



Dear VIZIO Customer,

Congratulations on your new VIZIO High Definition LCD Television purchase. This User Manual covers E320VA, E321VA, E370VA and E420VA 60HZ series models, for any specific difference between the models please refer to the specification sheets in Chapter 6. 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) 698-8462 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 _____

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This product qualifies for ENERGY STAR in the "factory default (Home Use)" setting and this is the setting in which power savings will be achieved. Changing the factory default picture setting or enabling other features will increase power consumption that could exceed the limits necessary to qualify for Energy Star rating.



THE TRADEMARKS SHOWN HEREIN ARE THE PROPERTY OF THEIR RESPECTIVE OWNERS; IMAGES USED ARE FOR ILLUSTRATION PURPOSES ONLY. VIZIO, THE V LOGO, WHERE VISION MEETS VALUE AND OTHER VIZIO TRADEMARKS ARE THE INTELLECTUAL PROPERTY OF VIZIO INC. PRODUCT SPECIFICATIONS ARE SUBJECT TO CHANGE WITHOUT NOTICE. © 2010 VIZIO INC. ALL RIGHTS RESERVED.

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

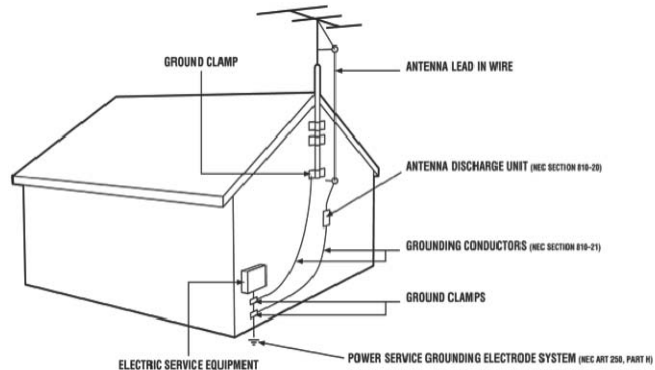
External Television Antenna Grounding

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

The nationwide switch to digital television broadcasting will be complete on June 12, 2009, but your local television stations may switch sooner. After the switch, analog-only television sets that receive TV programming through an antenna will need a converter box to continue to receive over-the-air TV. Watch your local stations to find out when they will turn off their analog signal and switch to digital-only 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.

For additional information, please contact the parties listed below, as appropriate:

FCC (US Federal Communications Commission)

<http://www.fcc.gov/>

Phone: 1-888-CALL-FCC (1-888-225-5322)

TTY: 1-888-TELL-FCC (1-888-835-5322)

Fax: 1-866-418-0232

E-mail: fccinfo@fcc.gov

NTIA (National Telecommunications and Information Administration)

<http://www.ntia.doc.gov/>

1-888-DTV-2009

Listings of US Television Stations

<http://www.high-techproductions.com/usTVstations.htm>

Note: Your HDTV comes with a built-in tuner capable of processing digital broadcasts. No extra converter box is needed.

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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.

Due to the weights and sizes of your HDTV models, 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 E320VA or E321VA or E370VA or E420VA

Detachable Stand Base

4 Thumbscrews (to attach Stand)

VIZIO Remote Control

Power Cord

Screen Cleaning Cloth

This User Manual

Quick Setup Guide

Registration Card

2 AA Batteries for the Remote Control



Caution: 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.

HDTV Accessories and Services

Additional certified accessories for your HDTV are sold separately, including:

- Wall mounts
- High Definition cables
- Extra or replacement remote controls
- Sound Bars
- Blu-ray DVD Players

VIZIO also offers installation services and extended warranty services for your HDTV.

To purchase or inquire about additional accessories and services for your VIZIO HDTV visit our website at www.VIZIO.com or call us toll free at **877-MYVIZIO** (877-698-4946).

Chapter 1 Setting Up Your HDTV

- Read this user manual carefully before installing your HDTV.
- For the power consumption of your HDTV, please check the specification sheet for your model in Chapter 6. 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 compromised.
- Install your HDTV on a flat surface to avoid tipping.
- For proper ventilation, you must allow a 1" space between the back of your HDTV and the wall.
- Avoid installing your HDTV in places with high humidity, dust, or smoke so you do not shorten the service life of the electronic components.
- Install your HDTV in a level, landscape orientation, with the VIZIO logo at the bottom to prevent poor ventilation and excessive component damage.
- If you want to mount your HDTV on the wall, see below for additional information.
- Read this user manual carefully before installing your HDTV.

VIZIO offers professional installation. Contact VIZIO for more information on these services at **877-MYVIZIO** (877-698-4946) or www.VIZIO.com.

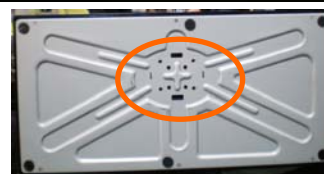
Attaching the TV Stand

Note: We strongly recommend that two people perform the setup and assembly due to the weight and size of the TV.

To unpack the TV and stand base:

1. Remove the remote control, batteries, and power cord from the foam end caps.
2. Remove the two top foam end caps.
3. Remove the stand base under foam end cap.
4. Remove the TV from the box and lay it face down on a clean, flat surface.

Note: Make sure that the surface is free of debris to prevent the TV screen from getting scratched.



To attach the TV stand base:

1. Line up the stand neck (attached to the TV) with the stand base.
2. Push the stand base onto the stand neck.
3. On the bottom of the base, insert the included (Qty. 4) thumbscrews and tighten it.
4. Move the TV into an upright position.



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.

Wall Mounting Your HDTV

Your HDTV can be mounted on the wall for viewing. If you choose to mount your HDTV on the wall, follow the instructions below.

1. Write down the serial number located on the back of your HDTV in the space provided on page 1 to have it handy if you need to call for support.
2. Remove the stand base and neck:
 - a. Disconnect the cables from your HDTV.
 - b. Place your HDTV face down on a soft, flat surface to prevent damage to the screen.
 - c. Remove the TV stand base per above instructions.
3. Mount your HDTV on the wall:
 - a. Attach your HDTV to a wall mount (sold separately) using the mounting holes in the back panel of your HDTV (see illustration at the right).
 - b. Read the instructions that came with your specific wall mount to properly hang your HDTV.



E320VA E321VA E370VA		Wall Mounting Specifications	
Screw Size		•	M6
Screw Length		•	10mm
Screw Pitch		•	1.0 mm
Hole Pattern		•	VESA standard 200mm x 200mm

E420VA		Wall Mounting Specifications	
Screw Size		•	M6
Screw Length		•	10 mm
Screw Pitch		•	1.0 mm
Hole Pattern		•	VESA standard 400mm x 200mm

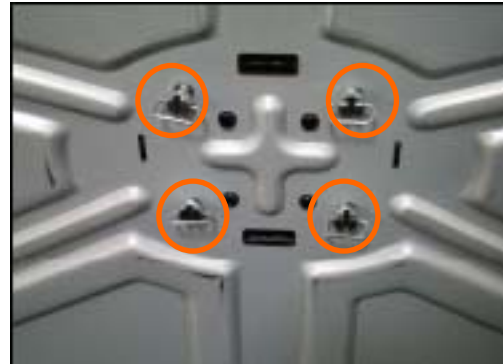
NOTE: If using wall mounts different from our certified ones, please verify that they are UL/CSA/ETL listed wall mount brackets with suitable weight specs.

Preparing your LCD HDTV for Wall Mounting

Your VIZIO HDTV 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 base stand:

5. Unplug all cables from the HDTV.
6. Place your HDTV face down on a soft and flat surface (blanket, foam, cloth, etc) to prevent any damage to the TV.
7. Remove the total of eight (4) screws holding the base stand to the TV.
8. 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 200mm horizontally and 200mm vertically.

The screw type required is metric M6, .8mm 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).

Chapter 2 Basic Controls and Connections

Front Panel

POWER 'VIZIO' LIGHT– The VIZIO name lights white when powered on and it will get dimmer when powered off.


REMOTE CONTROL SENSOR and LIGHT SENSOR – This is the window through which 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.

The light sensor allows controlling the adjustment of the backlight intensity automatically by sensing the ambient lighting, this is a feature selectable through the OSD menu.



all

Side Panel Controls

() – Press this button once to power your TV on. 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 confirms the selection to be adjusted or takes the user to the next level of the menu.

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.

INPUT (LAST) – Repeated pressing of this button steps through the input sources in the following sequence: DTV/TV, AV, COMPONENT, HDMI1, HDMI2, HDMI3, HDMI4, RGB and PHOTO. 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 allows returning to previous menu level. When the OSD is not active, this button will show the current input selections.



Note: When using the A/V input (usually, a composite signal) the video signal (yellow color coded cable) need to be connected to the green jack connector. Expect to see a black/white video in the Component input, if it is selected by accident.

Rear and Side Panel Connections




No.	Connection	Description
1	SPDIF	Connect an SPDIF Optical cable from your HDTV to your home theater system to play digital audio through your home speakers.
2	DTV/TV (Cable/Antenna)	Connect to an antenna or digital cable for digital TV. For digital TV stations in your area visit www.antennaweb.org .
3	COMPONENT (YPb/CbPr/Cr with Audio L/R)	Connect your primary source component (like 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. Use white for left audio and red for right audio. When using the A/V input (usually, a composite signal) the video signal (yellow color coded cable) need to be connected to the green jack connector.
4	RGB PC /PC Audio	Connect the video from a computer here. Connect the audio (1/8 in. mini plug stereo connector) from a computer here.
5	USB	Connect a storage source (format FAT32) JPEG files (like a hard drive or thumb drive or card reader). It is recommended to back up your important document files as a precaution to prevent lost of data. This input is also used as a factory service connection for authorized personal, unauthorized usage of this connection to attend service of this equipment will void the manufacturer's warranty of the TV.
6	HDMI	Best connection in the field to transmit digital Audio and Video content. Connect an audio/video source for digital video such as a DVD multimedia player, a digital set-top box for cable or satellite receiver system. Your TV comes with four HDMI inputs.

NOTE: When using the A/V input (usually, a composite signal) the video signal (yellow color coded cable) need to be connected to the green jack connector. Expect to see a black/white video in the Component input, if it is selected by accident.

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

Remote Control Buttons

INPUT—Press to cycle through the various devices connected to your TV (called Inputs). The inputs cycle in the following sequence: DTV/TV, AV (Composite), COMPONENT, HDMI 1, HDMI 2, RGB and USB. Once you have stepped through the entire sequence, you will return to the beginning.

POWER ()—Press to turn the TV on from the Standby mode. Press it again to return to the Standby mode.

TV—Press to select the TV input.

AV—Press to select the AV (Composite) input.

COMP—Press to select the Component input.

HDMI—Press to select the HDMI input. Press repeatedly to cycle between both HDMI inputs.

SLEEP—Press to select the Sleep Timer options: Off, 30, 60, 90 or 120 minutes.

WIDE—Press to cycle through the available aspect ratios or screen formats, the options are Normal, Wide, Zoom, Panoramic and Stretch.

CC (Closed Caption)—Press to select the Closed Caption option. The options are: Off, CC1, CC2, CC3 and CC4 for analog signals and Off, Service1 through Service6 for digital signals when they are being broadcast.

EXIT— Press to exit from open menus.




Up (▲), Down (▼), Left (◀) or Right (▶) navigation buttons — Press to navigate open menus, adjust other TV settings such as Brightness and Contrast, or turn menu options On and Off.

MENU/OK— Press to bring up the OSD menu. When the OSD menu is up, pressing this key select the highlighted option in the menu.

VOL ▲/▼—Press to turn the volume up or down.

CH ▲/▼—Press to change the channels up or down.

MUTE  —Press to turn the sound on and off.

LAST— Press to recall the previously viewed channel. When the Menu is active, press this button repeatedly to go to the previous level or out of the On Screen Menu completely.

Number Button Pad—Press to select a channel or enter a password.

INFO—Press to display program and channel information.

- (DASH) —Press to insert a dash between the main and sub-channels. For example, channel 28-2 would be selected by the button sequence 2, 8, DASH, 2.

The following keys do not function on these models:

Pause (II)—Press this button to pause the slideshow when using the PHOTO feature.

Play (▶)—Press this button to start playing the slideshow.

Stop (■)—Press this button stop and exit out the slideshow.

GUIDE— Press to display program information. It does not apply to this model, follow the INFO description to see the programming information.



Remote Control Range

- The effective range of the remote control is approximately 26 feet (8 meters) from the front of the receiver window and 13 feet (4 meters) at 45° to the left and right.
- Point the remote control at the remote control sensor on the front of your HDTV to send commands.
- Do not place any obstacles between the remote control and the remote control sensor.

VIZIO Remote Control Precautions

- Keep the remote dry and away from heat sources and humidity.
- If your HDTV 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.
- Do not mix old and new batteries or different types of batteries.

Inserting the remote control batteries

1. Remove the battery cover on the back of the remote control.
2. Insert two AA batteries (included) into the remote control, making sure you match the (+) and (-) symbols on the batteries with the (+) and (-) symbols inside the battery compartment.
3. Re-attach the battery compartment 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.

Using a Cable or Satellite Remote







Your VIZIO remote uses codes 11758 and 10178 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.

Cleaning the Housing and Remote Control

1. Use a soft cloth 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 3 Connecting Equipment

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	Description
Best (digital)		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)		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)		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)		Component. 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)		Composite. The complete video signal is carried through this single pin connector. This is the most commonly used video connection.
Best (digital)		USB (Universal Serial Bus). USB is an interface port designed to connect storage devices holding data (FAT32 format: JPEG for image) files without a need to power off the host (TV) unit.

Note: You can use your HDTV Component input to accept A/V signal (Composite) from a source with A/V out, please plug your video signal (yellow connector) into the Component input (green connector) and match up the audio connectors (R and L) for the sound. Expect to see a black/white video in the Component input, if it is selected by accident.

Connecting Your Cable or Satellite Box

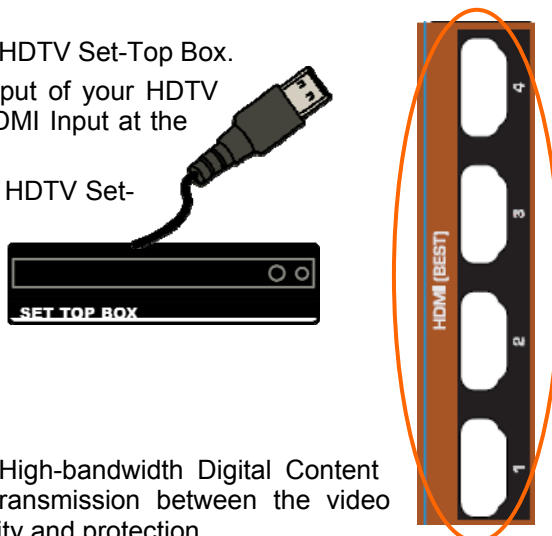
Using HDMI

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. Lengths are 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 at the side 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.

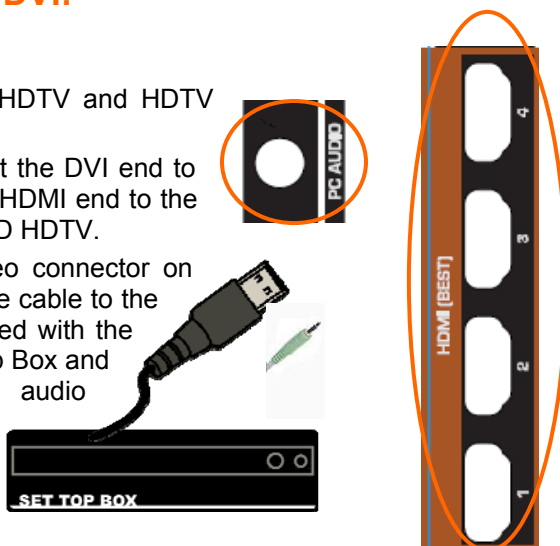


Note:

- 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 or HDMI4 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.

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 at the side of the LCD HDTV.
3. Using an audio cable (1/8' stereo connector on the going into the TV), 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 associated with the RGB input 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.

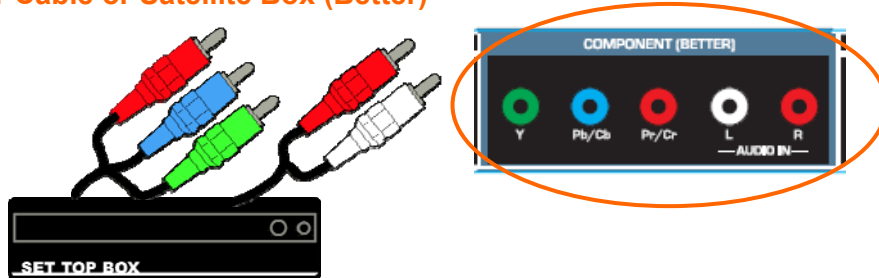


Note:

- 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 or HDMI4 connection. The LCD TV will recognize the DVI connection and obtain audio information from the audio connectors on the rear 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.

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 input 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 input 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 input 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 input at the rear of the LCD HDTV.
6. Turn on the power to the LCD HDTV and HDTV Set-Top Box.
7. Select Component using the INPUT button on the remote or side of the LCD HDTV, or directly by pressing the COMP button on the Remote Control.

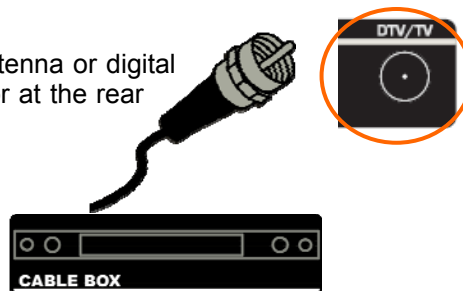
Note:

- 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 HDTV: HDMI, Component and Composite inputs. Based on your home theater configuration, you can decide which option is the right one for you.

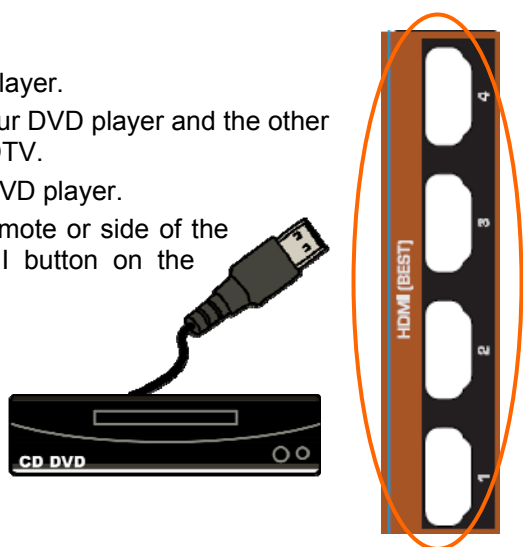
Using HDMI

DVD players that have a digital interface such as HDMI (High Definition Multimedia Interface) should be connected to the HDMI input of your 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 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 at the side 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.

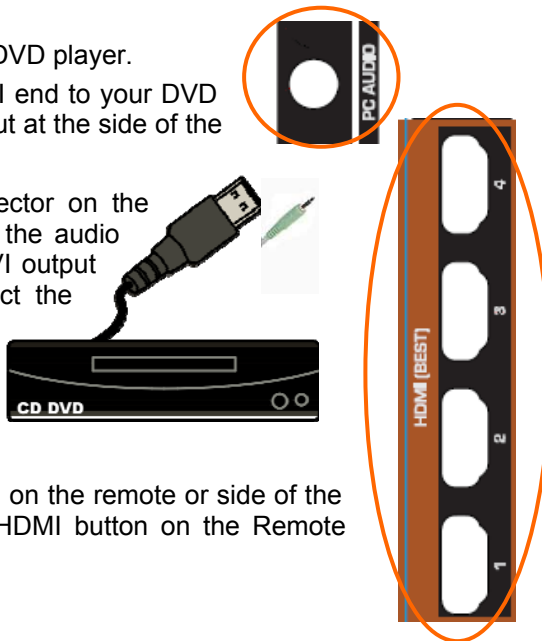


Note:

- If you are already using the HDMI1 input for another component, or you do not want to use the HDMI1 input for the DVD player, you can connect the DVD player to the HDMI2, HDMI3 or HDMI4 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 HDMI Input at the side of the LCD HDTV.
3. Using an audio cable (1/8" stereo connector on the going into the TV), 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 associated with the RGB input at the rear of the LCD HDTV.
4. Turn on the power to the LCD HDTV and your DVD player.
5. Select HDMI-Side using the INPUT button on the remote or side of the LCD HDTV, or directly by pressing the HDMI button on the Remote Control.



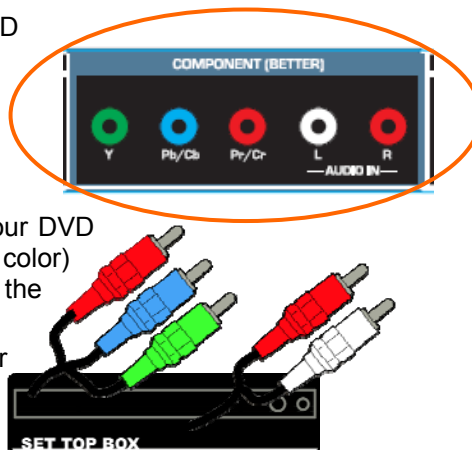
Note:

- If you are already using the HDMI1 input for another component, or you do not want to use the HDMI input for the DVD Player, you can connect the DVD player to the HDMI2, HDMI3 or HDMI4 input. The LCD TV will recognize the DVI connection and obtain audio information from the audio connectors on the rear of the TV.
- 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 input 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 input 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 input 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 input at the rear of the LCD HDTV.
6. Turn on the power to the LCD HDTV and DVD player.
7. Select Component using the INPUT button on the remote or side of the LCD HDTV, or directly by pressing the COMP button on the Remote Control.



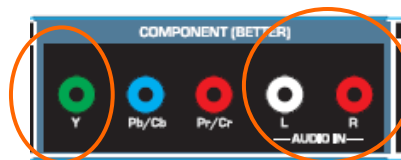
Note:

- 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 Y (green color) connector in the Component input 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 Component input at the rear of the LCD HDTV.
4. Turn on the power to the LCD HDTV and DVD Player.
5. Select AV using the INPUT button on the remote or side of the LCD HDTV, or directly by pressing the AV button on the Remote Control.



Notes:

1. Refer to your DVD player user manual for more information about the video output requirements of the product.
2. Expect to see a black/white video in the Component input, if it is selected by accident.

Connecting a USB (FAT32 Format) Storage Device

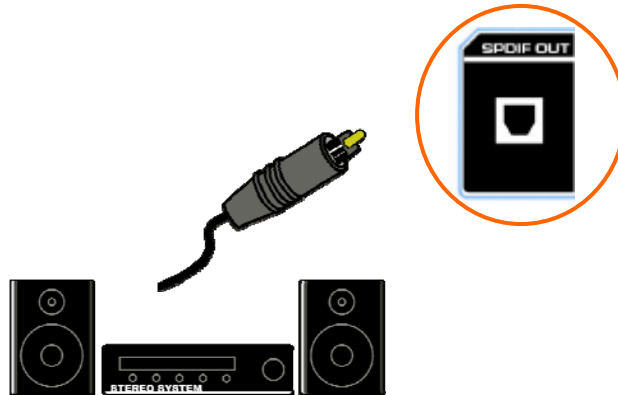
1. Connect a thumb drive, directly inserting it into the USB connection or by using an extension (if thumb drive housing is too big to have it fit in place) cable. Connecting a portable hard drive or card reader to this input is also possible
2. If your HDTV has been turned off, please turn it on.
3. The TV will start reading the contents in the USB device automatically to make sure of compatibility of files (JPEG format).
4. Please follow the instructions in the Multimedia section to either see the pictures (picture by picture or as a slideshow).



Note: This input is also used as factory service port. Please back up important files to prevent lost of data. Format your device to FAT32 and load your picture files, and enjoy your viewing. A high speed FAT32 storage device is also needed; preferable, new and memory emptied device for a better performance at least a 1Gb of memory device must be used.

Connecting an external Receiver/Amp

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



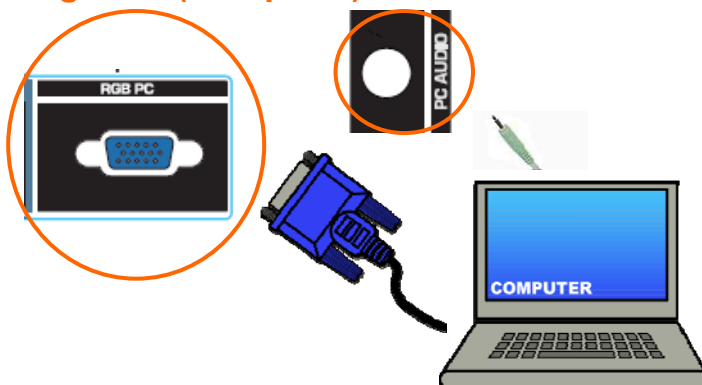
1. Turn off the power to the HDTV and Receiver/Amp.
2. Using an audio cable (optical cable), connect the cable to the audio input connectors on the Receiver/Amp and connect the other end to the SPDIF OUT audio optical connector at the rear of the LCD HDTV.
3. Turn on the power to the HDTV and Receiver/Amp.
4. Then press the **MENU/OK** button on the remote control to bring up the On-Screen Display (OSD) menu.
5. Press any navigation arrow button on the remote control to select the Audio menu.
6. Press **MENU/OK** button on the remote control to enter the Audio sub-menu. Press any navigation arrow button and select SPEAKERS.
7. Press **MENU/OK** button to select Off so that the sound from the TV will now be routed through your Receiver/Amp system.
8. Press **EXIT** key to exit the menu display.



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.

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. Using a 1/8" stereo cable, 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 either 1360x768 at 60Hz (E320VA model) or 1920x1080 at 60Hz (E321VA, E370VA and E420VA model) .
- 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.

Chapter 4 Setting Up to Watch Television

Basic LCD HDTV Start Up


1. **Connect Audio and Video Cables**

Connect audio and video cables from the desired components to your HDTV as described in "Connecting Devices."



2. **Connecting the Power Cable**

Connect one end of the power cord to the power cord connector on the back of your HDTV. Then connect the other end into a power outlet.

3. **Turning Power On**

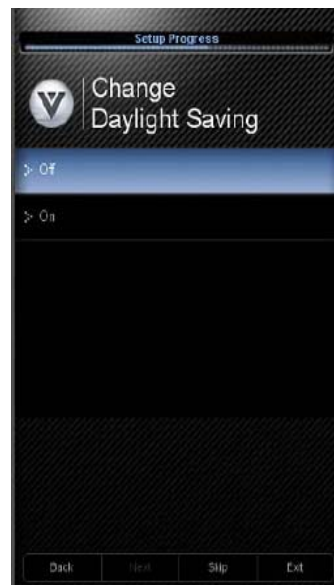
Press  on the remote control to turn on your HDTV.



4. **Initial Setup**

The Welcome Screen showing the *Language* screen option. Press  or  to highlight your language, and then press **MENU/OK** key to select it.

5. The *Mode Setting* screen opens. Select between **Home Mode** and **Retail Mode**, selecting Home Mode will give you an opportunity to save energy. Press the **MENU/OK** button. If Retail Mode is selected by mistake; the next option will allow you to switch your selection back to Home Mode.

6. Press the **MENU/OK** button to confirm your choice.



7. Next screen will provide you the option to select your Time Zone, press  or  to select your choice. Press **MENU/OK** button to confirm the selection.



If your Time Zone observes the daylight savings, the next display will give the choice to select or no select it. Highlight your choice and press **MENU/OK** button to confirm your selection.

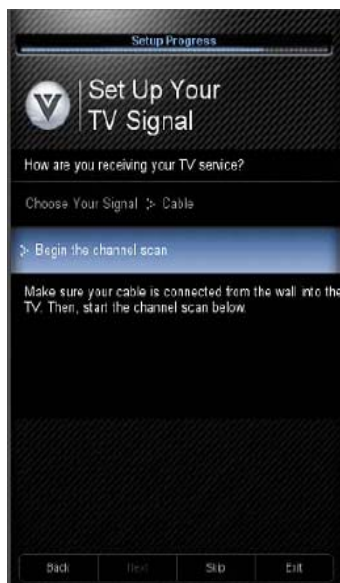


8. At this point if you have an outdoor antenna or use a cable service (No set-top box), the signal source can be selected.

Press **▲** or **▼** to select your input source (Antenna or Cable), then press **MENU/OK** button to confirm it. The scanning of the channels will start.

NOTE: Select Cable only if you receive your cable service without a set-top box.

9. The *Channel Scan progress* screen opens if you selected *Scan*. At this point if you are using a cable or satellite set-top box, please press **MENU/OK** button to exit this process and use your cable box to select the channels.



Note: If you select Stop Scan, you can scan channels at a later time by selecting Channels menu, and then select the Scan Channels option in the menu.

10. If you let the TV finishing the channel scan, the next screen will give the option to continue.

11. At this point, you can either let the TV do the final two steps automatically or press the **MENU/OK** key to continue and finish this procedure.



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

Selecting Inputs

1. Press **INPUT** on the remote or on the side of your HDTV to select the input source that matches the connection you made on the back of your HDTV. A repeated press of **INPUT** cycles you through the options.
2. Turn on your component (cable box, VCR, satellite receiver, DVD player, etc.). You should see a picture on your HDTV after few seconds. If you do not see a picture, press **INPUT** again to select next signal input. Repeat the **INPUT** pressing until the correct input is found.

Note: If the selected input is RF, your HDTV needs to be on either channel 3 or 4 to match the channel on the VCR, cable box, external TV tuner or satellite receiver. Refer to the User's Manual of your equipment for details. This type of configuration is most common with older SD (480i) receivers.

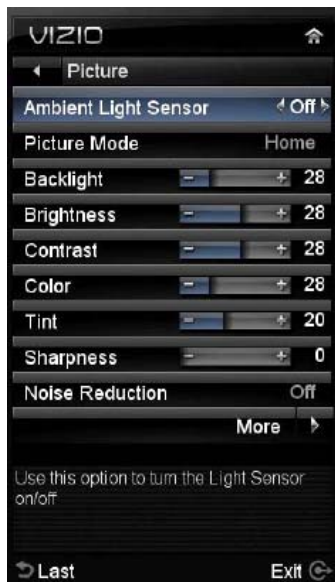


Note: Your HDTV will display the television station or program selected by the cable box, VCR, external tuner, or satellite receiver. Use the remote control that came with that component to change programs or channels. If the service being used is the one which setup includes a box with two outputs for two different (distant) rooms, then scanning channels will help you to find the signal. Be aware that the channel to be selected varies from provider to provider. You may have to call your provider to get the specific channel when using your HDTV. Some examples of these channels are 105, 106, 115, and 116.

Setting the Picture to User's Preferences

1. Press **MENU/OK** button on the remote control. The *Main* menu opens.
2. Press the Navigation arrow keys to select *Picture*, and then press the **MENU/OK** key. The *Picture Settings* menu opens.
3. Press **▲** or **▼** to select Picture mode.
4. Press **◀** or **▶** to select *Custom mode*.
5. Press **MENU/OK** key to select it.

6. The Custom menu opens. Parameters as Backlight, Brightness, Contrast, Color, Tint and Sharpness are adjustable, Noise Reduction is switchable On or Off. Contrast Enhancement, Color Stretch and DCR are switchable On or Off, Make the desired changes and exit the menu by pressing **EXIT** on the remote control.



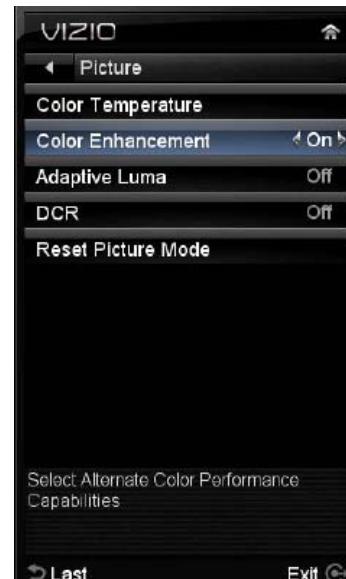
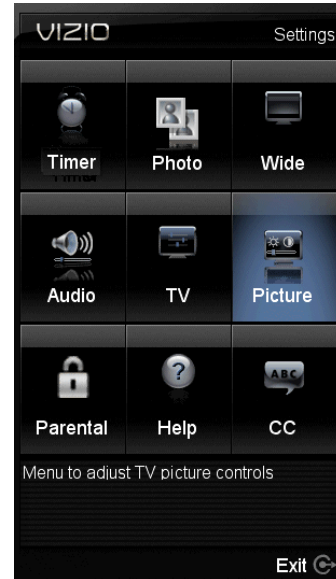
7. If More is selected, then the options are: Color

Temperature

which allows to adjust the balance or intensity of Red, Green and Blue colors, Color Enhancement, Adaptive Luma and DCR (Dynamic Contrast Ratio) are switchable options. The option to reset the settings is also available in this submenu, it allows the modified values to be set to manufacturer's

settings if desired. Exit the entire OSD by pressing **EXIT** or return to previous screen menu by either pressing the **LAST** button on the remote control or by selecting the **◀**

on top left hand side next to Picture Settings.



Using the INFO Guide

Press **INFO** three times on the remote to display program information for the channel you are watching.

The following information is displayed when the **INFO** key is pressed:



Date & Time – It shows the current date and time of the day of your local area, as long as the correct time zone had been selected.

Signal Strength – It displays how strong the signal is being received, it shows as colored bars with green color indicating a strong signal.

Description – It displays the name of the program being viewed as well as the Parental Control rating, if Closed Captioned and if it is a digital channel.

Content – It shows the type (480i, 1080i, etc.) signal and what language the program is being viewed.

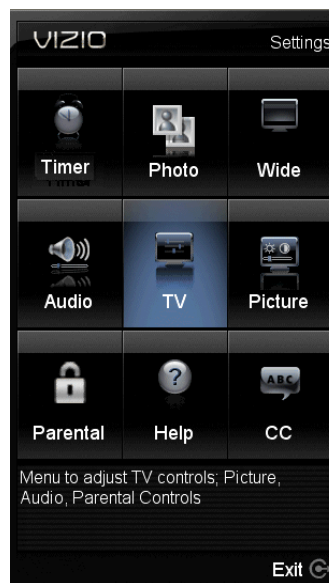
Channel Information – It displays the header of channel physical address as well as the name of broadcaster.

Schedule – It displays up to two events.

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 dim to bright.
2. There are 3 options for selecting your programming:
 - 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.

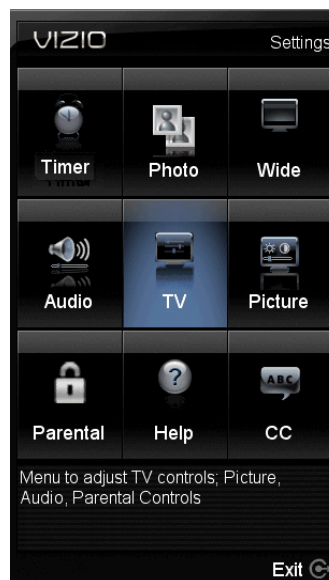


Note: You should be able to see a picture. If you do not, make sure that all of the HDTV connections are secure and you have selected the correct video input source.

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.*

Using the On-Screen Display (OSD)

1. Press **MENU/OK** button on the remote control or the side of your HDTV. The menu opens.
2. Press **▲** or **▼** on the remote control or **VOL +** or **VOL -** on the side of your HDTV to highlight a sub-menu option.
3. Press **◀** or **▶** on the remote control or **CH +** or **CH -** on the side of your HDTV to select the highlighted sub-menu option.
4. Press **MENU/OK** button on the remote control or the **MENU** on the side of your HDTV to adjust the item.
5. Press **EXIT** when finished making adjustments.
6. Press **LAST** key to return to the previous screen or repeatedly to exit the OSD.



Using the Navigation Keys

The Navigation Keys on the remote control are designed to make the use of the OSD easier for you, as shown below:

The **MENU/OK** key functions as a selection button, when the OSD is already displayed, the function of this key is to select the highlighted option.

The **▲** and **▼** arrows make the access to the displayed options faster, if the arrow down is pressed and the desired option is overshoot, then pressing the arrow up will take you to the previous option or vice versa.

The **◀** and **▶** arrows make it easier for the user to adjust values on parameters or features which has a slide bar for settings.



The remote control or the control buttons on the side of your HDTV control the function settings. The On-Screen Display (OSD) lets you adjust the contrast, brightness, and other settings. Changes are saved even when you turn off the TV; Your HDTV has the unique feature of saving your preferred settings to the input being used given a total of nine different selections. The OSD consists of these menu options:

Timer: By selecting this menu setting, you could set the TV to turn Off after a period of time. The option default is set to OFF as default, 30, 60, 90 and 120 minutes are the choices.

Photo: This feature allows viewing taken pictures in a slideshow form. It requires having a USB storage device such as a portable hard drive or thumb drive or card reader being connected through the USB port on the side of the TV as long as it is a **FAT32** formatted high speed device.

Wide: To select how the picture displays on the screen select this option, the options vary depending on the selected input and the content of the program: Normal, Wide, Zoom, Panoramic and Stretch are the choices.

Audio: This function encompasses all parameters to setup the audio preferences. The options are: SRS TruSurround HD, SRS TruVolume, Equalizer, Balance, Speakers, Digital Audio Out, Bass & Treble and Reset Audio

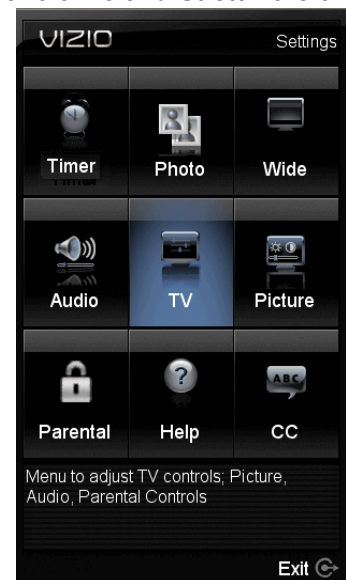
TV: The TV menu has the options to set up your TV if the original setting process was skipped. You can select Input, scan channels, change the Language, Set the Date & Time or go through the PC Settings if computer is used as the signal source. This option is the default choice when the OSD menu is activated.

Picture: This option will display all parameters which setting values would produce the video quality to the end user's preference. The choices under this selection are: Ambient Light Sensor, Picture Mode, Backlight, Contrast, Color, Tint, Sharpness, Noise Reduction, Color Temperature, Adaptive Luma, DCR.

Parental Control: This option covers all requirements to help adults on preventing children from watching undesirable content or programs. To obtain the submenu, a four-digit PIN or password needs to be input. These are the choices and features provided for this selection: Ratings Locks, Channel Locks, Front Panel Lock, Change PIN and Reset Locks.

Help: Selecting this menu brings up the options: System Info and Reset All Settings.

CC (Closed Caption): Use this menu to adjust the closed caption being received with program being viewed.



Unique TV Features

This HDTV comes with some extra features to make your TV experience more enjoyable. They are described as follows:

1. **Photo:** This feature allows using storage devices such as a portable hard drive or thumb drive or card reader as long as it is a **FAT32** formatted device to display the pictures (JPEG files) as a slide show. Through the Photos menu, you are able to Browse (select which pictures to show and how to show them using Picture Settings from main menu), View Slideshow (select to start your slide show) and Slide Settings (select how to display the pictures; Repeat, Shuffle, Full Screen, Pace and Mode). If the message "No Thumbnail Preview" is shown, it means that the thumbnail is not available for this picture, but still the picture is available to be shown. Depending on the size of the picture file and directory, it could take a longer time to display or change the picture .

Note: To prevent the loss of data or important files, it is recommended to use a clean or newly formatted device or to make sure that the files have been backed up. VIZIO cannot be held liable if proper measurements and recommendations are not followed to prevent the loss of important data.

Pressing either individual (TV, AV, COMP, HDMI) input keys or the **LAST** key to exit this feature.

2. **Channels:** The Channels menu has the following added features: Skip Channel (allows you to select what channels to skip by group or individually), Additional Scan (rescan channels without the loss of previous scanned table) and Channel Name Edit (select it to name your favorite channels as well as these channels which are broadcast without any header information to preferred names or labels).
3. **Picture:** In the Picture menu the Fast Response feature is added for game players to improve picture response.
4. **Parental Control:** In this menu, the User Control Lock is added to prevent the use of the TV by individuals to whom supervision is required, after keying your password, this option will be displayed in the Parental Control menu. If it is selected, the control buttons on the side of the TV will become inactive (nonfunctional) until this option is unchecked by using the remote control to turn on the TV and going back to the Parental Control menu.
5. **Input:** In the TV Settings menu two new features are added: Input Labels (allows you to name the different inputs according to your preferences) .

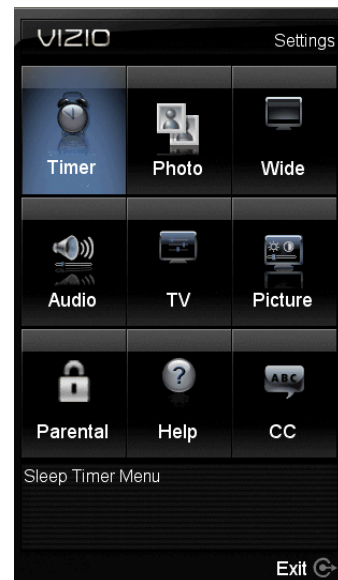
Reminder: When using the media (Photos) features a USB FAT32 formatted high speed storage device is needed with at least a storage capacity of 1Gb of memory for better performance of these features.

Adjusting Settings



When viewing DTV / TV or an HDMI, Component, or AV, or Storage Device source, the following picture adjustment OSD screens are available when you press **MENU/OK** button on the remote control.

Press **▲ / ▼ / ◀ / ▶** to highlight and select the choice, then press **MENU/OK** key to select the desired adjustment, and then press the **EXIT** key when finished making adjustments. Press **LAST** or **Back** to return to the previous screen or repeatedly to exit the OSD.



Adjusting Timer Settings

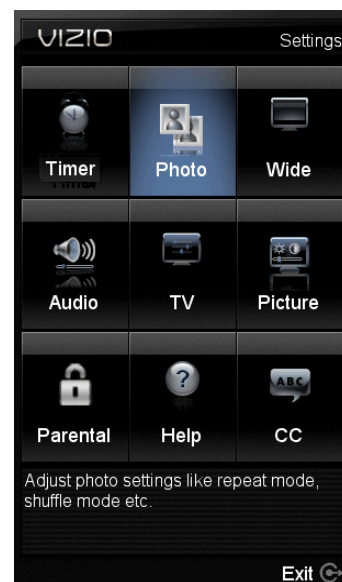
To have the TV to turn off after a period of time, please select the Timer option. This option has the following periods: 30, 60, 90 and 120 minutes, it comes with Off as the manufacturer setting.

Adjusting Photo Settings

In the Photo feature, you have the following choices:

The following options are available in the Photos menu:

1. **Browse Photos** – This option switches to Photos mode in a browse view screen, allowing the user to see thumbnails of the photos, if available.
2. **View Slideshow** – This option switches to Photos mode and starts the slide show displaying the images in your USB storage device.
3. **Slide Settings** – This option allows controlling the behavior or ways of how you would like to display the images or pictures. Under these settings, the choices are: Repeat and Shuffle, Full Screen (it stretches the picture to fill the screen) and Speed (elapsed time between pictures).



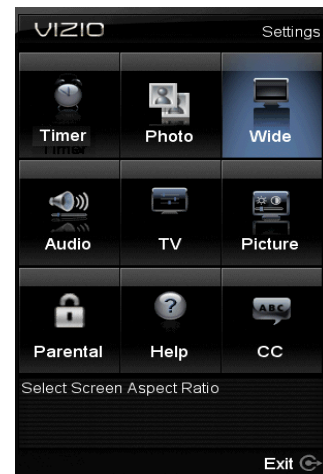
Adjusting Wide settings

The following table shows the different screen modes and display sizes according to the content being sent to the HDTV.

Screen Mode	480p/480i(4:3)	480i/480p/720p(16:9)	1080i/1080p(16:9)	RGB(4:3)	RGB(16:9)
Type					
Content					
Normal					
Wide					
Zoom					
Panoramic					
Stretch					

Note: The red lines show the video signal being over scanned.

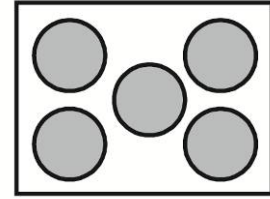
Normal	SD(4:3) with cropping 3% and maintain aspect. SD/HD(16:9) with no cropping. RGB with no cropping.	Wide	SD (4:3) H & V with cropping 3%. SD/HD (16:9) H & V with cropping 2.5%
Zoom	For signal with Letter Box, 4:3 signal --the H cropping: 3%. V cropping: 14% (reference only) 16:9 signal --the H cropping: 14%. V cropping: 14% (reference only)		
Panoramic	H & V overscan cropping 3% and stretched out full screen(Only support for SD(4:3))		
Stretch	H overscan with cropping 12.5% V overscan with cropping 2.5%(Only support for SD/HD(16:9)) RGB(4:3) extend to full screen RGB(16:9) H overscan with cropping 12.5%		



The following paragraphs describe in detail the differences of the Aspect Ratio being processed by the TV:

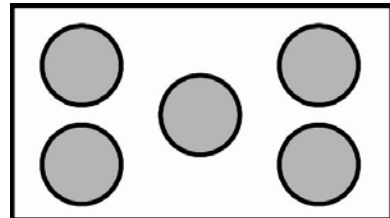
Normal Mode

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.



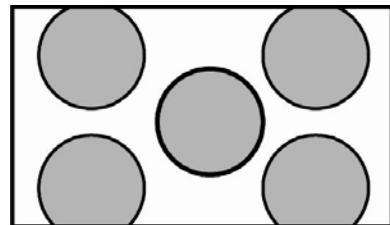
Wide Mode

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 of the screen.



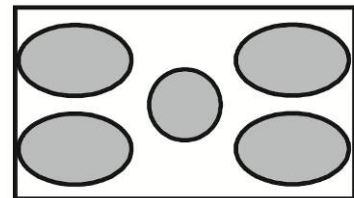
Zoom Mode

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.



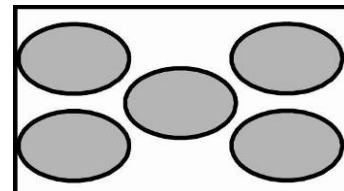
Panoramic Mode

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.



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.



Adjusting the Audio Settings

When viewing a DTV / TV or an HDMI, Component, AV, or PC source, the following audio adjustment OSD screens are available when you press **MENU/OK** key on the remote control.

Press **▲ / ▼ / ◀ ▶** to highlight and select the choice, then press **MENU/OK** key to select the desired adjustment, and then press the **EXIT** key when finished making adjustments.

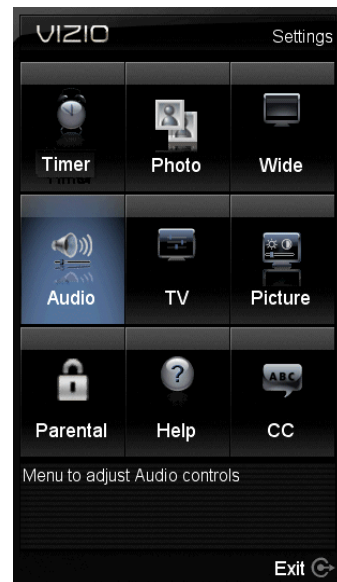
The following options are available in the *Audio* menu:

1. **SRS TruSurround HD™** — Turn the simulated surround feature *On* or *Off*.
2. **SRS TruVolume™** — When the programming switches to a commercial or when changing from channel to channel, volume fluctuations occur. The SRS TruVolume™ provides the listener with a comfortable and consistent volume level.
3. **Equalizer Settings** — To adjust the level for different frequencies of the Stereo audio signal, use this option.



This option is available only if SRSTruSurround HD feature is Off.

4. **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.
5. **Speakers** — Turn off the internal TV speakers when listening to the audio through your home theater system.
6. **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.



- **Auto** — Select to detect either Dolby Digital or PCM audio automatically to play through stereo amplifier if Optical Out is being used.

- **Forced PCM** - Select to output PCM audio to your stereo amplifier if Optical Out is being used.

7. **Bass & Treble**— Adjust low and high frequency sounds. You can also adjust for bass and treble boost or attenuation. This option is available only if SRSTruSurround HD feature is Off.

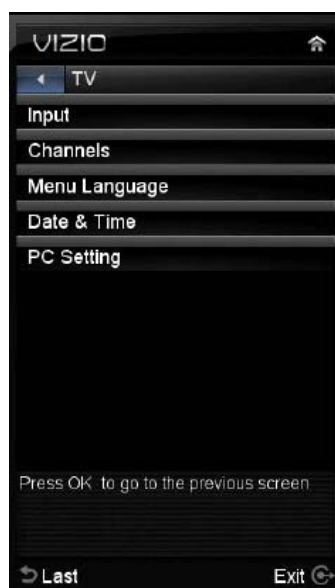
8. **Reset Audio** — This option allows the reset of any changes done to these parameters within the Audio menu.

Adjusting the TV Settings

If you did not set up your HDTV for DTV / TV channels using the Initial Setup screens or if your setup has changed, you can do so from the **TV** menu.

Press **MENU/OK** key to bring up the OSD menu, the default option is **TV**. Select it by pressing either the **MENU/OK** key

The following options are available in the **TV** menu:



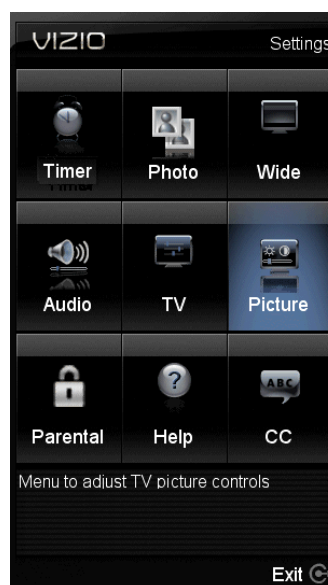
1. **Input** - This option allows to select the input, it being either DTV/TV, A/V, Component, HDMI1, HDMI2, HDMI3, HDMI4, RGB and PHOTO.
2. **Channels** - This option allows to select the type of signal input, it being either antenna signal (over the air) or direct cable service (no a set-top box).
3. **Menu Language** - This option allows selecting the language to which it is preferred to have the OSD menu and instructions available to you.
4. **Date & Time** – Allows adjusting the displayed time and date.
5. **PC Settings** – If the selected input is connected through RGB (computer being used), this option allows adjusting of display to accommodate the signal content.



Adjusting the Picture Settings

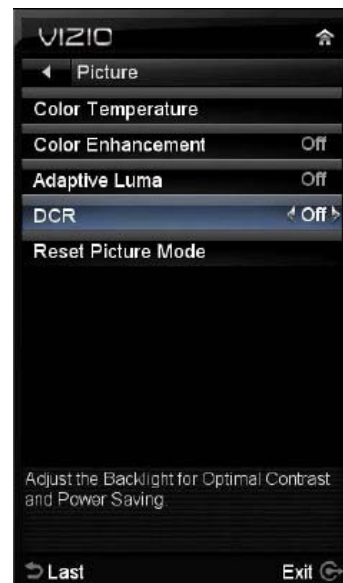
When viewing DTV / TV or an HDMI, Component, or AV source, the following picture adjustment OSD screens are available when you press **MENU/OK** button on the remote control.

Press **▲ / ▼ / ◀ / ▶** to highlight and select the choice, then press **MENU/OK** key to select the desired adjustment, and then press the **EXIT** key when finished making adjustments.



The following options are available in the *Picture* menu:

1. **Ambient Light Sensor** – This feature allows adjusting the backlight level accordingly to the amount surrounding ambient lightening. It is default to Off. When activated, adjustment of the Backlight is not available.
2. **Picture Mode** - Select *Home*, *Movie*, *Retail*, *Game*, *Custom*.
3. **Backlight** – Backlight adjusts the overall brilliance of the picture. It does not affect the Brightness (black level) or Contrast (white level) of the picture. If **DCR** or **Ambient Light Sensor** is activated, backlight adjustment is not available.
4. **Brightness** – This option adjusts the black levels 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.
5. **Contrast** – This option adjusts the white levels 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.
6. **Color** – This option will help the overall color saturation of the image being displayed on the screen.
7. **Tint** – This option adjusts the hue of the picture. The easiest way to set hue is to look at flesh tones and adjust for a realistic appearance. In most cases, the default middle position is correct.
8. **Sharpness** – This option setting 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.
9. **Noise Reduction** – This option diminishes picture artifacts caused by the digitizing of moving images, the settings being Off, Low, Medium and High.
10. **Color Temperature** – Color Temperature is the “warmness” or “coolness” of the white areas of the picture. Adjust your HDTV color temperature preferences: Cool, PC, Normal and Custom are the choices. Custom allows adjusting the *Red*, *Green*, and *Blue* color levels.
11. **Color Enhancement** – This option enhances the white levels in the picture.
12. **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 option will lower the APL to counteract this effect.
13. **DCR** (Dynamic Contrast Ratio) - DCR (Dynamic Contrast Ratio) automatically adjusts the contrast between brighter and darker scenes. When activated, adjustment of the Backlight is not available.

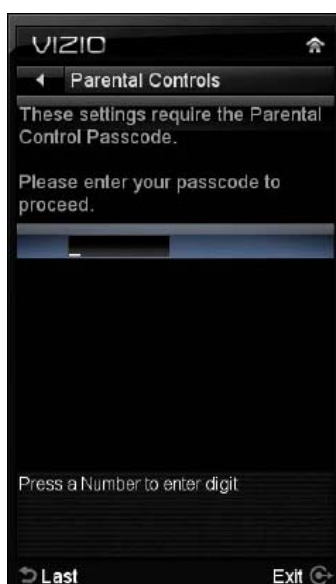


14. **Reset Picture** – This option allows the user to reset any changed value in the Picture menu to the factory value without altering other menu settings.

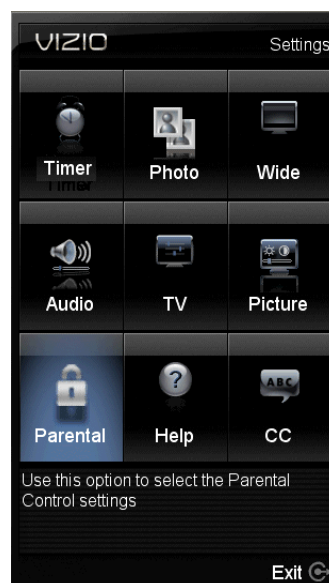
Adjusting the Parental Control settings

When viewing a DTV / TV or a component, or AV source, the following parental control OSD screens are available within the *Parental Control* OSD menu. Parental Control options are not available when viewing an HDMI source.

You can restrict certain channel and program viewing by turning on parental controls. Selected programs, movies and channels can then be made available only after an authorized password has been entered. **You could select your password when entering Parental Control first time.**



Press **▲ / ▼ / ◀ / ▶** to highlight and select the choice, then press **MENU/OK** key to select the desired adjustment, and then press the **EXIT** key when finished making adjustments.



The following options are available in the *Parental* menu:

1. **Ratings Enable** – This option allows blocking channels based on the ratings established by regulations.
2. **Channel Locks** – This option allows blocking channels no matter what content.



3. **USA - TV** – This option allows blocking of selected TV or Cable channels based on ratings established for US broadcasts. Select the desired rating and press **MENU/OK** to block (lock) or unblock (unlock).



TV Rating Definitions:	TV Rating Content Definitions
Y – All children	A – All subratings
Y7 – Older children	D – Sexual dialog
G – General audience	L – Adult language
PG – Guidance suggested	S – Sexual situations
14 – Strongly cautioned	V - Violence
MA – Mature audience	FV – Fantasy violence

4. **USA - Movie** – This option allows blocking of selected TV or Cable channels based on ratings established for US broadcasts. Select the desired rating and press **MENU/OK** key to block (lock) or unblock (unlock).



Movie Rating Definitions:

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

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



Movie Rating Definitions:

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+ – Adults programming

6. **CAN – French** – This option allows blocking of selected Canadian French TV or Cable channels based on age.



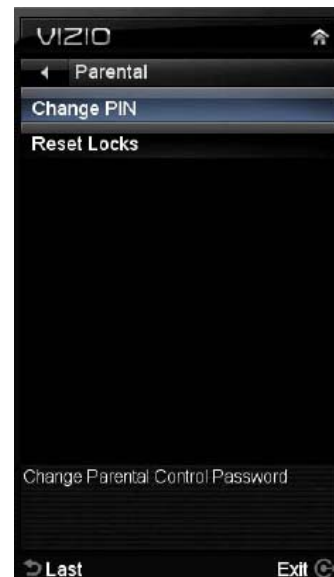
Movie Rating Definitions:

- 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

7. **Alternative Rating Region** – This is reserved for future use in the event that the parental control system is ever updated. Your HDTV will be able to receive and update the rating system to it.



8. **Block Unrated Shows** – This option allows blocking of unrated content.
9. **User Control Lock** – This option allows blocking the usage of the panel controls on the side of your HDTV.
10. **Change PIN** – This option allows creating a new PIN (password) to use Parental Control Settings menu.
11. **Reset Locks** – This option allows resetting the changes made in the Parental Control Settings menu, using this option there is no need to individually reset the settings unless it is desired (except the item of Alternative Rating Region).



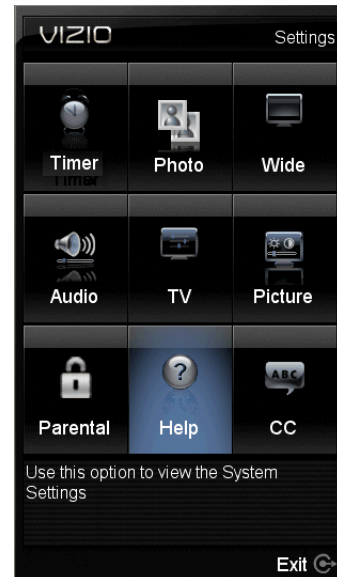
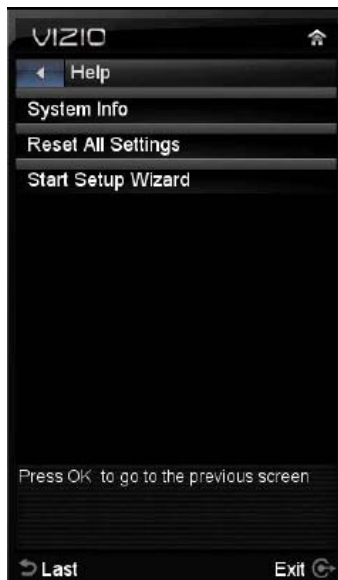
NOTE: Make sure you write down and store the new password in a secure place.

Adjustments on the Help Menu

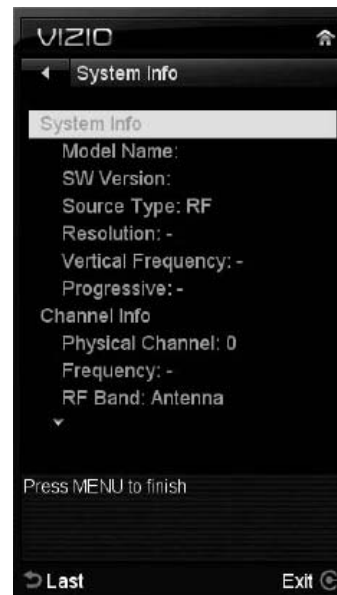
The Help Menu allows seeing the up to date information regarding your HDTV as well as the option to reset all values of the TV parameters and features to defaults (factory) settings.

The following options are available in the System menu:

1. **System Info** – The display shows information or content regarding your HDTV.



2. **Reset All Settings** – Settings are reset to factory defaults.



Note: This does NOT reset the Parental Control Password, and the previously scanned channels are not removed.

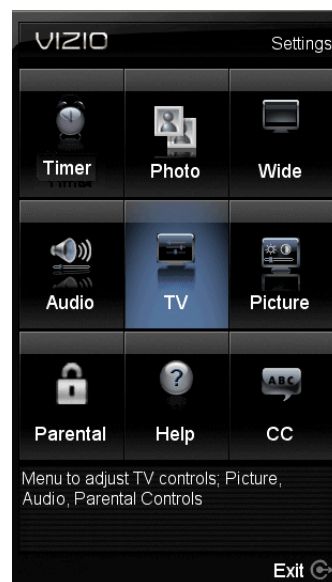
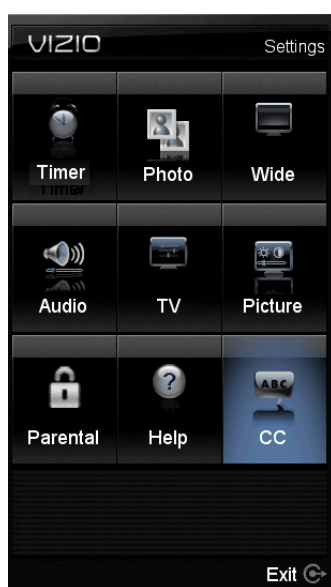
3. **Start Setup Wizard** – Select this option to return to the Initial Setup when your HDTV was used for the first time.

Note: This will reset the Parental Control Password, and the previously scanned channels will be removed.

Adjusting the CC (Closed Caption) settings

When viewing a DTV / TV or an HDMI, Component, AV, or PC source, the following setup adjustment OSD screens are available when you press **MENU/OK** key on the remote control.

Press **▲ / ▼ / ◀ / ▶** to highlight and select the choice, then press **MENU/OK** key to select the desired adjustment, and then press the **EXIT** key after making adjustments.



When selecting CC (Closed Caption), the screen will display what is being said in the program. It would allow the viewer to follow with a low level on the volume if the content of the signal or program being viewed carries this format. Your HDTV will activate this feature allowing the user to follow the program without disturbing the surrounding people.

The following picture shows the options within this menu. It is base on the type of content carry by the signal.

NOTE: When a computer is the source, the CC option is not available.



Chapter 5 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 1-877-698-4946 or e-mail us at techsupport@vizio.com.

Problem	Solution
No power.	<p>Make sure the power button is ON (VIZIO Logo glows white).</p> <p>Make sure AC power cord is securely connected to the AC socket.</p> <p>Plug another electrical device (like a radio) to the power outlet to verify that the outlet is supplying power.</p>
No sound.	<p>Press the Volume + (Up) key on the remote control</p> <p>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</p> <p>Check your audio settings. If TV input is selected, audio may be set to SAP, or speakers are set to off.</p> <p>If external devices are selected input, check the audio connections.</p>
If the screen is black.	<p>Make sure the power button is ON (VIZIO Logo glows white).</p> <p>Press the INPUT button on the TV or the Remote.</p> <p>Check the input connections.</p>
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.	<p>Press only one button at a time.</p>
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>

Problem	Solution
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.	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.
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 correctly.</p>
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.	<p>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.</p> <p>However, due to variances in broadcast practices, it is possible some image distortions can occur.</p>

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 6 Specifications

Product specifications may change without notice or obligation.

E320VA Specifications	
Panel	32" Diagonal (31.51" Diagonal viewing), 16:9 Aspect Ratio
Resolution	1366 x 768 pixels
Pixel (Dot) Pitch	0.51075mm x 0.51075mm
Display Compatibility	720p (HDTV)
Colors	1.06 Billion
Brightness	450 cd/m ² (typical)
Contrast with DCR	50000 :1 (typical)
Response Time	8ms (typical)
Viewing Angle	Horizontal and Vertical 178° (typical)
Inputs	1x Coaxial RF (ATSC/QAM/NTSC), 4x HDMI with HDCP 1x Component YPbPr plus Stereo Audio, 1x RGB PC plus Stereo Audio (1/8" stereo jack), 1xUSB
Outputs	1x Optical Audio Out (SPDIF),
Features	ATSC/Clear QAM Tuner, Noise Reduction, CC, V-Chip 2.0, 3D Comb Filter, Freeze, Picture Enhancement, Dynamic Contrast Ratio Technology, MPEG-2 Decoding via DTV input, NTSC Video decoding via Video (AV or Component), Progressive Scan Video via HDMI, Component or RGB, HDTV via HDMI, Component or RGB (Set-Top Box required), Computer 640x480, 800x600, 1024 x 768, 1360 x 768 via RGB or 1360 x768 via HDMI, Color Temperature Adjustments of 6500K/9300K/11000K, Independent RED/GREEN/BLUE adjustments for Color Temperature Fine Tuning, Built-in SRS (TruSurroundHD™/TruVolume™) Audio, Supports 1080P (Full HDTV) , 1080i (HDTV) , 720P (HDTV) , 480P (EDTV) and 480i (SDTV) video signals. HDMI V.1.3, Dolby Digital Decoding, SRS TruSurround HD and SRS TruVolume sound enhancement, USB Digital (JPEG photo files) Media Player
Speakers	2 x 10Watts speakers, '82 +/-3dB@1m/W
Panel Life	60,000 hours to half the original brightness
Power	
Input	IEC Connector for direct power line connection
Voltage Range	120VAC at 60Hz
Power Consumption	58W (Avg), <1W Standby
Environmental Conditions	
Operating	Temperature: 5°C~35°C, Relative Humidity: 20~80%, Altitude: 0~6,561ft
Non-Operating	Temperature: -20°C~50°C, Relative Humidity: 10~90%, Altitude: 0~40,000 ft
Dimensions	30.65" W x 21.73" H x 8.48" D with stand; 30.65" W x 20.14" H x 3.19" D without stand
Net Weight	22.71lbs with stand, 18.74lbs without stand
Gross Weight	27.56lbs
Certifications	UL, FCC Class B, Energy Star 4.0, ATSC Spec A/65, EIA/CEA-766-A

E321VA Specifications	
Panel	32" Diagonal (31.55" Diagonal viewing), 16:9 Aspect Ratio
Resolution	1920 x 1080 pixels
Pixel (Dot) Pitch	0.36375mm x 0.36375mm
Display Compatibility	1080p (HDTV)
Colors	1.06 Billion
Brightness	450 cd/m ² (typical)
Contrast with DCR	50000 :1 (typical)
Response Time	5ms (typical)
Viewing Angle	Horizontal and Vertical 178° (typical)
Inputs	1x Coaxial RF (ATSC/QAM/NTSC), 4x HDMI with HDCP 1x Component YPbPr plus Stereo Audio, 1x RGB PC plus Stereo Audio (1/8" stereo jack), 1xUSB
Outputs	1x Optical Audio Out (SPDIF),
Features	ATSC/Clear QAM Tuner, Noise Reduction, CC, V-Chip 2.0, 3D Comb Filter, Freeze, Picture Enhancement, Dynamic Contrast Ratio Technology, MPEG-2 Decoding via DTV input, NTSC Video decoding via Video (AV or Component), Progressive Scan Video via HDMI, Component or RGB, HDTV via HDMI, Component or RGB (Set-Top Box required), Computer 640x480, 800x600, 1024 x 768, 1920 x 1080 via RGB or 1920 x 1080 via HDMI, Color Temperature Adjustments of 6500K/9300K/11000K, Independent RED/GREEN/BLUE adjustments for Color Temperature Fine Tuning, Built-in SRS (TruSurroundHD™/TruVolume™) Audio, Supports 1080P (Full HDTV) , 1080i (HDTV) , 720P (HDTV) , 480P (EDTV) and 480i (SDTV) video signals. HDMI V.1.3, Dolby Digital Decoding, SRS TruSurround HD and SRS TruVolume sound enhancement, USB Digital (JPEG photo files) Media Player
Speakers	2 x 10Watts speakers, '82 +/-3dB@1m/W
Panel Life	60,000 hours to half the original brightness
Power	
Input	IEC Connector for direct power line connection
Voltage Range	120VAC at 60Hz
Power Consumption	63W (Avg), <1W Standby
Environmental Conditions	
Operating	Temperature: 5°C~35°C, Relative Humidity: 20~80%, Altitude: 0~6,561 ft
Non-Operating	Temperature: -20°C~50°C, Relative Humidity: 10~90%, Altitude: 0~40,000 ft
Dimensions	30.65" W x 21.73" H x 8.48" D with stand; 30.65" W x 20.14" H x 3.19" D without stand
Net Weight	22.71lbs with stand, 18.74lbs without stand
Gross Weight	27.56lbs
Certifications	UL, FCC Class B, Energy Star 4.0, ATSC Spec A/65, EIA/CEA-766-A

E370VA Specifications	
Panel	37" Diagonal (37.00" Diagonal viewing), 16:9 Aspect Ratio
Resolution	1920 x 1080 pixels
Pixel (Dot) Pitch	0.4845mm x 0.4845mm
Display Compatibility	1080p (Full HDTV)
Colors	1.06 Billion
Brightness	500 cd/m ² (typical)
Contrast with DCR	50000 :1 (typical)
Response Time	5ms (typical)
Viewing Angle	Horizontal and Vertical 178° (typical)
Inputs	1x Coaxial RF (ATSC/QAM/NTSC), 4x HDMI with HDCP 1x Component YPbPr plus Stereo Audio, 1x RGB PC plus Stereo Audio (1/8" stereo jack), 1xUSB
Outputs	1x Optical Audio (SPDIF Optical)
Features	ATSC/Clear QAM Tuner, Noise Reduction, CC, V-Chip 2.0, 3D Comb Filter, Freeze, Picture Enhancement, Dynamic Contrast Ratio Technology, MPEG-2 Decoding via DTV input, NTSC Video decoding via Video (AV or Component), Progressive Scan Video via HDMI, Component or RGB, HDTV via HDMI, Component or RGB (Set-Top Box required), Computer 640x480, 800x600, 1024 x 768, 1920 x 1080 via RGB or 1920 x 1080 via HDMI, Color Temperature Adjustments of 6500K/9300K/11000K, Independent RED/GREEN/BLUE adjustments for Color Temperature Fine Tuning, Built-in SRS (TruSurroundHD™/TruVolume™) Audio, Supports 1080P (Full HDTV) , 1080i (HDTV) , 720P (HDTV) , 480P (EDTV) and 480i (SDTV) video signals. HDMI V.1.3, Dolby Digital Decoding, SRS TruSurround HD and SRS TruVolume sound enhancement, USB Digital (JPEG photo files) Media Player
Speakers	2 x 10Watts speakers, '82 +/-3dB@1m/W
Panel Life	60,000 hours to half the original brightness
Power	
Input	IEC Connector for direct power line connection
Voltage Range	120VAC at 60Hz
Power Consumption	74W (Avg), <1W Standby
Environmental Conditions	
Operating	Temperature: 5°C~35°C, Relative Humidity: 20~80%, Altitude: 0~6,561 ft
Non-Operating	Temperature: -20°C~50°C, Relative Humidity: 10~90%, Altitude: 0~40,000 ft
Dimensions	35.41" W x 24.30" H x 8.76" D with stand; 35.41" W x 22.92" H x 3.77" D without stand
Net Weight	32.19lbs with stand, 27.78 lbs without stand
Gross Weight	42.11lbs
Certifications	UL, FCC Class B, Energy Star 4.0, ATSC Spec A/65, EIA/CEA-766-A

E420VA Specifications	
Panel	42" Diagonal (42.02" Diagonal viewing), 16:9 Aspect Ratio
Resolution	1920 x 1080 pixels
Pixel (Dot) Pitch	0.4845mm x 0.4845mm
Display Compatibility	1080p (FHD TV)
Colors	1.06 Billion
Brightness	500 cd/m ² (typical)
Contrast with DCR	50000 :1 (typical)
Response Time	5ms (typical)
Viewing Angle	Horizontal and Vertical 178° (typical)
Inputs	1x Coaxial RF (ATSC/QAM/NTSC), 4x HDMI with HDCP 1x Component YPbPr plus Stereo Audio, 1x RGB PC plus Stereo Audio (1/8" stereo jack), 1x S-Video plus Stereo Audio, 1xUSB
Outputs	1x Optical Audio (SPDIF Optical), 1x Headphone
Features	ATSC/Clear QAM Tuner, Noise Reduction, CC, V-Chip 2.0, 3D Comb Filter, Freeze, Picture Enhancement, Dynamic Contrast Ratio Technology, MPEG-2 Decoding via DTV input, NTSC Video decoding via Video (AV or Component), Progressive Scan Video via HDMI, Component or RGB, HDTV via HDMI, Component or RGB (Set-Top Box required), Computer 640x480, 800x600, 1024 x 768, 1920 x 1080 via RGB or 1920 x 1080 via HDMI, Color Temperature Adjustments of 6500K/9300K/11000K, Independent RED/GREEN/BLUE adjustments for Color Temperature Fine Tuning, Built-in SRS (TruSurroundHD™/TruVolume™) Audio, Supports 1080P (Full HDTV) , 1080i (HDTV) , 720P (HDTV) , 480P (EDTV) and 480i (SDTV) video signals. HDMI V.1.3, Dolby Digital Decoding, SRS TruSurround HD and SRS TruVolume sound enhancement, USB Digital (JPEG photo files) Media Player
Speakers	2 x 10Watts speakers, '82 +/-3dB@1m/W
Panel Life	60,000 hours to half the original brightness
Power	
Input	IEC Connector for direct power line connection
Voltage Range	120VAC at 60Hz
Power Consumption	88W (Avg), <1W Standby
Environmental Conditions	
Operating	Temperature: 5°C~35°C, Relative Humidity: 20~80%, Altitude: 0~6,561 ft
Non-Operating	Temperature: -20°C~50°C, Relative Humidity: 10~90%, Altitude: 0~40,000 ft
Dimensions	39.74" W x 26.71" H x 9.99" D with stand; 39.74" W x 25.28" H x 3.65" D without stand
Net Weight	37.48lbs with stand, 32.19 lbs without stand
Gross Weight	47.40lbs
Certifications	UL, FCC Class B, Energy Star 4.0, ATSC Spec A/65, EIA/CEA-766-A

Preset PC Resolutions

E320VA Preset PC Resolutions

If connecting to a PC through the RGB PC input, set the TV timing mode to VESA 1360x768 at 60Hz for better picture quality (refer to the graphic card's user guide for questions on how to set this timing mode). See the table below for the factory preset resolutions.

Refresh (Hz)	Resolution	H.Freq (kHz)	H.Sync	V.Freq (Hz)	V.Sync	Pixel Freq (MHz)
60	640 x 480	31.469	N	59.94	N	25.175
75	640 x 480	37.5	N	75	N	31.5
70	720 x 400	31.46	N	70.08	P	28.32
60	800 x 600	37.897	P	60.317	P	40
75	800 x 600	46.875	P	75	P	49.5
60	1024 x 768	48.363	N	60.004	N	65
70	1024 x 768	56.476	N	70.069	N	75
75	1024 x 768	60.023	P	75.026	P	78.75
60	1360 x 768	47.72	P	59.799	P	84.75

E321VA, E370VA & E420VA 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). See the table below for the factory preset resolutions.

Refresh (Hz)	Resolution	H.Freq (kHz)	H.Sync	V.Freq (Hz)	V.Sync	Pixel Freq (MHz)
60	640 x 480	31.469	N	59.94	N	25.175
75	640 x 480	37.5	N	75	N	31.5
70	720 x 400	31.46	N	70.08	P	28.32
60	800 x 600	37.897	P	60.317	P	40
75	800 x 600	46.875	P	75	P	49.5
60	1024 x 768	48.363	N	60.004	N	65
70	1024 x 768	56.476	N	70.069	N	75
75	1024 x 768	60.023	P	75.026	P	78.75
60	1920 x 1080	66.587	P	59.934	P	138.5

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.

Chapter 7 Warranty

ONE-YEAR LIMITED WARRANTY ON PARTS AND LABOR

Covers units purchased as new in United States and Puerto Rico Only

VIZIO provides a warranty to the original purchaser of its products against defects in materials and workmanship for a period of one year of non-commercial usage and ninety (90) days of commercial use. If a VIZIO product is defective within the warranty period, VIZIO will either repair or replace the unit at its sole option and discretion.

To obtain warranty service, contact VIZIO Technical Support via email: TechSupport@VIZIO.com or via phone at 877 MY VIZIO (877.698.4946) from 6:00AM to 9:00PM Monday through Friday and 8:00AM to 4:00PM Saturday and Sunday, Pacific Time, or visit www.VIZIO.com. Proof of purchase in the form of a purchase receipt or copy thereof is required.

Parts and Labor

There will be no charge for parts or labor during the warranty period. Replacement parts and units may be new or recertified at VIZIO's option and sole discretion. Replacement parts and units are warranted for the remaining portion of the original warranty or for ninety (90) days from warranty service or replacement, whichever is later.

Types of Service

Units 30" or larger will usually be serviced in-home. In-home service requires complete and easy access to the unit and does not include de-installation or re-installation of the product. However, in some cases, it may be necessary to send the unit to a VIZIO service center. VIZIO will cover the transportation charges to and from the same customer location.

Units less than 30" must be sent to a VIZIO service center. VIZIO is not responsible for transportation costs to the service center, but VIZIO will cover return shipping to the customer. PRE-AUTHORIZATION IS REQUIRED BEFORE SENDING ANY UNIT IN FOR SERVICE.

Any returns to VIZIO's service centers must utilize either the original carton box and shipping material or a replacement box and material provided by VIZIO. VIZIO technical support will provide instructions for packing and shipping the unit to the VIZIO service center.

Limitations and Exclusions

VIZIO's one-year limited warranty only covers defects in materials and workmanship. Items not covered include but are not limited to cosmetic damage, normal wear and tear, misuse, signal issues, power surges, and damages from shipping, acts of God, any sort of customer misuse, installation, customer modifications, adjustments, and set-up issues. Units with unreadable or removed serial numbers, "image burn-in", and routine maintenance are not covered. This warranty does not cover products sold "AS IS", "FACTORY RECERTIFIED", or by a non-authorized reseller.

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 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 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 WARRANTY IS SUBJECT TO CHANGE WITHOUT NOTICE. CHECK www.VIZIO.com FOR THE MOST CURRENT VERSION.

Personal Data

If your VIZIO product is capable of storing personal data and other information, **ALL CONTENTS AND INFORMATION WILL BE DELETED IN THE COURSE OF SOME IN-HOME AND ALL SHIP-IN WARRANTY SERVICE.** If this occurs, your product will be restored to you configured **as originally purchased.** You will be responsible for restoring all applicable data and passwords. Recovery and reinstallation of user data is not covered under this Limited Warranty. **In order to protect your personal information, VIZIO recommends that you always clear all personal information from the unit before it is serviced, regardless of the servicer.**

ZERO BRIGHT PIXEL DEFECT GUARANTEE

This policy covers “zero bright pixels” defects for the duration of the limited “ONE YEAR WARRANTY” on select new product purchases. To determine if this guarantee applies to your product, refer to the “DETAILS” tab of the model’s product information page (www.VIZIO.com) or look for the “zero bright pixel” guarantee on the box.

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