 frames per second. Any time that film is displayed at a frame rate that is not an even multiple of 24, judder will result. For presentation on a TV, film goes through a process and comes out at frame-rates of 30 or 60, which are those used in TV.

Press the ▼ button to highlight the Smooth Motion option.

Use the ► button to select level of compensation from Low, Middle, High or Off.



Real Cinema Mode

The Real Cinema Mode option allows selection of the type of compensation used for the Smooth Motion™ Effect option.

Press the ▼ button to highlight the Real Cinema Mode option.

Use the ◀ or ▶ button to select from Precision, Smooth and Off.

Precision Option

This option provides a sharper image of the scene while suppressing the halo effect sometimes observed with ME/MC processing.

Smooth Option

This option eliminates the effect of juddering during a fast action scenes and sports programs.

Once the adjustments are completed press the **EXIT** button to exit the OSD completely.



Smooth Motion Demo

This option splits the screen in half, displaying the picture without Smooth Motion processing on the left half of the screen, and with Smooth Motion processing on the right half of the screen. This allows you to determine the best results for you settings. Press the **MENU** key to exit the demo.

Smooth Motion Demo Mode, Press MENU to exit.

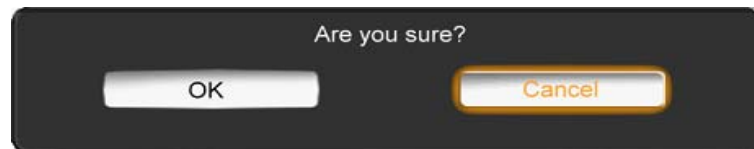


Reset Picture Mode

Press the ▼ button to highlight the Reset Picture Mode option

Press the ► or **OK** button..

A confirmation OSD will be displayed.



Press either ◀ to accept or ▶ to cancel.

Press **OK** to confirm your choice.

Once the adjustments are completed press the **EXIT** button to exit the OSD completely.

Note: Only settings under the Picture adjustments will be reset.



Audio Adjustment

Audio Mode

Press the **MENU** button to display the On Screen Display (OSD).

Press the **▼** button to highlight the **Audio Mode** option.

Use the **◀** or **▶** button to choose from Flat, Rock, Pop, Classic or Jazz preset options.

Equalizer adjustments are available to fine-tune a preset to your personal preference.



Equalizer

With the **Audio Mode** OSD highlighted, press the **OK** button to enter the Equalizer option.

Press the **◀** or **▶** button to select **Flat** if it is not already selected.

The Equalizer OSD will be displayed with levels for different frequencies.

Press the **◀** or **▶** button to select the frequency to be adjusted.

The options are 120 Hz, 500Hz, 1.5 kHz, 5kHz and 10kHz.

Press the **▼** or **▲** button to adjust the selected frequency to your preference.

Values above 0 will boost the frequency and values below 0 will attenuate the frequency



Once the adjustments are completed, press the **MENU** button to return to the previous menu or the **EXIT** button to exit the OSD completely.

Note: The equalizer option is not available in the SRS TSHD surround mode.
or if the preset is not set to Flat.

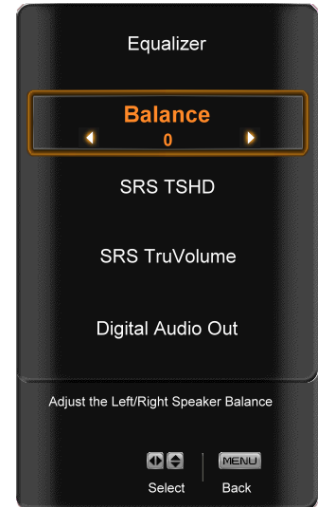


Balance

This option allows for compensation of one channel (Left or Right Audio) being higher or lower than the other in order to bring stereo effect back into balance.

Press the ▼ button to highlight the Balance selection.

Use the ◀ or ▶ button to adjust the left/right speaker balance.



Once the adjustments are completed, press the **EXIT** button to exit the OSD completely.

SRS TSHD (SRS TruSurround HD™)

This option sets the SRS True Surround HD surround sound process.

Press the ▼ button to highlight the **SRS TSHD** option.

Press the ◀ or ▶ button to turn SRS TSHD On or Off.

SRS TruVolume™

When the programming switches to a commercial or when changing from channel to channel, volume fluctuations occur. This SRS TruVolume™ provides the listener with a comfortable and consistent volume level.

This option sets the SRS TruVolume™ option.

Press the ▼ button to highlight the **SRS TruVolume** option.

Press the ◀ or ▶ button to turn SRS TruVolume On or Off.

Digital Audio Out

This option allows selection of the type of processing for the SPDIF (Optical connector) when used with a Receiver/Amplifier/Home Theatre system.

Press the ▼ button to highlight the Digital Audio Out selection.

Press the ◀ or ▶ button to select from the options Off, Dolby Digital and PCM.



Once the adjustments are completed, press the **EXIT** button to exit the OSD completely.



Speakers

Press the ▼ button to highlight the Speakers option.

Press either ◀ or ▶ button to turn the internal speakers On or Off.

This is desirable when listening to the audio through a Receiver/Amplifier/Home Theatre system.

Once the adjustments are completed, press the **EXIT** button to exit the OSD completely.



Analog Audio Out

This option sets the Volume Control properties when using the RCA (White and Red) connectors as audio line out to connect a Receiver/Amplifier/Home Theatre system.

Press the ▼ button to highlight the Analog Audio Out selection.

Press either ◀ or ▶ button to set the audio out to Fixed or Variable. When set to variable, volume from the external speakers will change according to the volume setting on the TV. When set to fixed, the volume can only be changed by the settings on the external Receiver/Amplifier/Home Theatre system.

Once the adjustments are completed press the **EXIT** button to exit the OSD completely.

Lip Sync

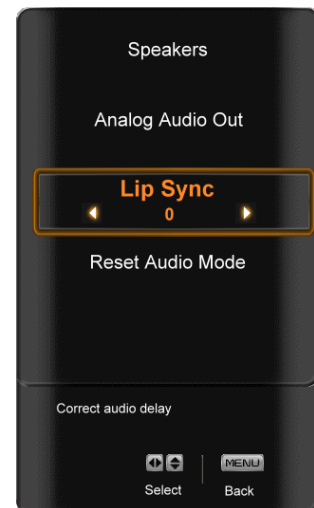
Due to the nature of Digital Signal Processing, the broadcast video may sometimes be out of synchronization with the audio. The Lip Sync option will compensate for the variables of signal transmission by adjusting the audio of the program being viewed so that it matches the movement of the lips of someone talking on the screen. This feature can be applied to all inputs. To use this feature, follow the steps below.

Press the **MENU** key to bring up the OSD.

Press the ▼ button to highlight Lip Sync.

Press either ◀ or ▶ button to match the sound to the lip movements.

Press the **MENU** key to return to the previous menu or the **EXIT** key to exit the OSD completely.



Reset Audio Mode

Press the ▼ button to highlight the Reset Picture Mode option

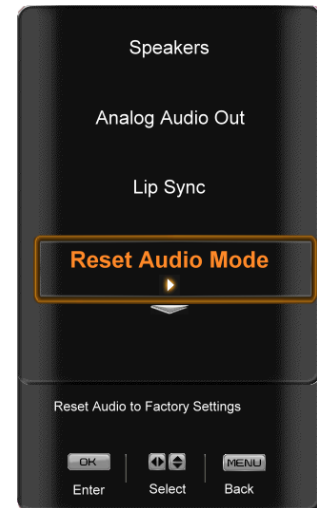
Press the ► or **OK** button..

A confirmation OSD will be displayed.



Press either ◀ to accept or ▶ to cancel.

Press **OK** to confirm your choice.



Once the adjustments are completed, press the **EXIT** button to exit the OSD completely.

Note: Only settings under the Audio adjustments will be reset.



DTV / TV Tuner Setup

If Initial Setup was cancelled when you first used your HDTV, or setup has changed (such as switching from Antenna to Cable), channels can be scanned using the TV TUNER SETUP menu.

Setup Wizard

With TV selected as the input:

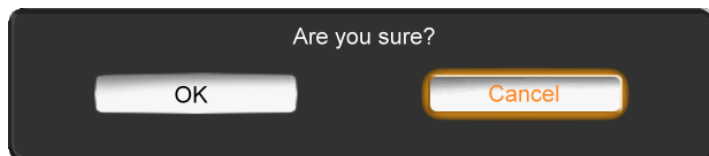
Press the **MENU** button to bring up the On Screen Display (OSD).

Press the **▼** button to highlight the Setup option.

Press OK to enter the DTV/TV Setup sub-menu.

Press the **▼** button to highlight the System Reset option.

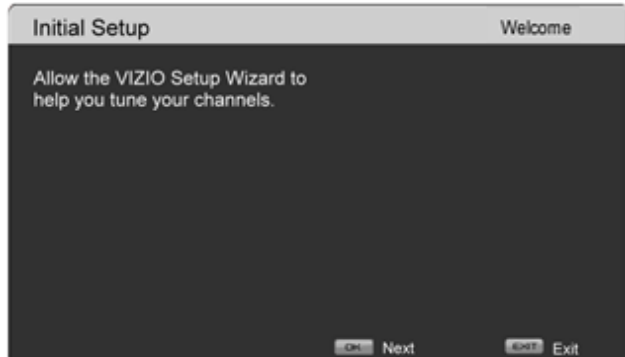
Press OK to enter the System Reset sub-menu. The Setup Wizard option is highlighted. Press the **▶** button to activate.



Press either **◀** to accept or **▶** to cancel.

Press **OK** to confirm your choice

The Initial Setup screen will come up.
Press the **OK** button on the remote control.



The Language choice screen will be displayed. The default English option is highlighted. If you wish to change the OSD language to Español or Français, Press the **▼** button on the remote control to select the desired language.



Press the **OK** button on the remote to go to the next screen. The Mode Setting screen will be displayed. Press the **OK** button to accept the Home Mode or press the **▼** button to select the Retail Mode.

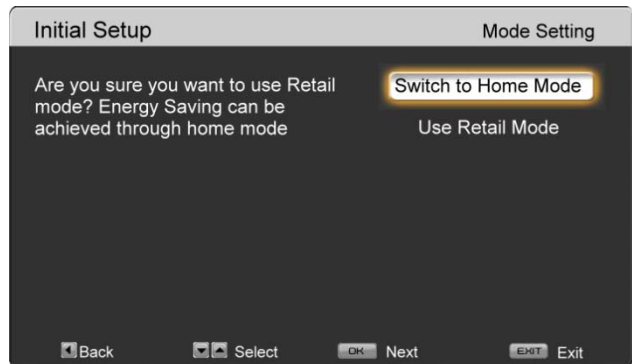
Note: Retail Mode uses the “Vivid” picture setting. This enhances the TV picture while on display under high ambient lighting. The Home Mode uses the “Custom” picture setting, which is the more appropriate choice for the average home environment.



If Retail Mode is selected, a second Mode Setting screen will be displayed, advising you of energy saving potential.

Press the **OK** button on the remote control to switch to Home Mode, or press the **▼** button on the remote control to continue to use the Retail Mode, then press the **OK** button to continue..

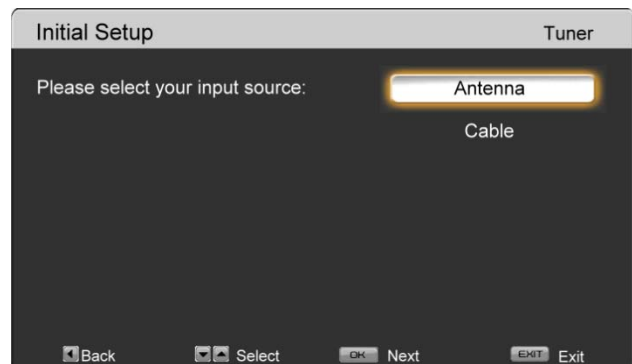
Note: You can change the Picture Mode later as desired using the Picture Menu.



At this point, if a Set-Top Box from your Cable or Satellite Service Company or equipment other than a direct connection of an Antenna or Cable to the DTV input is used, please press the **EXIT** key on the remote control and skip to Step 5. Otherwise, continue to the next step.

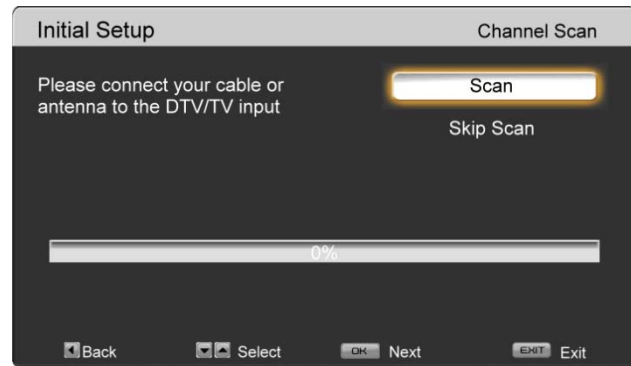
The Tuner screen will be displayed. The default choice is Antenna. If you are using Cable (No Box, cable connected directly to the DTV input – see P22), press the **▼** button on the remote control to highlight CABLE.

Press the **OK** button on the remote to go to the next screen.



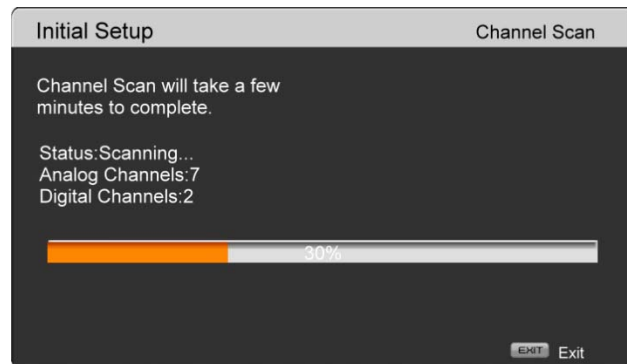
The Channel Scan screen will be displayed; default choice is Scan. Press the **OK** button on the remote control to commence the search for available channels to be stored into memory.

If you do not want to scan for channels at this time, press the **▼** button on the remote to highlight Skip Scan and then press the **OK** button.



Note: If you select Skip Scan, you can scan channels at a later time by selecting TV input, then go to the Menu and select the Auto Search option in the **TV** menu.

When **Scan** is selected, the screen will now change to show the progress of the search for Analog (NTSC) and Digital (ATSC) channels.



Note: DTV digital broadcast is not available in all areas. Refer to www.antennaweb.org to get information about availability in your area, type of antenna and in which direction to point your antenna. The channel availability through cable depends upon which channels your cable operator supplies in Clear QAM. Consult your cable operator for more information.



Tuner Mode

With TV selected as the input:

Press the **MENU** button to bring up the On Screen Display (OSD).

Press the ▼ button to highlight the **Tuner Mode** option.

Press the ◀ or ▶ button to choose Cable or Air (Antenna) depending upon which type you have connected to the DTV / TV Input.

Note: Digital Cable requires a box, which should be connected to either HDMI or Component input for highest quality. Please refer to pages 19-21 for more information.



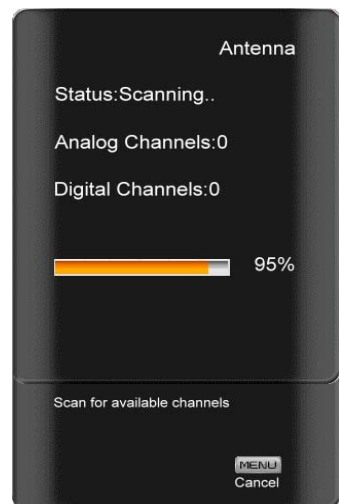
Auto Search

Press the ▼ button to highlight the Auto Search selection.

Press the ▶ button to Auto Search for the available TV channels.

The TV will automatically search for analog and digital channels.

Once the adjustments are completed, press the **EXIT** button to exit the OSD completely.



Partial Channel Search

If channels are missing after the auto search process, a partial channel search can be performed within a specified channel range.

Press the **▼** button to highlight the Partial Channel Search option.

Press the **▶** button to enter the submenu.

Press the **▶** button to select scan mode to look for Analog, Digital, or both Analog/Digital channels.

Press the **▼** button to highlight the “From Channel” option. Press the **◀** or **▶** buttons to select the lower channel number of the search range.

Press the **▼** button to highlight the “To Channel” option. Press the **◀** or **▶** buttons to select the upper channel number of the search range.

Press **OK** to channel search.

Press the **MENU** key to return to the previous menu or the **EXIT** key to exit the OSD completely.



Skip Channel

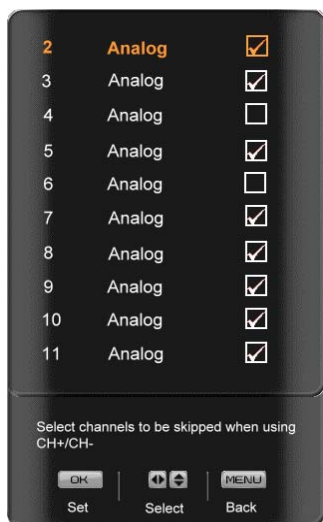
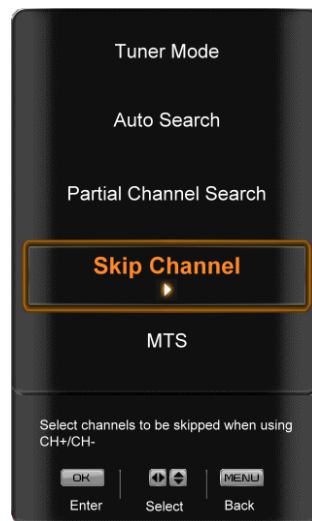
After the TV has stored all of the available channels in memory, channels may be removed so that when selecting channels using **CH+** or **CH-** those channels will be skipped over. Select the channel you wish to remove by pressing the **MENU** button to bring up the OSD.

Press the **▼** button to highlight SKIP CHANNEL.

Press the **▶** button to enter the skip channel sub-menu. Press the **▼** or **▲** button to highlight a channel.

Press the **OK** button to place a checkmark (skip) or to remove the checkmark (not skip). Repeat the above step for additional channels.

A skipped channel may still be selected using the number buttons on the remote control.



Press the **▶** button to skip ahead one page.

Press the **◀** button to skip back one page.

Press the **MENU** key to return to the previous menu or the **EXIT** key to exit the OSD completely



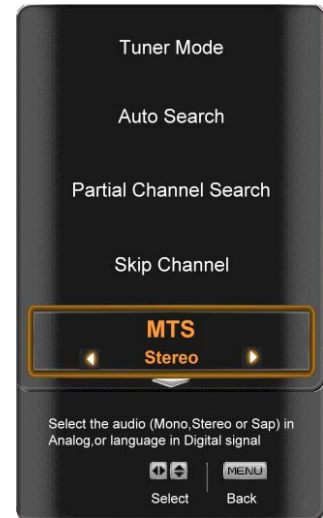
MTS (Multichannel Television Sound)

This option allows the selection of a Second Audio Program, which may contain commentary or a different language, such as Spanish.

Press the ▼ button to highlight the **MTS** option.

Press either ◀ or ▶ button to select from the options.

Once the adjustments are completed, press the **EXIT** button to exit the OSD completely.



Time Zone

This option sets the Time Zone for your region so the correct program times are shown when using the GUIDE function.

Press the ▼ button to highlight the Time Zone selection.

Press the ◀ or ▶ button to select the time zone where the TV is located.

Once the adjustments are completed, press the **EXIT** button to exit the OSD completely.



Daylight Saving

This option sets Daylight Saving so that in conjunction with the Time Zone for your region, the correct program times are shown when using the GUIDE function.

Press the ▼ button to highlight the Daylight Saving option.

Press the ▶ button to select On or Off.

Once the adjustments are completed press the **EXIT** button to exit the OSD completely.



DTV / TV Input Setup

Language

Press the **MENU** button to bring up the On Screen Display (OSD).

Press the **▼** button to highlight the **Setup** option.

Press the **OK** or **▶** button to enter the Setup sub-menu.

Press the **▼** button to highlight the **Language** option.

The default is English Press the **◀** or **▶** button to select Español or Français.



Once the adjustments are completed, press the **MENU** button to return to the previous menu or the **EXIT** button to exit the OSD completely.

PIP (Picture-in-Picture)

This option sets the parameters for a second (sub) screen, allowing two sources to be viewed simultaneously.

Press the **MENU** button to bring up the On Screen Display (OSD).

Press the **▼** button to highlight the **Setup** option.

Press the **OK** button to enter the Setup sub-menu.

Note: When Rating Enable is set to On, PIP functions will be disabled. This is because PIP sources can contain blocked material, and cannot be enabled with the password. If PIP functions are desired, please set Rating Enable to Off. Please refer to page 68 for details.



PIP Mode

Press the **▼** button to highlight the PIP mode option.

Press the **◀** or **▶** button to select Off, PIP or POP (Picture-outside picture). In the PIP mode a smaller sub screen will be displayed within the main screen. For the POP mode the main screen and sub screen will be of equal size and be positioned side by side.

-OR-



Press the **A/PIP** button on the remote to select PIP (Picture-in-Picture), POP (Picture-on-Picture) and Off.



PIP Source

When PIP or POP is selected, Press the **▼** button to highlight the **PIP Source** option.

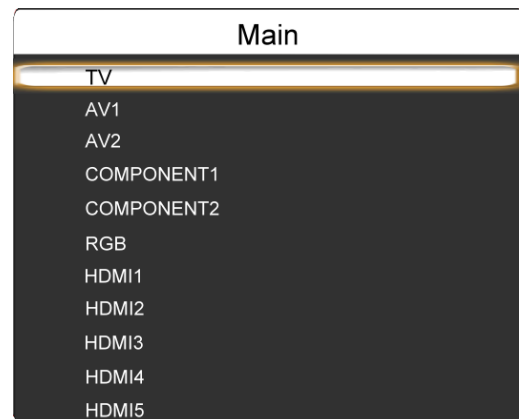
Press the **◀** or **▶** button to choose the input source for the sub screen.

The input sources available will vary according to which input is used for the main screen. Refer to the table below to match the inputs to your connected devices.

-OR-



Press the **C/P.INPUT** on the remote repeatedly to cycle through available PIP Inputs.



See below for detailed information regarding the PIP sources.

MAIN \ SUB	DTV	TV	AV1	AV2	Component 1	Component 2	HDMI1	HDMI2	HDMI3	HDMI4 HDMI5	RGB
DTV					✓	✓	✓	✓	✓	✓	✓
TV					✓	✓	✓	✓	✓	✓	✓
AV1					✓	✓	✓	✓	✓	✓	✓
AV2					✓	✓	✓	✓	✓	✓	✓
Component 1	✓	✓	✓	✓			✓	✓	✓	✓	
Component 2	✓	✓	✓	✓			✓	✓	✓	✓	
HDMI 1	✓	✓	✓	✓	✓	✓					✓
HDMI 2	✓	✓	✓	✓	✓	✓					✓
HDMI 3	✓	✓	✓	✓	✓	✓					✓
HDMI 4	✓	✓	✓	✓	✓	✓					✓
HDMI 5	✓	✓	✓	✓	✓	✓					✓
RGB	✓	✓	✓	✓			✓	✓	✓	✓	

“✓” – Indicates which inputs are available for PIP and POP modes.



PIP Position

When PIP is selected, Press the ▼ button to highlight the PIP **Position** option.

Press the ◀ or ▶ button to choose the position of the PIP screen within the main screen.

PIP Size

When PIP is selected, Press the ▼ button to highlight the PIP **Size** option.

Press the ◀ or ▶ button to choose Small, Medium or Large.

-OR-



Press the **B/P.SIZE** button on the remote to select PIP Size: Small, Medium or Large.

PIP Audio Source

When PIP or POP is selected, Press the ▼ button to highlight the PIP **Audio Source** option.

Press the ◀ or ▶ button to choose the audio source associated with the main screen or the sub screen.

-OR-



Press the **AUDIO/FF** button to switch the audio from the main screen to the sub-screen

Once the adjustments are completed, press the **EXIT** button to exit the OSD completely

PIP Swap



When PIP or POP is selected, the main picture program can be exchanged (swapped) with the program in the PIP sub-picture. To swap the main picture program with the PIP sub-picture program, press **SWAP/NEXT** on the remote control. Press SWAP again to return the program to the main picture.

PIP Channel



The PIP channel is independent of the main TV channel. To change the PIP channel, press the **P.CH** button on the remote control. Alternatively, you can change the PIP channel by pressing the CH+ or CH- button.



Sleep Timer

This option sets the elapsed time before the TV will power off automatically.

Press the **MENU** button to bring up the On Screen Display (OSD).

Press the **▼** button to highlight the **Setup** option.

Press the **OK** button to enter the Setup sub-menu.

Press the **▼** button to highlight the **Sleep Timer** option.

Press the **▶** button to set the timer to turn-off the TV in 30, 60, 90 or 120 minutes, or set to Off at any time to cancel the sleep timer.

Once the adjustments are completed, press the **EXIT** button to exit the OSD completely.



WIDE

The Wide option determines how the display fills the screen.

Please refer to Understanding Viewing Modes on page 80.

When in HDMI mode, the options are Wide, Zoom and Stretch.

When in PC (RGB) mode, the options are Normal and Wide.

When in AV or Component mode, the options are Normal, Wide, Zoom and Panoramic.

When in TV (SD) mode, the options are Normal, Wide, Zoom and Panoramic.

When in DTV Digital) mode, the options are Wide, Zoom and Stretch.

Press the **▼** button to highlight the **WIDE** option.



Press either **◀** or **▶** button to select from the options available under the current input as described previously.

-OR-

Press the **WIDE/RECORD** button on the remote to cycle through the available options.

Once the adjustments are completed, press the **EXIT** button to exit the OSD completely.



Input Naming

This feature allows you to apply custom labels the inputs matching the connected devices, which will make it easier for you to recognize. Examples are VCR, DVD, PS3, etc. You may use up to 8 characters in any combination of letters or numbers.

Press **▼** button to highlight the **Input Naming** option.

Press **▶** button to enter the sub-menu listing the different inputs.



- Press the **▼** button to highlight the input you wish to rename.
- Press the **OK** to select.
- Press **◀** or **▶** to go to the first space () within the brackets.
- Press either the **▲** or **▼** button to select either the letter or number.
- Press the **▶** button to go to the next space () and press either the **▲** or **▼** button to select the next letter or number.
- Repeat step **e** until the name for the selected input is complete.
- Press **OK** to accept the changes, or press the **EXIT** key to cancel the changes.
- Press the **MENU** key when finished to go to the previous sub-menu.



Repeat steps a through h to rename additional inputs.

Once the adjustments are completed, press the **EXIT** button to exit the OSD completely.



CC (Closed Caption)

These options set the Closed Captioning styles, which determine how the captioning will appear on screen.

Press the **MENU** button to bring up the On Screen Display (OSD).

Press the ▼ button to highlight the **Setup** option.

Press the ► button to enter the Setup sub-menu.

CC

This option sets the Closed Caption style when watching standard analog (NTSC) TV.

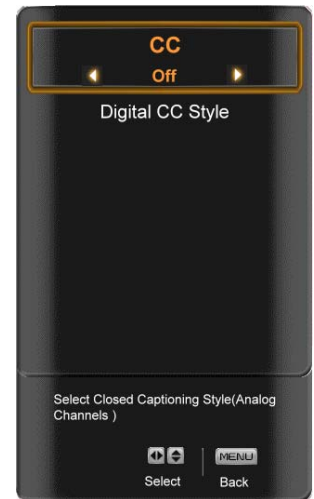
Press the ▼ button to highlight the CC option.

Press the ► button to select CC1, CC2, CC3 or CC4.

Once the adjustments are completed, press the **MENU** button to return to the previous menu or the **EXIT** button to exit the OSD completely.



You can also press the **CC/STOP** button on the remote repeatedly to cycle through the Closed Caption mode. The options are OFF, CC1, CC2, CC3, or CC4.



Note: Press the **INFO** button on the remote to display the channel information.

When the channel is a single number, e.g. 2, 7, 28 it is a Standard Analog channel.

Closed Caption for regular TV is usually CC1 or CC2.

When the channel has a dash “-“ and a second number, e.g. 2-1, 7-1, 28-1 it is a Digital channel.



Digital Closed Caption Style

This option sets the Closed Caption style when watching DTV.

Press the **MENU** button to bring up the On Screen Display (OSD).

Press the **▼** button to highlight the **Setup** option.

Press the **▶** button to enter the Setup sub-menu.

Press the **▼** button to highlight the **CC** option and Press the **▶** button to select the option.

Press the **▼** button to highlight the **Caption Style** option

Press either **◀** or **▶** button to toggle between the two options As Broadcaster or Custom.

When As Broadcaster is selected, the style will be applied as it is received from the broadcaster with the program, and cannot be altered by the viewer.

When Custom is selected, you may customize the way Closed Captioning will be displayed.

Font Size (size of lettering)

Press the **▼** button to highlight the **Font Size** option.

Press the **▶** button to select from the available sizes.

Font Color (letter color)

Press the **▼** button to highlight the **Font Color** option.

Press the **▶** button to select from the available colors.

Font Opacity (letter transparency) with more transparency, picture shows through the letters; with less transparency, lettering blocks the picture.

Press the **▼** button to highlight the **Font Opacity** option.

Press the **▶** button to set the font opacity.

Background Color (color of the background area where Closed Caption is displayed)

Press the **▼** button to highlight the **Background Color** option.

Press the **▶** button to select from the available colors.

Background Opacity - With less opacity, the picture shows through the background; with more opacity, the background blocks the picture.

Press the **▼** button to highlight the **Background Opacity** option.

Press the **◀** or **▶** button to set the background opacity.

Window Color (selects the color for the area where characters will be displayed)

Press the **▼** button to highlight the **Window Color** option.

Press the **▶** button to select from the available colors.

Window Opacity with less opacity, the picture shows through the window background; with more opacity, the window background blocks the picture

Press the **▼** button to highlight the **Window Opacity** option.

Press the **◀** or **▶** button to set the window opacity.

Once the adjustments are completed press the **EXIT** button to exit the OSD completely.



H/V Position

Occasional anomalies in the broadcast signal will appear in the picture, such as solid or dashed lines at the top or a thin stripe at the side. This is not caused by the TV. This option allows for adjustment of the image so the anomaly can be hidden.

Press the **MENU** button to bring up the On Screen Display (OSD).

Press the **▼** button to highlight the **Setup** option.

Press the **OK** button to enter the Setup sub-menu.

H - Position

Press the **▼** button to highlight the **H-Position** option

Use the **◀** or **▶** button to adjust the horizontal position.

V - Position

Press the **▼** button to highlight the **V-Position** option.

Use the **◀** or **▶** button to adjust the vertical position.

H - SIZE

Press the **▼** button to highlight the H-Size option.

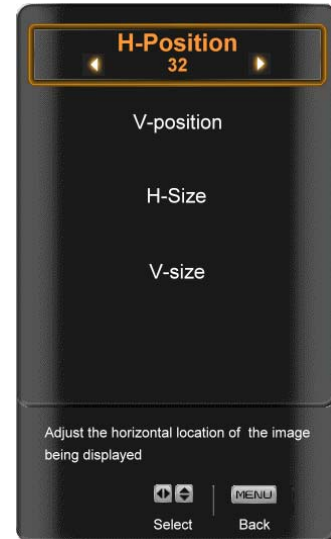
Use the **◀** or **▶** button to adjust the horizontal size.

V - SIZE

Press the **▼** button to highlight the V-Size option.

Use the **◀** or **▶** button to adjust the vertical size.

Once the adjustments are completed, press the **MENU** button to return to the previous menu or the **EXIT** button to exit the OSD completely.



DTV / TV Input Parental Control

This option allows restriction and access of specific channels, movies and program material based on ratings, and can then be made available only after an authorized password has been entered.

Press the **MENU** button to bring up the On Screen Display (OSD).

Press the **▼** button to highlight the **Setup** option.

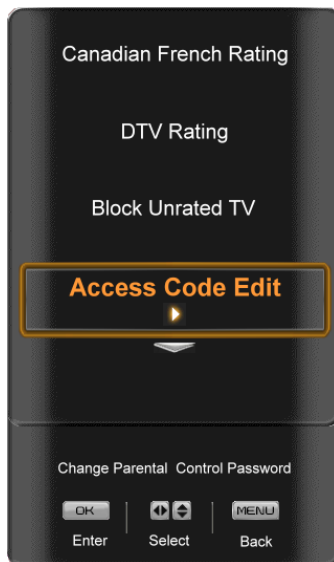
Press the **OK** button to enter the Setup sub-menu.

Press the **▼** button to highlight Parental. Press the **▶** button to enter the Parental control sub-menu

Once the adjustments are completed, press the **MENU** button to return to the previous menu or the **EXIT** button to exit the OSD completely.



A Password must be entered to access Parental settings. The default password set at the factory is 0 0 0 0. If you intend to use the Parental Control feature, it is recommended that you customize the password.



Key in "0000" on the remote.

Press the **▼** button to highlight **Access Code Edit**. Press the **▶** button to enter the Edit sub-menu.

In the New dialog box, key in a four (4) digit number on the remote keypad.

Press the **▼** button to move to the Confirm dialog box.

Key in the same number you entered in the New dialog box.

Note: Please write down and store the new password in a secure place. The Reset All Settings option (see page 72) does NOT reset the password.



Rating Enable

This option turns Rating Enable On or Off. It is the master control that applies the settings made within the content blocking menus that follow.

Press the **MENU** button to bring up the On Screen Display (OSD).

Press the **▼** button to highlight the **Setup** option.

Press the **OK** button to enter the Setup sub-menu.

Press the **▼** button to highlight the **Rating Enable** option.

Press the **◀** or **▶** button to enable or disable blocking

Press the **▼** button to highlight the **Parental** option.

Press the **▶** button to enter password.

Once the adjustments are completed, press the **MENU** button to return to the previous menu or the **EXIT** button to exit the OSD completely.



Note: When Rating Enable is set to On, PIP functions will be disabled. This is because PIP sources can contain blocked material, and cannot be enabled with the password. If PIP functions are desired, please set Rating Enable to Off.

Channel Block

This option allows blocking of selected TV or Cable channels.

Press the **▼** button to highlight the Channel Block option.

Press the **▶** button to go to the Channel Block sub-menu.

Press the **▼** or **▲** button to highlight the channel you wish to block.

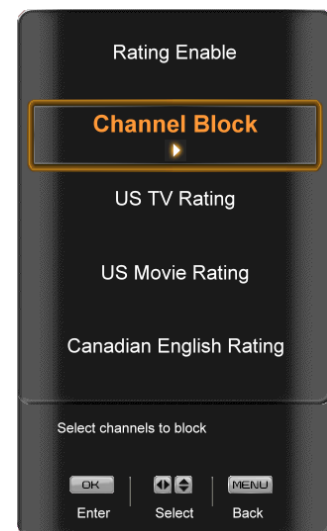
Press **OK** to add a checkmark to block the highlighted channel.

Press **OK** to delete a checkmark to unblock the highlighted channel.

Press the **▶** button to skip ahead one page.

Press the **◀** button to skip back one page.

Once the adjustments are completed, press the **MENU** button to return to the previous menu or the **EXIT** button to exit the OSD completely.



Note: When a channel is selected using either **CH+** or **CH-** or by direct number input, and that channel is blocked, the information banner will display "Channel Locked!" It will be necessary to perform the above steps and unblock the channel in order to be viewed. Press **CH+** or **CH-** or input another channel number to skip over the blocked channel.



US TV Rating

Note: Rating Enable must be set to **On** in order to use this option.

This option allows blocking of selected TV or Cable channels based on ratings established for US broadcasts.

Press the **▼** button to highlight the **US TV Rating** option.

Press the **▶** button to go to the **US TV Rating** sub-menu.

Once the adjustments are completed, press the **MENU** button to return to the previous menu or the **EXIT** button to exit the OSD completely.

The TV Rating levels can be set for program blocking according to age:

- Y – All children
- Y7 – Older children
- G – General audience
- PG – Guidance suggested
- 14 – Strongly cautioned
- MA – Mature audience

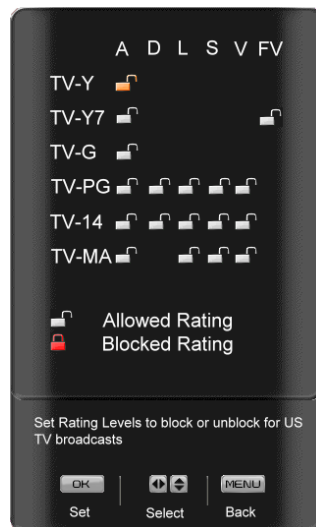
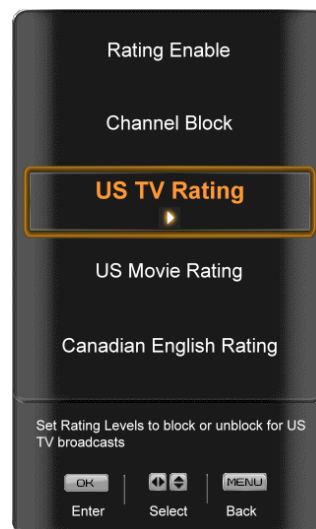
When a higher level (age) is blocked, all age levels below will be blocked.

The TV ratings can be customized for the following content:

- A – All sub ratings
- D – Sexual dialog
- L – Adult language
- S – Sexual situations
- V - Violence
- FV – Fantasy violence

Press the **▲ ▼ ◀ ▶** buttons to navigate through the TV rating options.

Press the **OK** button to block (locked) or allow (unlocked).



US Movie Rating

Note: Rating Enable must be set to **On** in order to use this option.

This option allows blocking of movies based on ratings established by the MPAA

Once the adjustments are completed, press the **MENU** button to return to the previous menu or the **EXIT** button to exit the OSD completely

Press the **▼** button to highlight the **US Movie Rating** option.

Press the **▶** button and the Block Movie Rating to display the sub-menu.

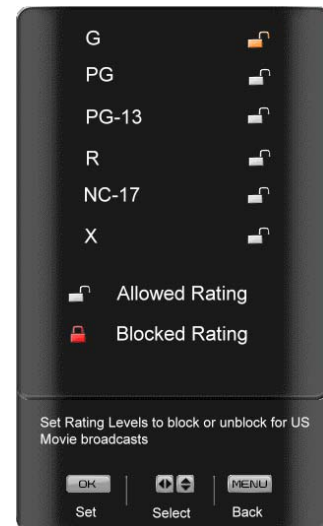
Movies may be blocked according to the following Movie ratings:

- G – General audience
- PG – Parental guidance suggested
- PG-13 – Recommended for children 13 years of age or older
- R – Mature audience
- NC-17 – No one under 17 years of age
- X – No one under 17 years of age

Press the **▲** or **▼** button to navigate the Movie rating options.

Press the **OK** button to block (locked) or allow (unlocked).

When a higher level (age) is blocked, all age levels below will be blocked.



Canadian English Rating

Note: Rating Enable must be set to **On** in order to use this option.

This option allows blocking of selected Canadian English TV or Cable channels based on age.

Press the **MENU** button to bring up the On Screen Display (OSD).

Press the **▼** button to highlight the **Setup** option.

Press the **OK** button to enter the Setup sub-menu.

Press the **▼** button to highlight the **Canadian English Rating** option.

Press the **▶** button to go to the Rating Level sub-menu.

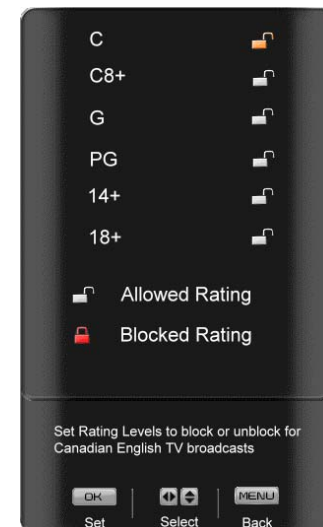
The TV Rating levels can be set for program blocking according to age:

- C – Children
- C8+ – Children 8 years or older
- G – General Programming, suitable for all audiences
- PG – Parental guidance
- 14+ – Viewers 14 years or older
- 18+ – Adult programming

Press the **▲** or **▼** button to navigate through the rating options.

Press the **OK** button to block (locked) or allow (unlocked).

When a higher level (age) is blocked, all age levels below will be blocked.



French Canadian Rating

Note: Rating Enable must be set to **On** in order to use this option.

This option allows blocking of selected French Canadian English TV or Cable channels based on age.

Press the **MENU** button to bring up the On Screen Display (OSD).

Press the **▼** button to highlight the **Setup** option.

Press the **OK** button to enter the Setup sub-menu.

Press the **▼** button to highlight the **Parental** option.

Press the **▶** button to enter password.

Press the **▼** button to highlight the **Canadian French Rating** option.

Press the **▶** button to go to the Rating Level sub-menu.

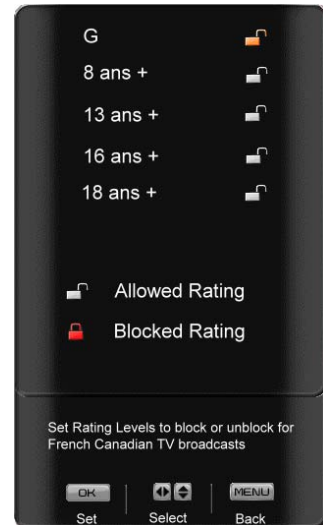
The TV Rating levels can be set for program blocking according to age:

- G – General audience
- 8 ans+ – General – not recommended for young children
- 13 ans+ – Not suitable for children under 13 years of age
- 16 ans+ – Not suitable for under 16 years of age
- 18 ans+ – Adults only

Press the **▲** or **▼** button to navigate through the rating options.

Press the **OK** button to block (locked) or allow (unlocked).

When a higher level (age) is blocked, all age levels below will be blocked.



Check for DTV Rating

This option is designed to update the TV or Movie table for different ratings of programs being viewed in your local or regional area. It is called a Regional Rating Table. It will allow the parental guidance control feature in your TV to have the most current parental control database for a Digital TV. This option may be available in the future for activation. This option works as follows: Whenever you use the Parental Control feature and this option has been activated in your area, the Check for New DTV Rating will be a solid color indicating that an update is available for any rating tables.

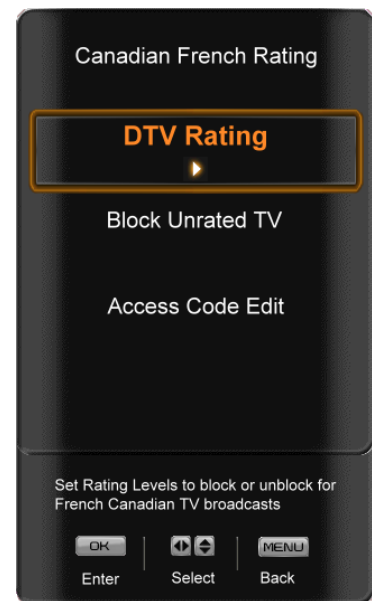
To check for updates to the Regional Rating Table:

Press the **MENU** button to bring up the On Screen Display (OSD).

Press the **▼** button to highlight the **Setup** option.

Press the **OK** button to enter the Setup sub-menu.

Press the **▼** button to highlight Parental. Press the **▶** button to enter the Parental control sub-menu.



After entering the password, Press the **▼** button to highlight **DTV Rating**. Observe the status of the **DTV Rating**. If option is faded out, no update is available (the option is not activated in your area).

If it is not faded out, press the **▶** button to execute this operation. Please follow the on screen instructions to complete the procedure.

Once the adjustments are completed, press the **MENU** button to return to the previous menu or the **EXIT** button to exit the OSD completely.



Block Unrated Programming

This option allows blocking of unrated content.

Press the **MENU** button to bring up the On Screen Display (OSD).

Press the **▼** button to highlight the **Setup** option.

Press the **OK** button to enter the Setup sub-menu.

Press the **▼** button to highlight the **Parental** option.

Press the **▶** button to enter password.

Press the **▼** button to highlight the **Block Unrated TV** option

Press the **◀** or **▶** button to select Yes (Block) or No (Allow).

Once the adjustments are completed, press the **MENU** button to return to the previous menu or the **EXIT** button to exit the OSD completely.

Access Code Edit (Change Password)

This option allows setting a custom password.

Press the **MENU** button to bring up the On Screen Display (OSD).

Press the **▼** button to highlight the **Setup** option.

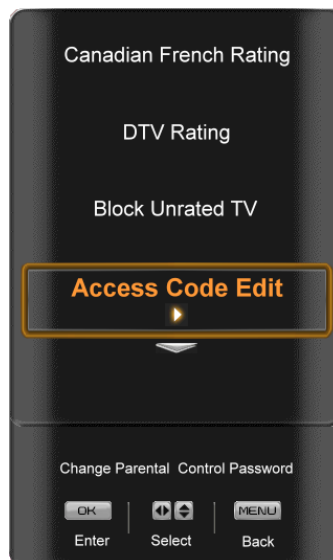
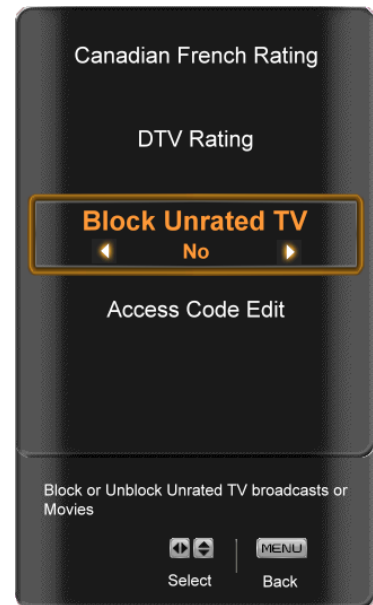
Press the **OK** button to enter the Setup sub-menu.

Press the **▼** button to highlight the **Parental** option.

Press the **▶** button and the Password panel will be displayed.

A Password must be entered to access Parental settings. The default password set at the factory is 0000.

If you have previously set a new password, and wish to change it, please enter your custom password.



Press the **▼** button to highlight **Access Code Edit**. Press the **▶** button to enter the Edit sub-menu.

In the New dialog box, key in a four (4) digit number on the remote keypad.

Key in the same number you entered in the New dialog box.

Note: Please write down and store the new password in a secure place. The Reset All Settings option does NOT reset the password.



Reset All Settings

This option resets Picture and Sound adjustments to their Factory Settings.

Press the **MENU** button to bring up the On Screen Display (OSD).

Press the **▼** button to highlight the **Setup** option.

Press the **OK** button to enter the Setup sub-menu.

Press the **▼** button to highlight the Reset All Settings option.

Press the **▶** button to reset the TV to the default factory settings.

The screen will display a message to confirm that you want to reset the values to factory settings.

Once the adjustments are completed, press the **MENU** button to return to the previous menu or the **EXIT** button to exit the OSD completely



Press either **◀** to accept or **▶** to cancel.

Press **OK** to confirm your choice.

Note: This does NOT reset the Parental Control Password.



H/V Position and Size

This option allows for adjustment of the image position and size.

Press the **MENU** button to bring up the On Screen Display (OSD).

Press the ▼ button to highlight the **Setup** option.

Press the **OK** button to enter the Setup sub-menu.

Press the ▼ button to highlight the **H/V Position** option

Press the ► button to enter the Position and Size sub-menu.

Once the adjustments are completed, press the **MENU** button to return to the previous menu or the **EXIT** button to exit the OSD completely.

H - Position

Press the ▼ button to highlight the **H-Position** option

Use the ◀ or ▶ button to adjust the horizontal position.

V - Position

Press the ▼ button to highlight the **V-Position** option.

Use the ◀ or ▶ button to adjust the vertical position.

H - SIZE

Press the ▼ button to highlight the H-Size option.

Use the ◀ or ▶ button to adjust the horizontal size.

V - SIZE

Press the ▼ button to highlight the V-Size option.

Use the ◀ or ▶ button to adjust the vertical size.

Note: This option is not available in the DTV/TV Input mode.



Auto Phase (Component input)

This option allows for optimal adjustment of the image position.

Press the **MENU** button to bring up the On Screen Display (OSD).

Press the **▼** button to highlight the **Setup** option.

Press the **OK** button to enter the Setup sub-menu.

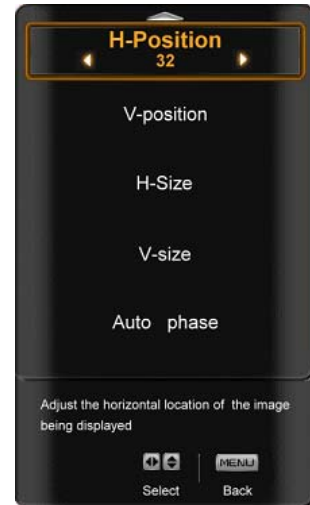
Press the **▼** button to highlight the **H/V Position** option

Press the **▶** button to enter the Position and Size sub-menu.

Once the adjustments are completed, press the **MENU** button to return to the previous menu or the **EXIT** button to exit the OSD completely.

Press the **▼** button to highlight Auto Phase.

Press the **▶** button to execute this option. The TV will automatically look for the phase of the signal to fine tune the picture.



Video Input Parental Control

The Parental Control menu operates in the same way for Video Inputs (Component and AV) as for the DTV /TV. Please refer to pages 67-73 for detailed instructions.



PC (Computer) Input Picture Adjustment

Picture Mode

Press the **MENU** button to bring up the On Screen Display (OSD).
Press the **OK** button to enter the Picture Mode submenu.



Auto Adjust

This option matches the PC signal timing to the display by aligning the picture elements (pixels) with the physical display cells so the display exhibits maximum readability.

Press the **MENU** button to bring up the On Screen Display (OSD).

Press the **▼** button to highlight the **Picture** option.

Press the **OK** button to enter the picture sub-menu.

Press the **▼** button to highlight the **Auto Adjust** option.

Press the **▶** button to adjust to the PC signal timing automatically.



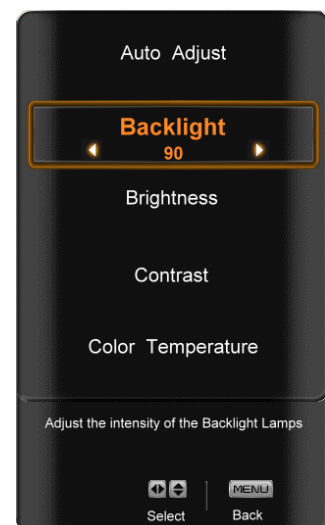
Backlight

Press the **▼** button to highlight the Backlight selection.

Use the **◀** or **▶** button to adjust the level.

The Backlight level does not affect the Brightness (black level) or Contrast (white level) of the picture, it adjusts the lamp current and this affects the overall brilliance of the picture.

Once the adjustments are completed press the **EXIT** button to exit the OSD completely.



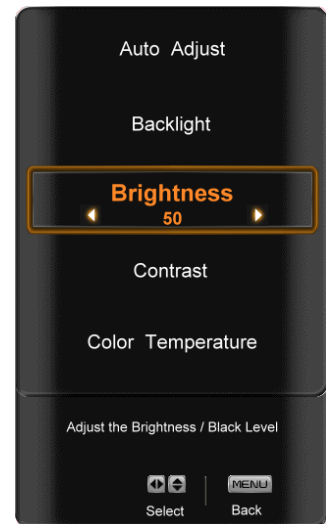
Brightness

Press the ▼ button to highlight the Brightness selection.

Use the ◀ or ▶ button to adjust the level.

The Brightness adjusts the black level in the picture. If the brightness is too low you will not be able to see the detail in darker parts of the picture and if the brightness is too high the picture will look washed out.

Once the adjustments are completed press the **EXIT** button to exit the OSD completely.



Contrast

Press the ▼ button to highlight the Contrast selection.

Use the ◀ or ▶ button to adjust the level.

The Contrast adjusts the white level in the picture. If the contrast is too low the picture will look washed out and if the contrast is too high you will not be able to see any detail in the bright parts of a picture.

Once the adjustments are completed press the **EXIT** button to exit the OSD completely.

Color Temperature

Press the ▼ button to highlight the Color Temperature option.

Color Temperature is the “warmness” or “coolness” of the white areas of the picture.

Press the ◀ or ▶ button if you want to select from the preset options described below.

6500: This option produces a “paper white” display./this is warmer than a standard PC display.

9300: Sets the white point at a value of 9300K, which is the established setting for a PC display.

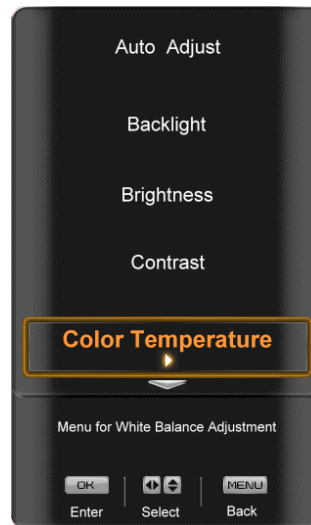
Custom: Allows the user to establish a preset calibrated for a white point to suit individual preference.

Each preset may also be adjusted for a customized setting.

Press the ▼ button to highlight a primary color: Red, Green or Blue.

Press the ◀ or ▶ button to adjust the color.

Once the adjustments are completed press the **EXIT** button to exit the OSD completely.



SIZE and POSITION OPTIONS

This option allows fine tuning of the display for optimum fit within the display area

H-SIZE

Press the **MENU** button to bring up the On Screen Display (OSD).

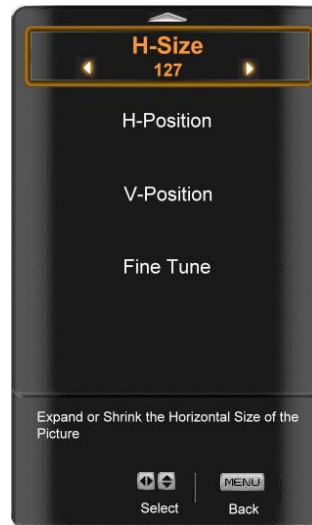
Press the **▼** button to highlight the **Picture** option.

Press the **OK** button to enter the picture sub-menu.

Press the **▼** button to highlight the **H-Size** option.

Press the **◀** or **▶** button to adjust the horizontal size.

Once the adjustments are completed press the **EXIT** button to exit the OSD completely.



H-Position

Press the **▼** button to highlight the **H-Position** option.

Use the **◀** or **▶** button to adjust the horizontal position.

Once the adjustments are completed, press the **EXIT** button to exit the OSD completely.

V-Position

Press the **▼** button to highlight the **V-Position** option.

Use the **◀** or **▶** button to adjust the vertical position.

Once the adjustments are completed, press the **EXIT** button to exit the OSD completely.



Fine Tune

This option allows fine-tuning of the image by shifting the display horizontally. This is useful when characters are being displayed.

Press the ▼ button to highlight the **Fine Tune** option.

Use the ◀ or ▶ button to adjust the tuning.

Once the adjustments are completed, press the **EXIT** button to exit the OSD completely.



PC Input Audio Adjustment

The Audio Adjust menu operates in the same way for the PC Input as the DTV / TV input. Please refer to pages 48-51 for detailed instructions.



PC Input Setup

The Setup menu operates in the same way for the PC Input as the DTV / TV input, with the exception that there are no Closed Caption options. Please refer to pages 59-63 for detailed instructions



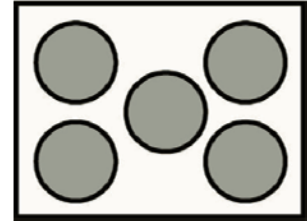
Understanding Viewing Modes

Your HDTV features the following viewing modes. You can switch viewing modes using the remote control, please follow the instructions in page 62.

Viewing Modes

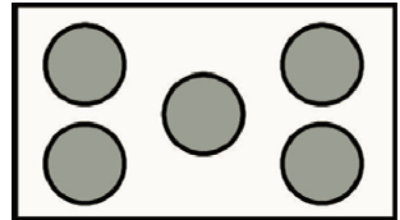
Normal Mode

The original 4:3 aspect ratio (1.33:1 source) is preserved, so black bars are added to the left and right of the display image. Standard TV broadcasts are displayed with a 4:3 Aspect Ratio. Movies in 4:3 Aspect Ratio may be referred to as pan-and-scan or full frame. These movies were originally filmed in 16:9 (widescreen), and then modified to fit a traditional TV screen (4:3).



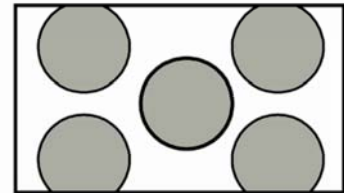
Wide Mode

When watching a standard broadcast or full-frame movie in this mode, the display image is stretched proportionately to fill the TV screen. When watching a widescreen (1.78:1 source) program or movie, the display image fills the TV screen. If you are watching a widescreen (1.85:1 or 2.35:1 source) program or movie, there will still be black bars at the top and bottom.



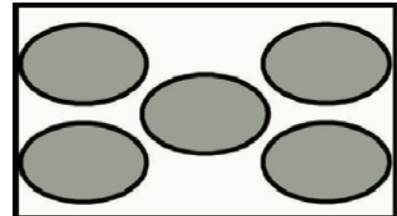
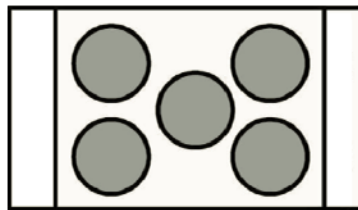
Zoom Mode

When watching a widescreen (1.78:1, 1.85:1, or 2.35:1 source) program or movie, the display image is zoomed proportionally to fill the width of the screen. The top and bottom are cut off to remove most of the source material's black bars. This mode is good for programs or movies with sub-titles.



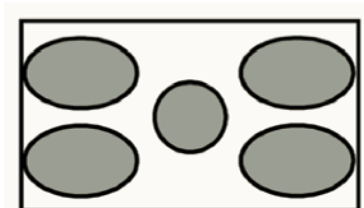
Stretch Mode

When watching a widescreen program (1.78:1 source) with black bars on the sides, the display image will stretch to fill the TV screen. People will appear wider than they really are. If you are watching a widescreen (1.85:1 or 2.35:1 source) program or movie, there will still be black bars at the top and bottom. This mode is available only when watching a widescreen program.



Panoramic Mode

When watching a standard broadcast or full frame movie in this mode, the 4:3 Aspect Ratio (1.33:1 source) display image is stretched horizontally on the left and right sides to fill the TV screen. The center of the image is not stretched.



Chapter 5 Programming the VIZIO Universal Remote Control

You can program the remote control to work with up to four different pieces of equipment including your VIZIO HDTV. Listed below are the steps for programming your VCR, Cable Box and DVD Player.

Programming for VCR

1. Manually turn on the VCR.
2. Press the DVD button on the remote control. **NOTE:** If you do not intend to program the remote for a DVD player, use the DVD device button. If you plan to also program the remote for a DVD player, the AUDIO device button may be used as a substitute.
3. Press and hold the SET button until the LED LIGHT flashes twice.
4. Find the programming code for your VCR in the code list in the back of this book and enter it using the Number Buttons. If the code is accepted, the LED flashes twice after the last digit is entered.
If the LED does not flash twice, repeat Steps 2 through 4 with the next code listed for the component and manufacturer.
5. Point the remote control at the VCR and press the POWER button. The VCR will turn off.

Note:

- If your VCR does not respond, try all the codes for your VCR brand. If the codes do not work, or your brand is not listed, see "Searching for Component Codes."
- Sometimes a code listed will only include limited functions. Try other codes that may include more functionality.

Programming for Cable or Satellite Set-Top Box

1. Manually turn on the Cable Box.
2. Press the CABLE button on the remote control.
3. Press and hold the SET button until the LED LIGHT flashes twice.
4. Find the programming code for your Cable Box in the code list in the back of this book and enter it using the Number Buttons. If the code is accepted, the LED flashes twice after the last digit is entered.
If the LED does not flash twice, repeat Steps 2 through 4 with the next code listed for the component and manufacturer.
5. Point the remote control at the Cable Box and press the POWER button. The Cable Box will turn off.
If the LED does not flash twice, repeat Steps 2 through 4 with the next code listed for the component and manufacturer.

Note:

- If your Cable Set-Top Box does not respond, try all the codes for your brand. If the codes do not work, or your brand is not listed, see "Searching for Component Codes."
- Sometimes a code listed will only include limited functions. Try other codes that may include more functionality.



Programming for DVD Player

1. Manually turn on the DVD Player.
2. Press the DVD button on the remote control.
3. Press and hold the SET button until the LED LIGHT flashes twice.
4. Find the programming code for your DVD player in the code list in the back of this book and enter it using the Number Buttons. If the code is accepted, the LED flashes twice after the last digit is entered.
If the LED does not flash twice, repeat Steps 2 through 4 with the next code listed for the component and manufacturer.
5. Point the remote control at the DVD Player and press the POWER button. The DVD Player will turn off.

Note:

- If your DVD player does not respond, try all the codes for your brand. If the codes do not work, or your brand is not listed, see "Searching for Component Codes."
- Sometimes a code listed will only include limited functions. Try other codes that may include more functionality.

Programming for Audio Amp/Receiver

1. Manually turn on the Receiver.
2. Press the AUDIO button on the remote control.
3. Press and hold the SET button until the LED LIGHT flashes twice.
4. Find the programming code for your Receiver in the code list in the back of this book and enter it using the Number Buttons. If the code is accepted, the LED flashes twice after the last digit is entered.
5. If the LED does not flash twice, repeat Steps 2 through 4 with the next code listed for the component and manufacturer.
6. Point the remote control at the Receiver and press the POWER button. The Receiver will turn off.

Note:

- If your Receiver does not respond, try all the codes for your Receiver brand. If the codes do not work, or your brand is not listed, see "Searching for Component Codes."
- Sometimes a code listed will only include limited functions. Try other codes that may include more functionality.



Searching for Component Codes

If you cannot find the manufacturer in the component list or the program code does not work, you can use the remote control to search for the correct component code.

To search for a component code:

1. Turn on the component.
2. Press the matching component button on the remote control.
3. Press and hold the SET button until the LED flashes twice.
4. Press 9 9 1. The LED flashes twice.
5. Point the remote control at the component and then alternate between pressing the POWER button and the component button on the remote control until the component turns off. If the component still does not respond, clear the component button, then repeat the search procedure.

Using a Cable or Satellite Remote

Your VIZIO remote uses codes 000, 047, 050, 067, 329, 331 and 339 to work your LCD HDTV. To use a cable or satellite remote to work the LCD HDTV, refer to your cable or satellite remote user guide for more information on how to program the remote. If your cable or satellite remote uses a 5-digit code (like most Direct TV units), first try 11758 and then, if that does not work, 10178. If your cable or satellite remote uses a 4-digit code, try 1758 and then 0178 as an alternative. If your cable or satellite remote uses a 3-digit code (EchoStar or Dish Network for example), use code 627.

Note: Some buttons may not function as expected on your cable or satellite remote. Typically power, volume and mute will work.



Chapter 6 Maintenance and Troubleshooting

Maintenance

Important

1. Make sure that the power cable is removed from the socket before cleaning the TV.
2. Do not use volatile solvent (such as toluene, rosin and alcohol) to clean the TV. Such chemicals may damage the housing, screen and remote control, and cause paint to peel.

Cleaning the Housing and Remote Control

3. Use a soft cloth for cleaning.
4. If the housing or remote control is seriously contaminated, use a soft cloth moistened with diluted neutral cleaner to clean the display. Wring water out of the cloth before cleaning to prevent water from penetrating into the housing. Wipe the display with a dry cloth after cleaning.

Cleaning the Screen

1. Use a soft cloth to gently clean the screen.
2. The screen glass is very fragile. Do not scrape it with any sharp object. Do not press or tap the screen to avoid cracking. If the screen is heavily contaminated, use a soft cloth moistened with diluted neutral cleaner to clean the display. Wring water out of the cloth before cleaning to prevent water from penetrating into the housing. Wipe the display with a dry cloth after cleaning.

Troubleshooting Guide

If the TV fails to operate, or the performance changes dramatically, check the display in accordance with the following instructions. Remember to check the peripherals to pinpoint the source of the problem. If the display still fails to perform as expected, contact the VIZIO for assistance by calling 1-877-MYVIZIO (1-877-698-4946) or e-mail us at techsupport@vizio.com.

Problem	Solution
No power.	Make sure the power button is ON (VIZIO Logo glows white). Make sure AC power cord is securely connected to the AC socket. Plug another electrical device (like a radio) to the power outlet to verify that the outlet is supplying power.
No sound.	Press the Volume + (Up) key on the remote control Check to see if the MUTE symbol is displayed in the lower corner of the screen. Press MUTE on the remote so that MUTE disappears from the screen Check your audio settings. If TV input is selected, audio may be set to SAP, or speakers are set to off. If external devices are selected input, check the audio connections.
If the screen is black.	Make sure the power button is ON (VIZIO Logo glows white). Press the INPUT button on the TV or the Remote.



Problem	Solution
	Check the input connections.
Power is ON but no screen image.	<p>Make sure any cable attached to the TV is connected to the correct output from a Set-Top Box, DVD, etc.</p> <p>Adjust brightness, contrast or backlight.</p> <p>Check Input settings.</p>
Wrong or abnormal colors appear.	<p>Check Color and tint settings in Picture Menu. Reset Picture settings.</p> <p>Component Input: If any colors (red, or blue) are missing, check the video cables to make sure they are securely connected.</p> <p>PC Input: If any colors (red, green, or blue) are missing, check the video cable to make sure it is securely connected.</p>
Control buttons do not work.	Press only one button at a time.
Remote Control does not work.	<p>Make sure batteries are inserted correctly</p> <p>Batteries could be weak.</p> <p>Make sure you have selected TV on the remote.</p>
There appears to be image quality issues.	<p>For best image quality, view HD wide screen programs where possible. If HD content is not available view "Standard Definition" from a digital source. Standard, analog TV will always be noticeably inferior to HD because your digital flat panel TV has video that is many times better than old TV's and so you can see interference and deficiencies you did not know you had.</p>
You cannot see a picture.	<p>Make sure that the power cord is plugged into a grounded electrical outlet.</p> <p>Make sure that the power button is turned on.</p> <p>Make sure that the selected input source is connected to a working input source.</p> <p>If your TV is connected to your computer in RGB or HDMI mode, press any key on your keyboard to "wake" your computer.</p>
You see a distorted picture or hear unusual sound.	<p>You may be getting interference from electrical appliances, cars, motorcycles, or fluorescent lights. If you have not mounted it on the wall, try moving your TV to another location to see if this is the cause of the problem.</p>
The picture has abnormal patterns.	<p>Make sure that the input source cable is attached securely and correctly to the back of your TV.</p> <p>Make sure that the video input source is within the range of your TV. Compare the video input source's specifications with your TV specifications.</p>
The display image does not cover the entire screen.	<p>If you are using RGB mode, make sure that H Size and V Position in the On Screen Display (OSD) are set correctly.</p> <p>If you are using TV, AV1, AV2 or Component with 480i input, use the WIDE button on the remote control to scroll through various screen modes.</p>
You can see a picture but you cannot hear sound.	<p>Make sure that the volume is not turned down.</p> <p>Make sure that the sound is not muted.</p> <p>Make sure that your audio input source cables are connected securely and</p>



Problem	Solution
	correctly.
The TV has pixels that are always dark or colored.	Your LCD HDTV is manufactured using an extremely high level of precision technology, however, sometimes some pixels of your LCD HDTV may not display. Pixel defects within industry specifications are inherent to this type of product and do not constitute a defective product.
You see “noise” or “trash” on the screen.	When your LCD HDTV’s digital capabilities exceed a digital broadcast signal, the signal is up-converted (increased) to match your TV’s display capabilities. Up-converting can cause noise or trash.
You switch to a different input and the volume changes.	The TV remembers the volume level from the last time you adjusted it. If the sound level is higher or lower from another source, then the loudness will change.
Tips for High-Definition Users.	The LCD HDTV is an ideal platform for viewing High Definition Content. Best Image Quality will be achieved by the HDMI Input, then YPbPr, then RGB. However, due to variances in broadcast practices, it is possible some image distortions can occur.
Tips for Letterbox Content Users.	Letterboxed (or “Widescreen”) versions of DVD movies are most commonly formatted for standard 4:3 Televisions. The LCD HDTV has the capability of expanding this content so the entire screen is filled at the expense of image accuracy. To use this function, press the “ZOOM” key on the remote control and cycle among the available options.

Telephone & Technical Support

Products are often returned due to a technical problem rather than a defective product that may result in unnecessary shipping charges billed to you. Our trained support personnel can often resolve the problem over the phone. For more information on warranty service or repair, after the warranty period, please contact our Support Department at the number below.

Customer support and quality service are integral parts of VIZIO’s commitment to service excellence.

For technical assistance contact our VIZIO Technical Support Department via email or phone.

Email: techsupport@vizio.com

Tel: (877) 698-4946 Fax: (949) 585-9563

Hours of operation: Monday - Friday: 6 am to 9 pm

Saturday – Sunday: 8 am to 4 pm

Please have your VIZIO model number, serial number, and date of purchase available before you call.

VIZIO

Address:

39 Tesla

Irvine, CA 92618, USA

Telephone: (949) 428-2525 Fax: (949) 585-9514

Web: www.vizio.com



Compliance

Caution: Always use a power cable that is properly grounded. Please use the AC cords listed below for each area.

USA	UL
Canada	CSA
Germany	VDE
UK	BASE/BS
Japan	Electric Appliance Control Act

FCC Class B Radio Interference Statement

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

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

Notice:

1. The changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.
2. Shielded interface cables and AC power cord, if any, must be used in order to comply with the emission limits.
3. The manufacturer is not responsible for any radio or TV interference caused by unauthorized modification to this equipment. It is the responsibilities of the user to correct such interference.



Chapter 7 Miscellaneous Information

Specifications

Specifications	
Panel	55" Diagonal, 16:9 Aspect Ratio
Resolution	1920 x 1080 pixels
Pixel (Dot) Pitch	0.5415 mm x 0.5415 mm
Display Compatibility	1080P (Full HDTV)
Colors	1.06 Billion
Brightness	500 cd/m ² (typical)
Contrast	1400 :1 (typical), 50,000 :1 (with Mega DCR)
Response Time	5ms (typical)
Viewing Angle	Horizontal and Vertical 178° (typical)
Inputs	1x Coaxial RF (ATSC/QAM/NTSC), 5x HDMI TM ** with HDCP (1 with Stereo Audio RCA), 2x Component YPbPr plus Stereo Audio, 1x RGB PC plus Stereo Audio (1/8" stereo jack), 2x Composite Video plus Stereo Audio, 1x S-Video plus Stereo Audio
Outputs	1x Optical Audio (SPDIF Optical), 1x Stereo Audio (RCA)
Features	FULL HD, PIP, POP, Noise Reduction, CC, V-Chip, 3D Comb Filter, Freeze, Support Motion Enhancement and Motion Correction, Picture Enhancement, MPEG-2 Decoding via DTV input, NTSC Video decoding via Video (AV, S-Video or Component), Progressive Scan Video via HDMI TM **, Component or RGB, HDTV via HDMI TM **, Component or RGB (Set-Top Box required), Computer 640x480, 800x600, 1024 x 768, 1920x1080 via RGB or 1920x1080 via HDMI, Built-in SRS (TruSurroundHD TM /TruVolume TM) Audio, Supports 1080P (Full HDTV) , 1080i (HDTV) , 720P (HDTV) , 480P (EDTV) and 480i (SDTV) video signals. 1080P FHDTV, HDMI V.1.3, 120 Hz Motion Estimation & Motion Compensation, Dolby Digital Decoding
Speakers	2 x 15 W
Panel Life	50,000 hours to half the original brightness
Power	
Input	IEC Connector for direct power line connection
Voltage Range	100 ~ 240Vac at 50/60Hz
Power Consumption	244W (Avg), <0.5W Standby
Environmental Conditions	
Operating	Temperature: 5°C~35°C, Relative Humidity: 20~80%, Altitude: 0~14,000 ft
Non-Operating	Temperature: -20°C~50°C, Relative Humidity: 10~90%, Altitude: 0~40,000 ft
Dimensions	51.5" W x 36" H x 13.5" D with stand; 51.5" W x 33.9" H x 5" D without stand
Net Weight	86lbs with stand, 73.8lbs without stand
Gross Weight	104.2lbs
Certifications	CSA, CSA-US, FCC, Bets-7, AV Safety certificate 60065

*Product specifications may change without notice or obligation.



Glossary – Standard Definitions

Analog TV: Today's TV system using radio frequency waves to transmit and display pictures and sound.

Aspect Ratio (4x3): Traditional TV "aspect ratio", that is, the screen width as compared to its height. For example, a "32 inch TV screen" would be 25 inches wide and 19 inches tall.

Aspect Ratio (16x9): "Wide screen TV" aspect ratio which is more like a movie screen than a traditional TV. For example, a "32 inch TV screen" would be 28 inches wide and 16 inches tall.

Digital TV (DTV): Television delivered and displayed using radio frequency waves that contain information that is digitally encoded for improved quality and efficiency.

Enhanced Definition TV (EDTV): A better digital television transmission than SDTV with at least 480P, in a 16x9 or 4x3 display and Dolby digital surround sound. 480P is the quality used by most DVD players. EDTV provides 300-400,000 pixels.

HDTV Monitor (sometimes called HDTV Ready): A set that can display HDTV programming if you have a separate HDTV tuner, HD Cable Set-Top Box or HD Satellite Set-Top-Box Receiver.

HDTV Tuner (also decoder, receiver, set-top box): A device capable of receiving and outputting HDTV signals for display. It may be stand-alone or integrated in the set.

High-Definition Television (HDTV): The best quality picture, wide screen (16x9) display with at least 720 progressively scanned lines (720P) or 1080 interlaced lines (1080i) and Dolby digital surround sound. HDTV provides 900,000-2.1 million pixels.

Integrated HDTV: An HDTV that has the digital tuner built into the set. It does not need a separate set-top box to receive over-the-air DTV signals.

Interlace Scan: A way to scan vertical lines onto a TV picture by scanning all the odd lines first, then filling the in the even lines (this happens instantaneously).

Plug-and-Play or Digital Cable Ready: A DTV or other device for digital cable consumers that plugs directly into the cable jack and does not require a separate set-top box. Plug-and-Play TV owners must obtain a CableCARD from their cable company in order to view scrambled programming services.

Progressive Scan: A way to scan vertical lines onto a TV picture by scanning all the lines consecutively (progressively).

Standard Definition TV (SDTV): Basic digital television transmission that may be displayed with fewer than 480 progressively scanned lines (480P) in 16 x 9 or 4 x 3 format. 480 interlaced (480i) is the quality of today's analog TV system.

Source: Buying a Digital Television, CEA, HDTV Guide, 2005

Note: The Federal Communications Commission (FCC), the Consumer Electronics Association (CEA) and the Consumer Electronics Retailers Coalition (CERC) have made a new tip sheet available for digital television (DTV) retailers to reproduce and distribute to consumers on the sales floor. The file may be downloaded online at www.dtv.gov. While you're there, check out the other useful information in the FCC is making available to consumers interested in learning more about the analog to digital transition.



Limited Product Warranty

VIZIO provides a "ONE-YEAR LIMITED WARRANTY" against manufacturing defects in materials and workmanship to the original purchaser of a new VIZIO display purchased from an authorized VIZIO U.S. reseller and used in the fifty (50) United States or Puerto Rico.

VIZIO's Responsibility

VIZIO displays purchased new from an authorized VIZIO U.S. reseller and that are used in the fifty (50) United States or Puerto Rico are warranted to be free from manufacturing defects in materials and workmanship for one (1) year from the date of the original retail purchase. If the display fails to conform to this limited warranty, VIZIO will, at its option and sole discretion, repair or replace the display.

Labor

During the one-year limited warranty period, VIZIO will provide, when needed, service labor to repair a manufacturing defect. Repairs required on displays which are thirty (30) inches and larger generally will be made "on-site" where the display is installed. The determination for performing the on-site repair is dependent upon the manufacturing defect and is at VIZIO's option and sole discretion. Repairs required on displays which are less than thirty (30) inches generally will be performed at a VIZIO service center.

Parts

Repairs may be made with new or recertified parts, or the entire unit may be replaced with a new or recertified unit, at VIZIO's option and sole discretion. Replacement parts or replacement units provided under this limited warranty are warranted for the remaining portion of the original warranty period, or for ninety (90) days from warranty service or replacement, whichever is later.

How to Obtain Warranty Service

To obtain warranty service, contact VIZIO Technical Support via email at techsupport@vizio.com, via phone at 877-MYVIZIO (877-698-4946), or via postal mail at VIZIO Technical Support, 39 Tesla, Irvine, CA 92618. You must provide the model, serial number, and date of purchase. VIZIO Technical Support is available from 6:00AM to 9:00PM Pacific Time, Monday through Friday, and 8:00AM to 4:00PM Pacific Time, Saturday and Sunday. Please note that holiday hours may vary. For up to date information, please visit www.VIZIO.com.

VIZIO reserves the right to assess all warranty claims and to determine if defects or damages are covered by this limited warranty. In case of a claim that is not covered by this warranty, you will be contacted to determine whether VIZIO should repair the damage for a fee or whether the product should be returned to you as received by the service technician or service center.

Parts and service labor that are VIZIO's responsibility under this limited warranty will be provided without charge. All other service is at the customer's expense. VIZIO reserves the right to charge the customer for any service call for anything not covered by this limited warranty. Before you ask for warranty service, please review your User Manual. You may avoid a service call and a service charge.

PLEASE DO NOT RETURN YOUR UNIT TO VIZIO WITHOUT PRIOR AUTHORIZATION.

Not Covered

This limited warranty does not cover the following: cosmetic defects; damage, malfunctions or failures resulting from shipping or transit, improper or faulty installation, abuse, operation contrary to furnished instructions, operation on incorrect power supplies, products not supplied by VIZIO, modification, alteration, improper servicing or tampering; damage from fire, water, lightning, power surges, abnormal environmental conditions or other acts of nature; normal wear and tear; unsatisfactory visual or audio performance not caused by a manufacturing defect; or displays with a missing or unreadable serial number. Operation of the display for commercial purposes or in applications or uses for which the display is not intended is not covered by this limited warranty. "Image Sticking", caused by static images on the screen for extended periods and or excessive brightness and contrast levels, is not covered by this limited warranty. Installation, removal, transportation and reinstallation of a display, and routine maintenance and cleaning, are not covered by this limited warranty.

THERE ARE NO EXPRESS WARRANTIES OTHER THAN THOSE LISTED OR DESCRIBED ABOVE. ANY IMPLIED WARRANTIES, INCLUDING ANY IMPLIED WARRANTY OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE, SHALL BE LIMITED IN DURATION TO THE PERIOD OF TIME SET FORTH ABOVE. VIZIO'S TOTAL LIABILITY FOR ANY AND ALL LOSSES AND DAMAGES



RESULTING FROM ANY CAUSE WHATSOEVER, INCLUDING VIZIO'S NEGLIGENCE, ALLEGED DAMAGE, OR DEFECTIVE GOODS, WHETHER SUCH DEFECTS ARE DISCOVERABLE OR LATENT, SHALL IN NO EVENT EXCEED THE PURCHASE PRICE OF THE DISPLAY. VIZIO SHALL NOT BE RESPONSIBLE FOR LOSS OF USE, COMMERCIAL LOSS, LOST REVENUE OR LOST PROFITS, OR OTHER INCIDENTAL OR CONSEQUENTIAL DAMAGES. SOME STATES DO NOT ALLOW LIMITATIONS ON HOW LONG AN IMPLIED WARRANTY LASTS OR THE EXCLUSION OR LIMITATION OF INCIDENTAL OR CONSEQUENTIAL DAMAGES, SO THE ABOVE LIMITATIONS OR EXCLUSIONS MAY NOT APPLY TO YOU.

This warranty gives you specific legal rights, and you may also have other rights, which vary from state to state. This is the only warranty applicable; no one is authorized to extend or modify it or to grant any other warranty on VIZIO's behalf.

Owner's Responsibility

To ensure warranty service, keep the dated bill or sales receipt as evidence of the purchase date and location. This limited warranty applies only to original purchaser and is non-transferable.

Note: Warranty service conditions are subject to change. For the latest Warranty Terms and Conditions and additional information regarding VIZIO's Limited Product Warranty, please see complete details online at www.VIZIO.com.

VIZIO Return Policy

VIZIO's return policy allows for products purchased directly from VIZIO to be returned by the original purchaser during the initial thirty (30) day period following the date of purchase. A VIZIO return authorization number must first be obtained as provided below. The refund will be the purchase price actually paid by the purchaser less a ten percent (10%) restocking fee per each item returned. Shipping and handling are not refundable.

The return authorization number must first be obtained from VIZIO's Customer Service by emailing CustomerSupport@VIZIO.com or by calling 949-428-2525, 6:00AM to 9:00PM Pacific Time, Monday through Friday, and 8:00AM to 4:00PM Pacific Time, Saturday and Sunday. Please note that holiday hours may vary. For up to date information, please visit www.VIZIO.com.

Products must be returned to the address specified by VIZIO Customer Service and must be shipped in the original packaging, with freight prepaid to VIZIO, and must be received in new and unused condition. The return authorization number must be included in the packaging. VIZIO reserves the right to assess fees for any damaged or missing parts in addition to the ten percent (10%) restocking fee.

Return authorization numbers are valid for only fifteen (15) days from issuance. The customer is responsible for and must prepay all shipping charges and shall assume all risk of loss or damage to the product while in transit to VIZIO. If the product is returned to VIZIO (i) without a VIZIO return authorization number, and/or (ii) beyond the fifteen (15) day period, and/or (iii) without proper packaging, VIZIO retains the right to refuse delivery of such return or may return the unit to the customer at the customer's expense and with no refund issued. This return policy does not apply to defective products. Please read VIZIO's Limited Product Warranty for warranty terms and conditions.

On-Site Warranty Repair Procedure

On-Site Warranty Repair generally is performed on repairable displays which are 30 inches and larger.

If VIZIO Technical Support determines that a problem with a display unit may be within the terms and conditions of the VIZIO Limited Product Warranty and that an on-site repair may be performed, the customer will be provided with an on-site repair authorization number and on-site repair instructions. The determination for performing the on-site repair may be dependent upon the manufacturing defect and is at VIZIO's option and sole discretion. Proof of purchase is required to confirm the product is within the one-year limited warranty period and meets the terms and conditions of the VIZIO Limited Product Warranty.

On-site repair service is requested through VIZIO's third-party service provider. After VIZIO provides the customer with the on-site repair (OSR) authorization number, the third-party service provider will contact the customer and will schedule the repair at the customer's location. The total approximate time for



the repair process, which includes the repair diagnosis, dispatching the technician, shipping the replacement part(s), and arranging the appointment with the customer, is completed within approximately 3 to 5 business days, pending availability of these factors.

If it is determined the product cannot be repaired on-site, the customer will be required to ship the unit to VIZIO's service center, per the below warranty replacement procedure.

VIZIO is not responsible for the de-installation or re-installation of the product. However, some standard installation may be performed during the on-site repair, at VIZIO's option and sole discretion. Please read VIZIO's Limited Product Warranty for warranty terms and conditions.

Warranty Replacement Procedure

Warranty Replacement generally is performed on displays which are determined to be economically unrepairable.

If VIZIO Technical Support determines that a problem with a display unit may be within the terms and conditions of the VIZIO Limited Product Warranty and that a repair is not economically possible, based on certain manufacturing defects in materials and/or workmanship, and/or at VIZIO's option and sole discretion, the customer will be provided with a return authorization number and replacement instructions. Proof of purchase is required to confirm the product is within the one-year limited warranty period and meets the terms and conditions of the VIZIO Limited Product Warranty.

For displays forty-two inches (42") and larger, VIZIO will generally cover the transportation charges to perform an on-site swap of the original unit with the replacement unit. For displays under forty-two inches (42"), the customer is responsible for the transportation charges to VIZIO's service center. VIZIO will be responsible for the return transportation charges from the service center to the customer. Please read VIZIO's Limited Product Warranty for warranty terms and conditions.

Mail-In Warranty Repair Procedure

Mail-In Warranty Repair generally is performed on displays which are smaller than 30 inches.

If VIZIO Technical Support determines that a problem with a display unit may be within the terms and conditions of the VIZIO Limited Product Warranty and that a mail-in repair may be performed, the customer will be provided with a return authorization number and mail-in repair instructions. Proof of purchase is required to confirm the product is within the one-year limited warranty period and meets the terms and conditions of the VIZIO Limited Product Warranty.

The customer will be provided with instructions for packing and shipping the unit to the VIZIO service center. The original carton box and packing material, or an equivalent as designated by VIZIO, must be utilized. The cost of shipping to VIZIO's service center is at the customer's expense. After the product is repaired and tested, the VIZIO service center will ship the unit back to the customer at VIZIO's expense. VIZIO is not responsible for the de-installation or re-installation of the product. Please read VIZIO's Limited Product Warranty for warranty terms and conditions.

PLEASE DO NOT RETURN YOUR UNIT TO VIZIO WITHOUT PRIOR AUTHORIZATION.



Index

A

- Accessories, 6
- Adjustments
 - Closed Caption, 16, 64
 - Selecting the Screen Size, 15, 39, 90
 - Stepping through TV Channels, 39
 - Volume, 10, 39, 84
- Advanced Video Features
 - Black Level Extender, 44
 - Color Temperature (Color Temperature, 45, 77
 - CTI (Color Transient Improvement, 45
 - DNR (Dynamic Noise Reduction, 44
 - Flesh Tone, 45

C

- Cleaning your VIZIO TV, 83
- Co-axial RF
 - Connecting for DTV, 22
 - Connecting for TV, 23
- Component
 - Connecting your Cable Box, 21
 - Connecting your DVD Player, 26
 - Connecting your Satellite Box, 21
- Composite (AV)
 - Connecting your DVD Player, 27, 28
 - Connecting your VCR, 29
 - Connecting your Video Camera, 29
- Controls
 - Front Panel, 10
 - Side Panel, 10

D

- DTV
 - Audio Adjustment, 47
 - Parental Control, 67
 - Picture Adjustment, 42
 - Special Features, 59
 - Tuner Setup, 52
- DTV Audio Adjust
 - Equalizer, 48
- DTV Audio Adjust
 - Balance, 48
- DTV Audio Adjust
 - Digital Audio Out, 49
- DTV Audio Adjust
 - Digital Audio Out, 49
- DTV Audio Adjust
 - Speakers, 49
- DTV Audio Adjust
 - Line Out, 50
- DTV Audio Adjust

- Lip Sync, 50
- DTV Audio Adjust
 - Reset Audio Mode, 50
- DTV Picture Adjust
 - Advanced Video, 44
 - Backlight, 42, 76
 - Brightness, 42, 77
 - Color, 43
 - Contrast, 43, 77
 - Reset Picture Mode, 47
 - Sharpness, 44
 - Tint, 43
- DTV Special Features
 - Digital Closed Caption, 64
 - Input Naming, 62
 - PIP, 59
 - Reset, 73
 - Sleep Timer, 62
- DTV Tuner Setup
 - Auto Search, 55
 - Daylight Saving, 57
 - MTS, 57
 - Partial Channel Search, 56
 - Skip Channel, 56
 - Time Zone, 57
- DVI
 - Connecting your Cable Box, 20
 - Connecting your DVD Player, 25
 - Connecting your Satellite Box, 20

F

- FCC Bulletin for New TV Owners, 4

G

- Glossary, 90

H

- HDMI
 - Connecting your Cable Box, 19
 - Connecting your DVD Player, 24
 - Connecting your Satellite Box, 19

I

- Inputs
 - Antenna, 4
 - Connectors, 18
 - Side Label, 12
- Installation
 - Preparation, 6
 - Wall Mounting, 6



O

OSD

- Brightness Adjustment, 89
- Closed Caption Selection, 16, 64
- Color Adjustment, 18
- Contrast Adjustment, 89

Outputs

- Using 5.1 Surround with a Home Theatre System, 30
- Using an external Receiver/Amp, 30

P

Parental Control

- Block Unrated Programming, 72
- Canadian English Rating, 70
- Canadian French Rating, 71
- Channel Block, 68
- Check for New DTV Rating, 71
- Movie Rating, 69
- Password change, 72
- TV Rating, 69

PC Input

- Audio Adjustment, 79
- Auto Adjust, 76
- Picture Adjustment, 76
- Setup, 79

PC Picture Adjust

- Fine Tune, 79
- H/V Position, 65, 73
- Horizontal Position, 65, 74, 78
- Horizontal Size, 66, 74, 78
- Vertical Position, 65, 74, 78

R

Remote

- Batteries, 16
- Layout, 13, 81
- Range, 17

Remote Control

- Codes for other equipment., 98
- Programming to work your DVD Player, 82
- Programming to work your Set-Top Box, 81
- Programming to work your VCR, 81, 82
- Using your Cable or Satellite Remote to Operate your VIZIO TV, 83

Remote:, 17

RGB

- Connecting your PC, 31

S

safety instructions, 2

Screen Size explanation, 80

S-Video

- Connecting your DVD Player, 27, 28

T

Technical Specifications, 89

Troubleshooting Guide, 84

TV

- Audio Adjustment, 47
- Parental Control, 67
- Picture Adjustment, 42
- Special Features, 59

TV Audio Adjust

- Balance, 48
- Digital Audio Out, 49
- Equalizer, 48
- Line Out, 50
- Lip Sync, 50
- Reset Audio Mode, 50
- Speakers, 49

TV Picture Adjust

- Advanced Video, 44
- Backlight, 42, 76
- Brightness, 42, 77
- Color, 43
- Contrast, 43, 77
- Reset Picture Mode, 47
- Sharpness, 44
- Tint, 43

TV Special Features

- Closed Caption, 64
- Input Naming, 62
- PIP, 59
- Reset, 73
- Sleep Timer, 62

TV Tuner Setup, 52

- Auto Search, 55
- MTS, 57
- Partial Channel Search, 56
- Skip Channel, 56

V

Video Input

- Auto Phase, 75
- Parental Control, 75

W

Warranty, 91

Watching TV

- Basic Adjustments, 39
- Basic connections, 33
- First Startup, 33
- Getting your Programs, 38
- Program Information, 40



Component Program Codes

Setup Code for VCR's	
ABS	21972
Admiral	20048, 20209
Aiko	20278
Aiwa	20037, 20479
Alienware	21972
America Action	20278
American High	20035
Amoisonic	20479
Anam	20162, 20037, 20240, 20278
Anam National	20162
Asha	20240
Audiovox	20037, 20278
Beaumark	20240
Bell & Howell	20104
Broksonic	20184, 20121, 20209, 20002, 20479
Calix	20037
Canon	20035
Carver	20081
CCE	20072, 20278
Changhong	20048, 20081
Citizen	20037, 20278
Colt	20072
Craig	20037, 20047, 20240,

Setup Code for VCR's	
	20072
Curtis Mathes	20060, 20035, 20162
Cybernex	20240
CyberPower	21972
Daewoo	20045, 20104, 20278
Dell	21972
Denon	20042
DirecTV	20739
Durabrand	20039, 20038
Electrohome	20037
Electroponic	20037
Emerex	20032
Emerson	20035, 20037, 20184, 20240, 20045, 20121, 20043, 20209, 20002, 20278, 20479
Fisher	20047, 20104
Fuji	20035, 20033
Fujitsu	20045
Gateway	21972
GE	20060, 20035, 20240
General	20045
Go Video	20432
GoldStar	20037,

Setup Code for VCR's	
	20209, 20038, 20225
Haojie	20240
Harman/Kardon	20081, 20038
Harwood	20072
Hewlett Packard	21972
HI-Q	20047
Hitachi	20037, 20042, 20055
Howard Computers	21972
HP	21972
Hughes Network Systems	20042, 20739
IBUYPOWER	21972
JVC	20045, 20067
KEC	20037, 20278
Kenwood	20067, 20038
KLH	20072
Kodak	20035, 20037
Kolin	20043
LG	20037, 20045, 20042, 20209, 20038
Logik	20072
LXI	20037
Magnavox	20035, 20039, 20081
Magnin	20240



Setup Code for VCR's	
Marantz	20035, 20081
Marta	20037
Matsushita	20035, 20162
Media Center PC	21972
MEI	20035
Memorex	20035, 20162, 20037, 20048, 20039, 20047, 20240, 20104, 20209, 20479
MGA	20240, 20043
MGN Technology	20240
Microsoft	21972
Mind	21972
Minolta	20042
Mitsubishi	20067, 20043
Motorola	20035, 20048
MTC	20240
Multitech	20072
NEC	20035, 20037, 20048, 20104, 20067, 20038
Newave	20037
Nikko	20037
Noblex	20240
Northgate	21972
Olympus	20035
Optimus	21062,

Setup Code for VCR's	
	20162, 20037, 20048, 20104, 20432
Orion	20184, 20209, 20002, 20479
Panasonic	21062, 20035, 20162, 20616, 20225
Penney	20035, 20037, 20240, 20042, 20038
Pentax	20042
Philco	20035, 20479
Philips	20035, 20081, 20739, 20618
Pilot	20037
Pioneer	20042, 20067
Polk Audio	20081
Profitronic	20240
Proscan	20060
Protec	20072
Pulsar	20039
Qisheng	20060
Quasar	20035, 20162
Radix	20037
Randex	20037
RCA	20060, 20035, 20240, 20042, 20880

Setup Code for VCR's	
Realistic	20035, 20037, 20048, 20047, 20104
ReplayTV	20616
Runco	20039
Sampo	20037, 20048
Samsung	20240, 20045, 20432
Sanky	20048, 20039
Sansui	20067, 20209, 20479
Sanyo	20047, 20240, 20104
Scott	20184, 20045, 20121, 20043
Sears	20035, 20037, 20047, 20042, 20104
Sharp	20048, 20209
Shintom	20072
Shogun	20240
Singer	20072
Sonic Blue	20616
Sony	20035, 20032, 20033, 20636, 21972
STS	20042
Sylvania	20035, 20081, 20043



Setup Code for VCR's	
Systemax	21972
Tagar Systems	21972
Tashiko	20037
Tatung	20045, 20067
Technics	20035, 20162
Teco	20035, 20037, 20048, 20038
Teknika	20035, 20037
Tivo	20636, 20618, 21503, 20739
TMK	20240
Toshiba	20045, 20042, 20067, 20043, 21503, 21008, 21972
Totevision	20037, 20240
Touch	21972
Unitech	20240
Vector	20045
Vector Research	20038
Victor	20067
Video Concepts	20045
Videomagic	20037
Videosonic	20240
Viewsonic	21972
Wards	20060, 20035, 20048, 20047, 20081, 20240,

Setup Code for VCR's	
	20042, 20072
White Westinghouse	20209, 20072
XR-1000	20035, 20072
Yamaha	20038
Zenith	20039, 20033, 20209, 20479
ZT Group	21972

Setup Code for Cable Converters	
ABC	00003, 00008, 00014
Americast	00899
Bell & Howell	00014
Bell South	00899
Clearmaster	00883
ClearMax	00883
Coolmax	00883
Daeryung	01877, 00877, 00477, 00008
Digi	00637
Director	00476
Dumont	00637
Gehua	00476
General Instrument	00476, 00810, 00276, 00003, 00014
GoldStar	00144
Hamlin	00009, 00273

Setup Code for Cable Converters	
Hitachi	00014
Jerrold	00476, 00810, 00276, 00003, 00012, 00014
KNC	00008
LG	00144
Memorex	00000
Motorola	00476, 00810, 00276, 01254, 01376
MultiVision	00012
Pace	01877, 00237
Panasonic	00000, 00008, 00107
Panther	00637
Paragon	00000
Philips	00317, 01305
Pioneer	01877, 00877, 00144, 00533
Pulsar	00000
Quasar	00000
RadioShack	00883
Regal	00279, 00273
Runco	00000
Samsung	00000, 00144
Scientific Atlanta	01877, 00877, 00477, 00008



Setup Code for Cable Converters	
Sony	01006
Starcom	00003, 00014
Supercable	00276
Supermax	00883
Tocom	00012
Torx	00003
Toshiba	00000
Trans PX	00276
Tristar	00883
TS	00003
V2	00883
Viewmaster	00883
Vision	00883
Vortex View	00883
Zenith	00000, 00525, 00899

Setup Code for Satellite Receivers	
AlphaStar	00772
Chaparral	00216
Crossdigital	01109
DirecTV	00392, 00566, 00639, 01142, 00247, 00749, 01749, 00724, 00819, 01856, 01076, 01109, 00099, 01392, 01640, 01442, 01414,

Setup Code for Satellite Receivers	
	01108
Dish Network System	01005, 00775, 01505
Dishpro	01005, 00775, 01505
Echostar	01005, 00775, 01505
Expressvu	00775
GE	00566
General Instrument	00869
GOI	00775
Goodmans	01246
Hisense	01535
Hitachi	00819, 00222, 01250
HTS	00775
Hughes Network Systems	01142, 00749, 01749, 01442
I-Lo	01535
JVC	00775
LG	01414, 01226
Magnavox	00724, 00722
Memorex	00724
Mitsubishi	00749
Motorola	00869
NEC	01270
Next Level	00869
Panasonic	00247, 00701
Paysat	00724

Setup Code for Satellite Receivers	
Philips	01142, 00749, 01749, 00724, 01076, 00722, 00099, 01442
Proscan	00392, 00566
Proton	01535
RadioShack	00869
RCA	00392, 00566, 00855, 00143, 01392
Samsung	01276, 01109, 01108
Sanyo	01219
SKY	00856
Sony	00639, 01640
Star Choice	00869
Tivo	01142, 01442
Toshiba	00749, 01749, 00790, 01285
UltimateTV	01640, 01392
Uniden	00724, 00722
US Digital	01535
USDTV	01535
Voom	00869
Zenith	00856, 01856

Setup Code for DVD Players



Setup Code for DVD Players	
Aiwa	20641, 21912
Akai	20770
Allegro	20869
Apex Digital	20672, 20717, 20797, 21061, 20796, 21056, 21937, 20794, 21020, 21915
Blaupunkt	20717
Blue Parade	20571
Broksonic	20695
Changhong	20627, 21061
CineVision	20869
Coby	21086
Curtis Mathes	21087
CyberHome	21024, 21023, 21129, 20816, 21117
Daewoo	20833, 21172, 20869
Denon	20490
DVD2000	20521
Emerson	20591, 20675
Enterprise	20591
Fisher	21919
Funai	20675
Gateway	21158, 21073
GE	20522, 20717

Setup Code for DVD Players	
Go Video	20744, 20833, 21099, 20783, 21075, 20869, 21730
Greenhill	20717
Harman/Kardon	20582, 20702
Hitachi	20573, 20664, 21919
Hiteker	20672
Initial	20717
Integra	20627, 21924
JBL	20702
JVC	20558, 20623, 20867
Kenwood	20490, 20534
KLH	20717, 21020, 21149
Koss	20651, 21980
Lasonic	20798
LG	20591, 20869, 20801
Liquid Video	21980
Lite-On	21158, 21058
Loewe	20511
Magnavox	20503, 20539, 21976, 21914, 20675
Marantz	20539

Setup Code for DVD Players	
Memorex	20695
Microsoft	20522
Mintek	20717
Mitsubishi	21521, 20521
Nesa	20717
Norcent	21003
Onkyo	20503, 20627, 21924, 20792
Oritron	20651, 21980
Panasonic	20490, 21762, 21990
Philips	20503, 20539, 20646, 21914
Pioneer	20525, 20571
Polaroid	21086, 21061
Polk Audio	20539
Portland	20770
Proscan	20522
Qwestar	20651
RCA	20522, 20571, 20717, 20822
Rio	20869
Rotel	20623
Sampo	20752, 20698
Samsung	20490, 20573, 21932, 21075, 20820



Setup Code for DVD Players	
Sansui	20695
Sanyo	20695
Sharp	20630, 20752
Sharper Image	21117
Sherwood	20770
Shinco	20717
Shinsonic	20533
Sonic Blue	20869, 21099
Sony	20533, 20864, 21033, 21904, 21903
SVA	20717
Sylvania	20675
Symphonic	20675
Teac	20717, 21984, 20809
Technics	20490
Theta Digital	20571
Toshiba	20503, 20695
V, Inc.	20123, 20124
Urban Concepts	20503
Xbox	20522
Yamaha	20490, 20539, 20545
Zenith	20503, 20591, 20869

Setup Code for CD Players	
Aiwa	30157
Burmester	30420
California Audio	30029

Setup Code for CD Players	
Labs	
Carver	30157, 30179
Denon	30873
DKK	30000
DMX Electronics	30157
Dynamic Bass	30179
Fisher	30179
Garrard	30420
Genexxa	30032
Harman/Kardon	30157, 30173
Hitachi	30032
Integra	30101
JVC	30072
Kenwood	30826, 30626, 30028, 30037, 30036, 30190
Krell	30157
Linn	30157
Magnavox	30157
Marantz	30626, 30029, 30157
MCS	30029
Miro	30000
Mission	30157
MTC	30420
NSM	30157
Onkyo	30868, 30101
Optimus	31063, 30000, 30032, 30037, 30420, 30179, 31075,

Setup Code for CD Players	
	30145
Panasonic	30029
Parasound	30420
Philips	30626, 30157
Pioneer	31063, 31062, 30032
Polk Audio	30157
Proton	30157
QED	30157
Quad	30157
Quasar	30029
RadioShack	31075
RCA	31062, 30032, 30420, 30179, 30053
Realistic	30420, 30179
Rotel	30157, 30420
SAE	30157
Sansui	30157
Sanyo	30179
SAST	30157
Sharp	30861, 30037
Silsonic	30888, 30036
Sonic Frontiers	30157
Sony	30490, 30000, 30100
Soundesign	30145
TAG McLaren	30157
Tascam	30420
Teac	30420



Setup Code for CD Players	
Technics	30029
Victor	30072
Wards	30157, 30053
Yamaha	30888, 30036
Zonda	30157

Setup Code for Audio Amplifiers	
Bose	30674
GE	30078
JVC	30331
Marantz	30321
Nakamichi	30321
NEC	30264
Optimus	30395
Realistic	30395
Sansui	30321
Shure	30264
Sony	30689
Soundesign	30078
Victor	30331
Wards	30078
Yamaha	30354, 30133

Setup Code for Audio Amp/Tuners	
ADC	30531
Aiwa	31405, 31243, 30121
Anam	31609, 31074

Setup Code for Audio Amp/Tuners	
Audiotronic	31189
Bose	31229
Capetronic	30531
Carver	31189
Coby	31263
Denon	31360, 31142, 30904
Fonmix	31360
Glory Horse	31263
Harman/Kardon	30110
Hitachi	31273
Inkel	30027
Integra	30135
JBL	30110
JVC	30074, 31263
Kenwood	31313, 31570, 30027
KLH	31428
Magnavox	31189, 31269, 30531
Marantz	31189, 31269, 30039
MCS	30039
Onkyo	30842, 30135
Optimus	31023, 30670, 30531, 31074
Panasonic	31518, 30039

Setup Code for Audio Amp/Tuners	
Philips	31189, 31269
Pioneer	31023, 30150, 30014, 30630, 30531
Proscan	31254
Qisheng	31609
Quasar	30039
RadioShack	31263
RCA	31023, 31609, 31254, 30531, 31074
Sharper Image	31263
Silsonic	30176
Sony	31058, 31441, 31258, 31759
Soundesign	30670
Stereophonics	31023
Sunfire	31313
Teac	31074, 31267
Technics	31308, 31518, 30039
Thorens	31189
Victor	30074
Wards	30014
Yamaha	30176, 31276, 31176



