

User Guide

NS-32E859A11/NS-42E859A11



Thank You

Congratulations on your purchase of a high-quality connected Insignia product. Your NS-32E859A11 or NS-42E859A11 represents the start of the art in LED connected TV design. We have created an experience that is easy to use, easy to connect, and easy to find.



CONTENTS

CHILD SAFETY2	Making connections	17
Important safety instructions3Warnings3Cautions4	Connecting the power	18 19 20
Introduction8	Connecting a DVI device	22
Easy to use	Connecting a composite video device	2 ² 2 ¹ 2 ¹
Easy to connect9WiFi9Z-Wave9Rocketboost™ Wireless Card Ready9	Wireless connection Wired connection Turning on your TV for the first time Programming your universal Insignia remote control	27
Easy to find 10 TiVo Search 10 CinemaNow 10 Netflix 10 Pandora 10 Napster 10	Understanding the basics Turning your TV on or off Selecting the video input source Navigating menus and using the on-screen keyboard Selecting a channel Adjusting the volume	3! 3! 3
Installing the stand or wall-mount bracket	Displaying additional information Using the applications offered on your TV Watching movies with CinemaNow	4(4(4(
TV components 12 Accessories 12 Front 13 Side 13 Back 14 Remote control 15	TiVo Search Adjusting the video Adjusting the video settings Resetting all video settings Turning the video window on or off	41 42 42
Using the remote control	Adjusting audio settings	4

INSIĜNIA

Setting the SRS TruSurround HD mode	Adjusting other options 92 Adjusting the INSIGNIA logo brightness92
Setting up Rocketboost™51	Setting the TV power on mode
Adding another Rocketboost device54	Labeling an input source94
Changing the Rocketboost sound source56	Turning the source sensor on or off
Using a different Rocketboost manager57	Resetting all options on the Devices menu90
Listening to TV audio through other Rocketboost devices58	Resetting all options on the Appearance menu
Repeating the Rocketboost set up60	nesetting all options on the Appearance mena
Expanding your Rocketboost System61	Maintaining 100
Playing TV audio only62	Cleaning the TV cabinet100
Setting the button sound effects volume	Cleaning the LED-LCD screen
Selecting the language for a TV program64	Updating your TV software100
Using Audio Return Channel (ARC)65	
Resetting all Audio menu settings66	Troubleshooting 100
Chanair a alcana al antica a	Using the on-screen help100
Changing channel settings 67	Resetting your TV to the factory defaults103
Automatically scanning for channels	-,
Setting up the channel and favorite channel lists68	Specifications 104
Viewing a favorite channel69	
Checking the signal strength70	Setting up your Z-Wave remote control 108
Setting parental controls	Adding your remote control to the TV Z-Wave network108
	Toggling between IR and RF communication108
Setting the PIN (password)	Removing your remote control from the TV Z-Wave network 10
Changing the PIN (password)	Resetting your TV Z-Wave network109
Turning Parental Controls on or off	Managing Z-Wave network (other device as Controller) 110
Setting Parental Control levels	Z-Wave Terminology110
Setting channel locks	A diversional versions constrain in a version
Locking control buttons/3	Advanced remote control programming 111
Using closed captioning	Programming a learned button11
Turning closed captioning on or off	Deleting a single learned button
Selecting the analog closed captioning mode	Deleting all learned buttons in a specific mode
Customizing digital closed captioning	Programming macros
custoffizing digital closed captioning	Controlling the remote control backlight 113
Adjusting time settings	Turning the remote control backlight on or off
Setting the date and time80	Setting the remote control backlight delay11
Setting the sleep timer81	Setting the remote control backlight delay
	Legal notices 116
Adjusting Internet settings 81	
Configuring a wireless connection81	Two-year limited warranty 117
Configuring a wired connection86	, ,
Testing the network89	
Disabling Internet features89	
Haina Milink to control HDMI devices	
Using INlink to control HDMI devices 90	
Setting up INlink HDMI control90	





Safety Information

CHILD SAFETY	 	 2
mportant safety instructions	 	 3



CHILD SAFETY

It makes a difference how and where you use your flat panel display

As you enjoy your new product, keep these safety tips in mind

The issue

The home theater entertainment experience is a growing trend, and larger TVs are popular purchases. However, TVs are not always supported on the proper stands or installed according to the manufacturer's recommendations. We and the consumer electronics industry are committed to making home entertainment enjoyable and safe.

TVs that are inappropriately placed on dressers, bookcases, shelves, desks, speakers, chests, or carts may fall over and cause injury.

Tune into safety

- One size of TV stand does not fit all. Use only a TV stand rated for the weight of your TV.
- Carefully read and understand all enclosed instructions for proper use of this product.
- Don't let children climb on or play with entertainment system furniture and TVs.
- Don't place TVs on furniture that can easily be used as steps, such as a chest of drawers.
- Remember that children can become excited while watching a program, especially on a "larger-than-life" TV. Make sure that you place or install the TV where it cannot be pushed, pulled over, or knocked down.
- Make sure that you route all cords and cables so that they cannot be pulled or grabbed by curious children.

Wall mounting

If you decide to wall mount your TV, always remember:

- One size of wall mount does **not** fit all. Use only a wall mount rated for the weight of your TV and that has been recommended by this TV manufacturer, listed in this manual, or otherwise listed by an independent laboratory as suitable for your TV.
- Follow all instructions supplied by the TV and wall mount manufacturers.
- If you have any doubts about your ability to safely wall mount your TV, get help from a
 professional installer.
- Make sure that the wall where you are mounting the TV is appropriate. Some wall mounts are not
 designed to be mounted to walls backed with steel studs or cinder blocks. If you are unsure, ask a
 professional installer.
- TVs can be heavy. At least two people are required for safe wall mount installation.







Important safety instructions



CAUTION RISK OF ELECTRIC SHOCK DO NOT OPEN





This symbol indicates that dangerous voltage constituting a risk of electric shock is present within your TV. This label is located on the back of your TV.



This symbol indicates that there are important operating and maintenance instructions in the literature accompanying your TV.

- 1 Read these instructions.
- 2 Keep these instructions.
- 3 Heed all warnings.
- 4 Follow all instructions.
- 5 Do not use this apparatus near water.
- 6 Clean only with dry cloth.
- 7 Do not block any ventilation openings. Install in accordance with the manufacturer's instructions.
- **8** Do not install near any heat sources such as radiators, heat registers, stoves, or other apparatus (including amplifiers) that produce heat.
- 9 Do not defeat the safety purpose of the polarized or grounding-type plug. A polarized plug has two blades with one wider than the other. A grounding type plug has two blades and a third grounding prong. The wide blade or the third prong are provided for your safety. If the provided plug does not fit into your outlet, consult an electrician for replacement of the obsolete outlet.
- 10 Protect the power cord from being walked on or pinched particularly at plugs, convenience receptacles, and the point where they exit from the apparatus.
- 11 Only use attachments/accessories specified by the manufacturer.

- 12 Use only with a cart, stand, tripod, bracket, or table specified by the manufacturer, or sold with the apparatus. When a cart is used, use caution when moving the cart/apparatus combination to avoid injury from tip-over.
- 13 Unplug this apparatus during lightning storms or when unused for long periods of time.
- 14 Refer all servicing to qualified service personnel. Servicing is required when the apparatus has been damaged in any way, such as power-supply cord or plug is damaged, liquid has been spilled or objects have fallen into the apparatus, the apparatus has been exposed to rain or moisture, does not operate normally, or has been dropped.
- **15** The *mains plug* is the disconnecting device. The plug must remain readily operable.
- 16 The apparatus with grounding-type plug is a class I apparatus. Class I apparatus need to be connected to earth ground wire to prevent possible electric shock. Make sure that you connect the class I apparatus to a mains socket outlet with a protective earthing connection.
- 17 Remote control batteries should not be exposed to excessive heat such as sunshine, fire, or the like.
- 18 The apparatus shall not be exposed to dripping or splashing, and no objects filled with liquids, such as vases, shall be placed on the apparatus.

Warnings

Electric shock hazard

To reduce the risk of fire or electric shock, do not remove any cover or expose the device to rain or moisture. No user-serviceable parts are inside. Refer servicing to qualified service technicians.

Lightning

For added protection for your device receiver during a lightning storm, or when it is left unattended and unused for long periods of time, unplug it from the power outlet and disconnect any antenna or cable system. This helps prevent property damage and personal injury from lightning and power line surges.



Power lines

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

Handling the LCD panel

- Your TV's screen is made of glass. Do not drop your TV or hit, jolt, or press hard against the LCD panel. If the screen breaks, be careful of broken glass.
- If the LCD panel is broken, make absolutely sure that you do not touch the liquid in the panel. This may cause skin inflammation.
- If the liquid gets in your mouth, immediately gargle, rinse, and consult with your doctor. Also, if the liquid gets in your eyes or touches your skin, consult with your doctor after rinsing for at least 15 minutes or longer in clean water.

Replacement parts

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

Safety check

After completing any service or repair to this device, ask the service technician to perform routine safety checks to determine that your TV is in correct operating condition.

Power source

Operate your TV only from the type of power source indicated on the marking label. If you are not sure of the type of power supplied to your home, consult an electrician or your local power company.

Cautions

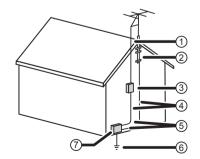
Damage requiring service

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

- When the power supply cord or plug is damaged or frayed.
- If liquid has been spilled or objects have fallen into your TV.
- If your TV has been exposed to rain or water.
- If your TV does not operate normally by following the operating instructions. Adjust only those controls that are covered by the operating instructions because incorrect adjustment of other controls may result in damage and will often require extensive work by a qualified technician to restore your TV to its normal operation.
- If your TV has been dropped or damaged in any way.
- When your TV exhibits a distinct change in performance.

Outdoor antenna grounding

If an outside antenna or cable system is connected to your TV, make sure that the antenna or cable system is grounded to provide some protection against voltage surges and built-up static charges. Article 810 of the National Electrical Code, ANSI/NFPA No. 70, provides information with respect to correct grounding of the mast and supporting structure, grounding of the lead-in wire to an antenna discharge unit, size of grounding conductors, location of the antenna-discharge unit, connection to grounding electrodes, and requirements for the grounding electrode.



- 1 Antenna lead-in wire
- (2) Grounding clamp
- (3) Antenna discharge unit
- 4 Grounding conductors
- 5 Ground clamps
- 6 Power service grounding electrode system
- 7 Electric service equipment



Note to CATV system installer

Article 820 of the National Electrical Code, ANSI/NFPA No. 40 provides guidance for correct grounding. Specifically, it states that the cable ground must be connected to the grounding system of the building as close to the point of cable entry as practical.

Condensation

Moisture will form on the TV if the TV is brought from cool surroundings into a warm room or if the temperature of the room rises suddenly. When this happens, the TV's performance may be impaired. To prevent this, let the TV stand in its new surroundings for about an hour before switching it on, or make sure that the room temperature rises gradually.

Condensation may also form during the summer if the TV is exposed to the breeze from an air conditioner. In such cases, change the location of the TV.

Mobile telephone warning

To avoid interference with your TV picture and sound, operating problems, or even damage, keep your cordless and cellular telephones away from the TV.

End of life directives

Your TV contains tin-lead solder. Disposal of this material may be regulated for environmental reasons. Your TV also contains material that can be recycled and reused. For disposal or recycling information, contact your local authorities or the Electronic Industries Alliance at www.eia.org to find a recycler in your area.

Non-active pixels

The LCD panel contains almost 3 million thin film transistors, which provide exceptionally sharp video quality. Occasionally, a few non-active pixels may appear on the screen as a fixed blue, green, or red point. These non-active pixels do not adversely affect the performance of your TV, and are not considered defects.





Getting Started

Installing the stand or wall-mount bracket	11
TV components	12
Using the remote control	17
Making connections	17
Connecting your TV to your home network	26
Turning on your TV for the first time	27
Understanding the basics	35



Introduction

Congratulations on your purchase of a high-quality connected Insignia product. Your NS-32E859A11 or NS-42E859A11 represents the start of the art in LED connected TV design. We have created an experience that is easy to use, easy to connect, and easy to find.

Easy to use

TiVo DESIGN™



The only TV that combines the power of the Internet with the legendary TiVo user interface, all in stunning HD. You'll find entertainment from both broadcast TV and the Internet with just a few clicks of your remote control. Now get what you want, when you want it.

- Award-winning TiVo experience: Easily access all your favorite TV shows, movies and more with the easy to use TiVo user interface.
- Intelligent Search: Search by title, artist, director, keyword and more.
- Access to the best Internet entertainment: Enjoy movies from Netflix and CinemaNow, music from Pandora and Napster, and much more.
- Future-proof: New software features, updates, and enhancements download automatically.
- Broadband connected: Delivers a plethora of new entertainment choices including TV, Movies, and Music.

Two-year limited warranty

Feel confident in the quality of Insignia TV parts and assembly. Gain peace of mind knowing that you are not only getting the best picture possible but are safeguarded against any unforeseen service and repairs by an industry leading two-year limited manufacturer warranty.

Game mode

Video games generally require adjustments to the television picture settings to get the maximum experience. By simply pressing the **GAME** button on the front of your TV, your TV settings will automatically adjust for video games. It couldn't be easier.

Insignia Motion 120Hz

With a 120Hz screen, a screen with 1,080 lines of resolution progressively scanned, and special motion-detection technology, you will be experiencing a picture with clearer detail, brightness, smoother transitions, judder-free and reduced motion blurring, particularly when watching fast-motion sports and action scenes. (See page 42 for instructions on how to adjust the TV picture.)

AUDYSSEY Dynamic Volume plus Dynamic EQ

Have you ever caught yourself wishing that you didn't constantly need to adjust the volume: wishing that the commercials wouldn't blare and that you could better hear whispering during a movie scene? Audyssey Dynamic Volume is a feature that lets you put the remote control down and enjoy your show while Audyssey adjusts the sound levels for you automatically. Audyssey Dynamic EQ is a feature that automatically finds the richest sound settings-including enhanced bass-for each scene, even when the volume level is held steady, making the sound coming from your TV speakers sound more lifelike. (See page 48 for instructions on how to adjust the audio settings to take advantage of Audyssey.)

SRS TruSurround HD

At Insignia, providing you with superior audio quality is just as important as exceptional picture quality. That's why we added SRS TruSurround HD, which provides you with a theater-like surround-sound experience, with the clearer dialog and the enhanced bass sounds that movie viewers and gamers crave.

Easy to connect

WiFi

Connect your TV wirelessly to the Internet. By connecting your TV to the Internet you can enjoy all your TV has to offer! Access Internet content through the Internet applications that came with your TV. New and exciting applications are continually being added to your TV.

No additional adapter required. The WiFi feature is built-in.

Z-Wave

Setting up a universal remote can be difficult. With the two way radio frequency (RF) Z-Wave functionality built in, we have made it easy to use your Insignia remote to control all your home theater devices. Follow the on-screen guide, it couldn't be easier. (See "Setting up your Z-Wave remote control" on page 108 for instructions on how to do this).

Rocketboost™ Wireless Card Ready



Installing a Rocketboost ™ Wireless Card (card sold separately) lets this product send and receive wireless audio with your other Rocketboost™ products. For example, you can listen to TV audio with Rocketboost wireless headphones.

What is Rocketboost™?

Rocketboost™ is expandable wireless digital audio.

- Products with Rocketboost™ technology let you easily expand your listening experience throughout your home.
- Rocketboost[™] does not interfere with other wireless products in your home.
- Rocketboost™ is uncompressed digital audio compatible with all audio formats such as Dolby, TrueHD, and DTS-HD Master Audio used with Blu-ray.

When you see the Rocketboost[™] logo on any product, it has been designed to work with other Rocketboost[™] products, no matter who manufactures them. (See page 51 for instructions on how to set up a Rocketboost Wireless Card.)



Easy to find

Note

Please connect to the internet to download the latest software to allow use of these features.

TiVo Search

You can search for specific shows by title or actor name, or you can discover new shows recommended for you.

• Searching by title or actor name: TiVo Search lets you search content, so you're always sure to find something great to watch. Just enter a search term, and you'll see results for shows available from video-on-demand providers.

On the search screen, enter a few letters of your search term (title or actor's name). Select a show title or actor's name from the results list to see more details.

CinemaNow

With CinemaNow on your TV, you can rent some of your favorites from the comfort of your couch. All you need is your Insignia remote. Once you have a CinemaNow account from CinemaNow.com, grab some popcorn and enjoy the show. (See page 40 for instructions on how to register with CinemaNow.)

Netflix

With Netflix on your TV, if you have a Netflix unlimited plan, you can instantly watch thousands of movies and TV episodes streamed from Netflix to your TV. Just add shows to your Netflix Instant Queue, and start watching. (See page 40 for instructions on how to register with Netflix.)

Pandora

Pandora on your TV lets you choose exactly the music you want to hear and creates personal Internet radio stations that play it for you. Just enter a song title or band name that represents the kind of music you want to hear, and Pandora will start a unique "Pandora station" that plays music similar to it. Add variety by entering other titles and bands to your station, and even more variety by creating multiple Pandora stations (up to 100!). (See page 41 for instructions on how to register with Pandora.)

Napster

Listen to what you want, when you want with Napster, the ultimate online jukebox. Access instantly your choice of over 11 million songs—anytime, anywhere. Kick back with ad-free radio stations, recommendations, and Billboard® charts back to 1955. Create your own playlists for a customized listening experience.

Installing the stand or wall-mount bracket

To set your TV on a cabinet or other flat surface, you must install the stand.

To mount your TV on a wall or other vertical surface, you must remove the stand

Warning

Make sure that you unplug the power cord before you install or remove the stand.

Warning

Read these instructions carefully before you try to install the stand or a wall-mount bracket.

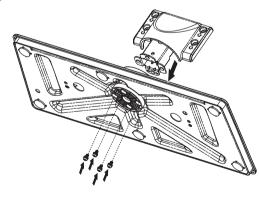
If you are not sure you can install the stand or wall-mount bracket, consult a professional installer or service personnel. Your warranty does not cover damages or injuries that happen due to mishandling or incorrect assembly.

When installing the stand or wall-mount bracket, make sure that you place your TV on a soft cushion or covering to prevent scratching or damage to your TV's finish or screen.

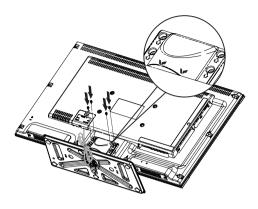
Installing the stand

To install the stand:

- 1 Carefully place your TV screen face-down on a cushioned, clean surface to protect the screen from damages and scratches.
- 2 Attach the stand neck to the base and secure it with four M4 × L17 mm screws (provided).



- 3 Align the stand on the TV base, then insert the metal tabs on the stand into the designated slots on the TV base
- 4 Secure the stand with four M4 × L17 mm screws (provided).



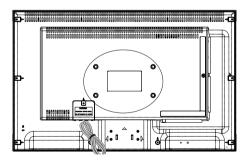
Caution

Make sure that you use all the screws provided for the stand assembly.

Installing a wall-mount bracket

To install a wall-mount bracket:

- 1 Carefully place your TV screen face-down on a cushioned, clean surface to protect the screen from damages and scratches.
- 2 Secure the wall mount bracket to the TV using these four screws or those provided with the bracket.



Model	Vesa mount pattern (H x V)
NS-32E859A11	200 x 100 mm
NS-42E859A11	200 x 200 mm

Did you know?

Init Products offer quality stands and mounts, perfect for your new TV.
Visit the Best Buy store nearest you to see a wide assortment of television accessories.

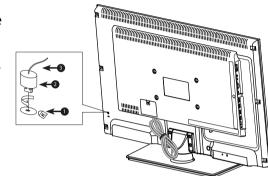


Installing a Kensington lock

A Kensington lock (not provided) is a device used to physically secure your TV when it is used in a public place.

To install a Kensington lock:

- 1 Insert the locking device into the Kensington slot on the TV.
- 2 Turn the device in the locking direction.



- 3 Connect the Kensington lock cable.
- 4 Secure the Kensington lock to a desk or a heavy stationary object.

Caution

The appearance of the lock and the locking direction may vary depending on the lock manufacturer. See the documentation that came with the lock.

TV components

Accessories

Make sure that the following accessories are provided in the packaging:

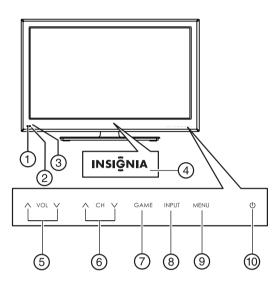
- TV stand with screws
- Universal remote control with AA batteries (2)
- Component video cable
- Audio cable
- Cleaning cloth
- Quick Setup Guide

Note

The cleaning cloth is for cleaning the TV screen only. Do not use the cleaning cloth to clean any other part of your TV.

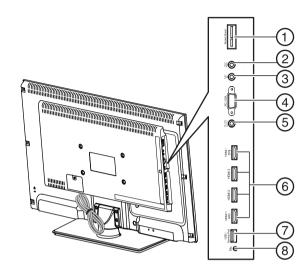


Front



#	Button	Description
1	Remote control sensor	Receives signals from the remote control. Do not block.
2	Ambient light sensor	Detects the ambient light conditions to optimize the picture brightness for optimum viewing and provides energy savings.
3	Power indicator	Lights blue when your TV is turned on. Depending on the TV power on mode you select, lights red or purple when your TV is in standby mode. For more information, see "Setting the TV power on mode" on page 93.
4	INSIGNIA logo	Lights when the logo feature is turned on. For more information, see "Adjusting the INSIGNIA logo brightness" on page 92.
(5)	V0L ✓/V0L ✓	Press to decrease or increase the volume.
6	CH 🍑/CH 🦯	Press to go to the previous or next channel. For more information, see "Selecting a channel" on page 37.
7	GAME	Press to use the Game mode feature for optimal performance while playing games.
8	INPUT	Press to open input source list. For more information, see "Selecting the video input source" on page 35.
9	MENU	Press to open the on-screen menu. Press again to close the menu.
10	் (power)	Press to turn on your TV. Press again to put your TV in standby mode. When your TV is in standby mode, power still flows through it. To completely disconnect power, unplug the power cord.

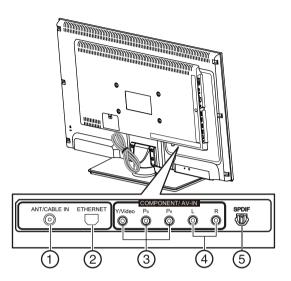
Side



# Jack	Description
1 Rocketboost	Insert a Rocketboost Wireless card (RF-RBCARD, sold seperately) to wirelessly connect Rocketboost audio products to your TV. For more information, see "Setting up Rocketboost™" on page 51.
2 Headphone	Connect headphones to this jack. For more information, see "Connecting headphones" on page 25.
3 Audio Out	Connect an analog sound system to this jack to send the TV audio through the sound system. See "Connecting an analog audio receiver" on page 26.
4 PC/VGA	Connect the video for a computer to this jack. For more information, see "Connecting a computer" on page 24.
5 PC/DVI Audio In	Connect the audio for a computer or DVI device to this jack. For more information, see "Connecting a computer" on page 24 or "Connecting a DVI device" on page 21.
6 HDMI jacks	Connect HDMI devices to these jacks. An HDMI cable carries both video and sound. You do not need to make an audio connection for an HDMI device. For more information, see "Connecting an HDMI device" on page 20.
7 USB/Service Port	For service only. Do not use.
8 INc	Connect a device that has RS232 controls, such as a connected soundbar. By doing this your TV remote control will be able to control the soundbar's volume.



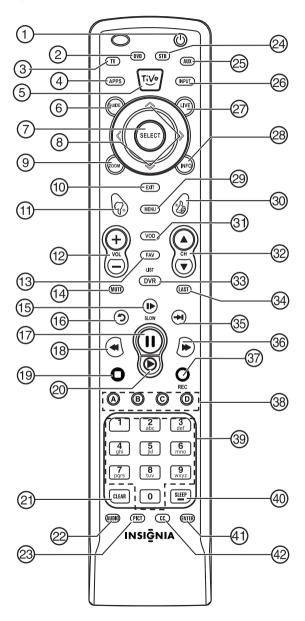
Back



#	Jack	Description
1	ANT/CABLE IN	Connect an antenna, cable TV (without a cable box), or a satellite TV box to this jack. For more information, see "Connecting an antenna or cable TV without a cable box" on page 18.
2	ETHERNET	Connect an Ethernet cable to this jack to connect your TV to the Internet. For more information, see "Connecting your TV to your home network" on page 26.
3	COMPONENT/AV-IN	Connect the video for a component video device to these jacks, or connect the video for a composite video device to the Y/Video jack. For more information, see "Connecting a component video device" on page 22, "Connecting a composite video device" on page 23, or "Connecting a camcorder, game, or VCR" on page 23.
4	L/R (audio in)	Connect the audio for a component video device connected to the Y/Video/PB/PR jacks or a composite video device connected to the Y/Video jack. For more information, see "Connecting a component video device" on page 22, "Connecting a composite video device" on page 23, or "Connecting a camcorder, game, or VCR" on page 23.
(5)	SPDIF	Connect a digital sound system to this jack to send the TV audio through the sound system. For more information, see "Connecting a digital audio receiver" on page 25.



Remote control



Note

If you see a low battery message or the power button blinks five times after your press a button, the remote control batteries need to be changed.

#	Button	Description
1	ப் (power)	Press to turn your TV on or off.
2	DVD	Press to control a DVD player. You must program the remote control before this button works. For more information, see "Programming your universal Insignia remote control" on page 29.
3	TV	Press to put the remote in TV mode.
4	APPS	Press to open the <i>Apps</i> bar.
(5)	TiVo	Press to open the <i>Home</i> menu.
6	GUIDE	Press to open the program guide. For more information, see "Displaying additional information" on page 37.
7	SELECT	Press to confirm selections or changes.
8	▲▼∢ ►	Press to move left, right, up, or down in on-screen menus.
9	Z00M	Press to select the aspect ratio. For more information, see "Adjusting the video settings" on page 42.
10	EXIT	Press to close the on-screen menu.
11)	(thumbs down)	Press to decrease the thumbs rating by 1 thumb. In the channel list, press to remove a highlighted channel from the favorite list. In the on-screen keyboard, press to switch to lowercase letters.
13	V0L+/V0L-	Press to increase or decrease the volume.
	VOL+/ VOL-	Press to open the favorite channel list. For more information, see
13)	FAV	"Setting up the channel and favorite channel lists" on page 68 and "Viewing a favorite channel" on page 69.
14)	MUTE	Press to mute the sound. Press again to restore the sound.
15	I ►/SLOW	Press to enter slow motion playback in TV VOD mode (watching Netflix and CinemaNow) or when using a DVD player or Blu-ray player. For more information, see "Programming your universal Insignia remote control" on page 29. Press to turn the video window on or off. For more information, see "Turning the video window on or off" on page 45.
16	1 (replay)	Press to jump back eight seconds in TV VOD mode (watching Netflix and CinemaNow) or when using a DVD player or Blu-ray player. For more information, see "Programming your universal Insignia remote control" on page 29.



#	Button	Description
17)	(pause)	Press to pause playback in TV VOD mode (watching Netflix and CinemaNow) or when using a DVD player or Blu-ray player. For more information, see "Programming your universal Insignia remote control" on page 29.
(18)	(fast-reverse)	Press to fast-reverse in TV VOD mode (watching Netflix and CinemaNow) or when using a DVD player or Blu-ray player. For more information, see "Programming your universal Insignia remote control" on page 29.
19	■ (stop)	Press to stop playback in TV VOD mode (watching Netflix and CinemaNow) or when using a DVD player or Blu-ray player. For more information,see "Programming your universal Insignia remote control" on page 29.
20)	► (play)	Press to start playback in TV VOD mode (watching Netflix and CinemaNow) or when using a DVD player or Blu-ray player. For more information, see "Programming your universal Insignia remote control" on page 29.
21)	CLEAR	Press to clear character input in the on-screen keyboard.
22	AUDIO	Press to adjust the audio settings for Audyssey Dynamic Volume , SRS TruSurround HD , Audio Only , Audio Return Channel (ARC) , Treble , Bass , or Balance . For more information, see "Manually adjusting audio settings" on page 46.
23	PICT	Press to adjust the video settings. For more information, see "Adjusting the video settings" on page 42.
24)	STB	Press to control a set-top box. You must program the remote control before this button works. For more information, see "Programming your universal Insignia remote control" on page 29.
25)	AUX	Press to control auxiliary devices, such as amplifiers or receivers. You must program the remote control before this button works. For more information, see "Programming your universal Insignia remote control" on page 29.
26)	INPUT	Press to open the input source list, then press \triangle or \bigvee to cycle through the available input sources. For more information, see "Selecting the video input source" on page 35.
27)	LIVE	In menu mode, press to return to full-screen video TV mode.
28	INFO	Press to display TV status information, such as the channel number, channel name (if available), or signal source. For more information, see "Displaying additional information" on page 37. In the channel list, press to rename the highlighted channel. For more information, see "Setting up the channel and favorite channel lists" on page 68.
29	MENU	Press to open the on-screen menu.
30)	(thumbs up)	Press to increase the thumbs rating by 1 thumb. In the channel list, press to add a highlighted channel to the favorite list. In the on-screen keyboard, press to switch to uppercase letters.

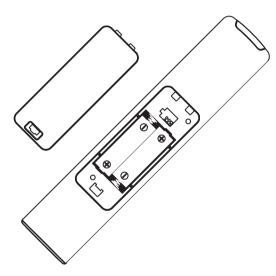
#	Button	Description
31)	VOD	Press to access the VOD (video on demand) on-screen menu to watch video services offered through your connected TV, such as Netflix, CinemaNow, etc.
32)	CH▲/CH▼	Press to change channels. For more information, see "Selecting a channel" on page 37.
33	LIST/DVR	Press to see the list of all the recorded programs in a DVR/STB that is set up with your remote control. You must program the remote control before this button works. For more information, see "Programming your universal Insignia remote control" on page 29.
34)	LAST	Press to go to the last viewed channel in TV mode.
35)	(advance)	Press to jump forward to the next segment in TV VOD mode (watching Netflix and CinemaNow) or when using a DVD player or Blu-ray player. For more information, see "Programming your universal Insignia remote control" on page 29.
36)	(fast-forward)	Press to fast-forward in TV VOD mode (watching Netflix and CinemaNow) or when using a DVD player or Blu-ray player. For more information, see "Programming your universal Insignia remote control" on page 29.
37	• (record)	Press to record a program. You need to program the remote control to work with your DVR. You must program the remote control before this button works. For more information, see "Programming your universal Insignia remote control" on page 29.
38)	ABCD	Provides an enhanced interface for attached device (such as a DVR), Internet applications, and TiVo search features.
39	Numbers	Press to enter channel numbers, the parental control password, or characters. When programming the remote control, press to enter device and programming codes.
40	SLEEP/—	Press to enter a digital sub-channel number in Live TV mode. Press to set the sleep timer. You can select Cancel , 5 , 10 , 15 , 30 , 60 , 90 minutes and 2 , 3 , 4 hours. For more information, see "Setting the sleep timer" on page 81.
41)	ENTER	Press to confirm selections or changes.
42	cc	Press to turn closed captioning on or off. For more information, see "Turning closed captioning on or off" on page 76.

Using the remote control

Installing the remote control batteries

To install the remote control batteries:

1 While pressing the release button on the battery compartment cover on the back of the remote, lift the cover off the remote.



- 2 Insert two AA batteries into the battery compartment. Make sure that you match the + and symbols on the batteries with the + and symbols in the battery compartment.
- 3 Replace the battery cover.

Cautions

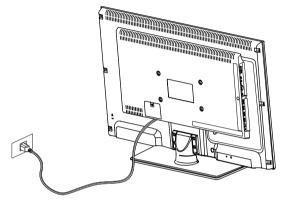
- Batteries should not be exposed to excessive heat, such as sunshine, heat registers, or fire.
- Battery chemicals can cause a rash. If the batteries leak, clean the battery compartment with a cloth. If chemicals touch your skin, wash immediately.
- Make sure that batteries are disposed of correctly. Do not burn or incinerate.

Making connections

Connecting the power

To connect the power:

 Plug the power cord on back of your TV into a power outlet.



Cautions

- Make sure that you use the correct type of power. See the label on your TV.
- If you do not intend to use your TV for an extended period of time, unplug the power cord from the power outlet.

Did you know?

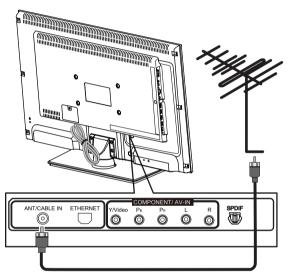
Insignia, Dynex, and Rocketfish offers a wide variety of cords and cables for connecting just about type of device to your new TV. Stop in a store nearest you or visit www.bestbuy.com



Connecting an antenna or cable TV without a cable box

To connect an antenna or cable TV without a cable box:

 Connect a coaxial cable (not provided) to the ANT/CABLE IN jack on the back of your TV and to the antenna or cable TV wall jack.



Cautions

- Use a 75 ohm cable to eliminate interference and noise from radio waves.
- Do not bundle the 75 ohm cable with the power cord or other cables.
- If the antenna is not installed correctly, contact qualified service personnel to correct the problem.



Connecting a cable or satellite box

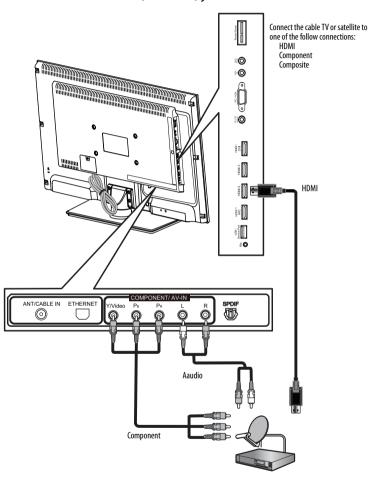
Many cable or satellite TV boxes have more than one connection type. To get the best video, you should use the best connection type available.

Connection type	Video quality
HDMI	Best
Component	Better than composite
Composite	Better than coaxial
Coaxial	Good

To connect a cable TV or satellite TV box:

1 Connect the incoming cable or satellite from the wall jack to the cable-in or satellite-in jack on the cable box or satellite box.

2 Depending on the jacks available on the cable or satellite TV box, connect a cable from the outgoing jacks on the cable or satellite TV box to the corresponding jacks on the back of your TV. The connection can be to an **HDMI** jack or the **COMPONENT/AV-IN (Y/PB/PR)** jacks.





- 3 If you use the **COMPONENT/AV-IN (Y/PB/PR)** jacks, connect an audio cable (provided) to the **L** and **R** (audio in) jacks on the back of your TV.
- 4 Connect the other end of the audio cable to the audio out jack(s) on the cable or satellite box.

Note

- If the cable or satellite box does not have an HDMI or component connection, you can connect the cable or satellite to the composite jacks on the back of your TV. See "Connecting a composite video device" on page 23.
- If the cable or satellite box does not have an HDMI, component, or composite connection, connect the box to the ANT/CABLE IN jack on the back of your TV. See "Connecting an antenna or cable TV without a cable box" on page 18.

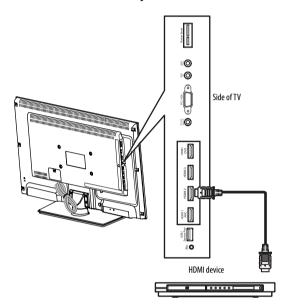
Connecting an HDMI device

If your device has an HDMI connection, we recommend that you use the HDMI connection to get the best quality possible.

To connect an HDMI device:

1 Make sure that your TV's power cord is unplugged and the HDMI device is turned off.

2 Connect an HDMI cable (not provided) to the HDMI 1, HDMI 2, HDMI 3, or HDMI/DVI jack on the side of your TV and to the HDMI OUT jack on the HDMI device.



To play from an HDMI device:

- 1 Turn on your TV.
- 2 Turn on the HDMI device, then set it to the correct output mode. See the documentation that came with the device for more information.
- 3 Press INPUT to open the input source list.
- 4 Press ▲ or ▼ to highlight HDMI 1, HDMI 2, HDMI 3, or HDMI 4, then press SELECT.

Note



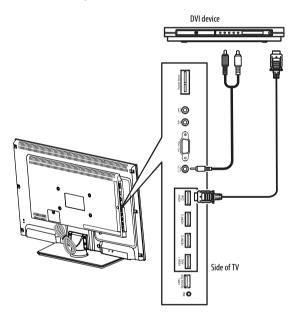
Connecting a DVI device

Note

A DVI device must be connected to the **HDMI/DVI** jack. If you connect a DVI device to another HDMI jack, you will not hear audio.

To connect a DVI device:

- 1 Make sure that your TV's power cord is unplugged and the DVI device is turned off.
- 2 Connect an HDMI-DVI adapter (not provided) to one end of an HDMI cable (not provided), then connect the adapter to the **DVI OUT** jack on the DVI device.



- 3 Connect the other end of the HDMI cable to the **HDMI/DVI** jack on the side of your TV.
- 4 Connect an audio cable to the PC/DVI Audio In jack on the side of your TV and to the AUDIO OUT jack on the DVI device.

To play from a DVI device:

- 1 Turn on your TV.
- 2 Turn on the DVI device, then set it to the correct output mode. See the documentation that came with the device for more information.
- 3 Press **INPUT** to open the input source list.
- 4 Press ▲ or ▼ to highlight **HDMI** 4, then press **SELECT**.

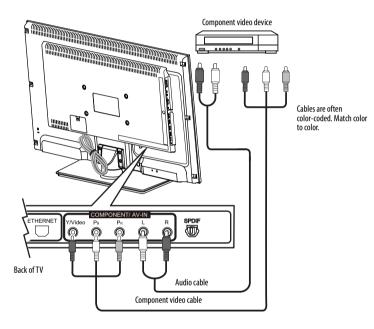
Note



Connecting a component video device

To connect a component video device:

- 1 Make sure that your TV's power cord is unplugged and the component video device is turned off.
- 2 Connect a component video cable (provided) to the COMPONENT/AV-IN (Y/PB/PR) jacks on the back of your TV and to the COMPONENT OUT jacks on the component video device.



3 Connect an audio cable (provided) to the L and R (audio in) jacks on the back of your TV and to the L and R AUDIO OUT jacks on the component video device.

To play from the component video device:

- 1 Turn on your TV.
- 2 Turn on the component video device, then set it to the correct output mode. See the documentation that came with the device for more information.
- 3 Press INPUT to open the input source list.
- 4 Press ▲ or ▼ to highlight Component/Composite, then press SELECT.

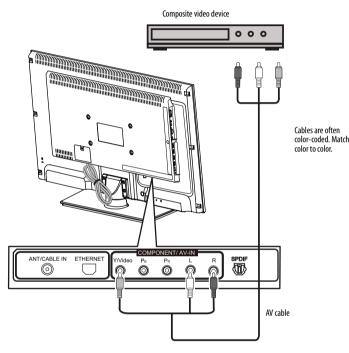
Note



Connecting a composite video device

To connect a composite video device:

- 1 Make sure that your TV's power cord is unplugged and the composite video device is turned off.
- 2 Connect an AV cable (not provided) to the Y/Video and L and R (audio in) jacks on the back of your TV and to the AV OUT jacks on the composite video device.



To play from the composite video device:

- 1 Turn on your TV.
- **2** Turn on the composite video device, then set it to the correct output mode. See the documentation that came with the device for more information.
- **3** Press **INPUT** to open the input source list.
- 4 Press ▲ or ▼ to highlight Component/Composite, then press SELECT.

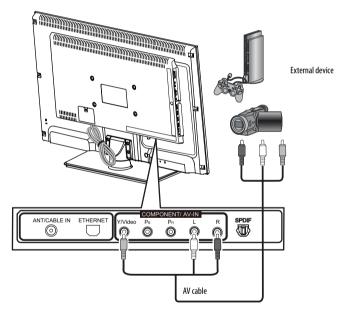
Connecting a camcorder, game, or VCR

Note

If your camcorder or game console has an HDMI or component connection, we recommend that you use the HDMI or component connection to get the best picture quality.

To connect a camcorder, game, or VCR:

- 1 Make sure that your TV's power cord is unplugged and the camcorder or game console is turned off.
- 2 Connect an AV cable (not provided) to the Y/Video and L and R (audio in) jacks on the back of your TV and to the AV OUT jacks on the camcorder, game console, or VCR.



Note

The composite video jack **Y/Video** is also one of the component video jacks. When making connection with an AV (composite) cable, connect the yellow plug to the green/yellow (Y/Video) jack on the back of your TV.



To play from the camcorder or game console:

- 1 Turn on your TV, then turn on the device.
- 2 Press **INPUT** to open the input source list.
- 3 Press ▲ or ▼ to highlight Component/Composite, then press SELECT.
- 4 If you connected a VCR, insert a videotape, then press **PLAY** on the VCR.

Note

If the source sensor is turned on, the inputs that do not have devices connected are grayed in the input source list. When you press **INPUT**, your TV moves between the inputs that have devices connected. You can select a grayed input by pressing ▲ or ▼. For more information, see "Turning the source sensor on or off" on page 95.

Connecting a computer

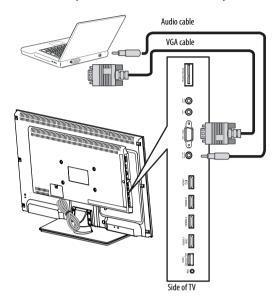
Note

If the computer has an HDMI jack, you can connect it to one of the HDMI jacks on your TV.

To connect a computer:

1 Make sure that your TV's power cord is unplugged and the computer is turned off.

2 Connect a VGA cable (not provided) to the **PC/VGA** jack on the side of your TV and to the **VGA** jack on the computer.



3 Connect an audio cable with a stereo mini plug to the **PC/DVI Audio In** jack on the side of your TV and to the **LINE OUT** or **AUDIO OUT** jack on the computer.

To play video from the computer:

- 1 Turn on your TV, then turn on the computer.
- 2 Press **INPUT** to open the input source list.
- 3 Press ▲ or ▼ to highlight VGA, then press SELECT.
- **4** On the computer, adjust the display properties, if necessary.

Note

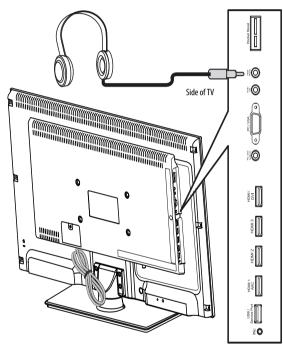
Connecting headphones

Warning

Loud noise can damage your hearing. When using headphones, use the lowest volume setting on your headphones that still lets you hear the sound.

To connect headphones:

 Connect headphones to the **Headphone** jack on the side of your TV.



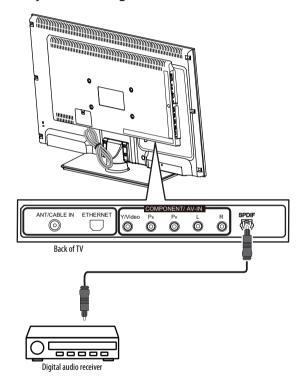
Note

When headphones are plugged in, the sound from your TV's speakers is muted.

Connecting a digital audio receiver

To connect a digital audio receiver:

- 1 Make sure that your TV's power cord is unplugged and the digital audio receiver is turned off.
- 2 Connect a digital optical audio cable (not included) to the **SPDIF** jack on the back of your TV and to the digital optical audio jack on the digital audio receiver.



Note

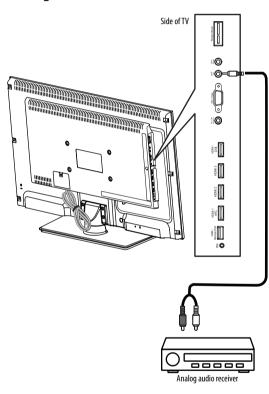
To hear sound only from the receiver, turn off the TV speakers. For more information, see "Turning your TV speakers on or off" on page 50.



Connecting an analog audio receiver

To connect an analog audio receiver:

- 1 Make sure that your TV's power cord is unplugged and the analog audio receiver is turned off.
- 2 Connect an audio cable (not provided) to the **Audio Out** jack on the side of your TV and to the **AUDIO IN** jacks on the analog audio receiver.



Note

To hear sound only from the receiver, turn off the TV speakers. For more information, see "Turning your TV speakers on or off" on page 50.

Connecting your TV to your home network

Wireless connection

Your TV has a built-in wireless WiFi device that lets you access the Internet through your home network. With this feature, you can easily connect to a wireless network and enjoy the benefits of networking in a cable-free environment.

To connect to a wireless network:



For step-by-step instructions to set up a wireless Internet connection, see "Configuring a wireless connection" on page 81.



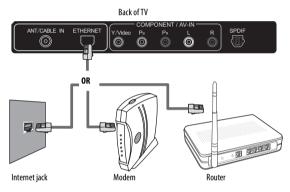
Wired connection

Depending on how your Internet connection is setup, you can connect your TV to:

- An Internet jack
- A modem
- A router

To connect your TV to your home network:

• Connect an Ethernet cable (not provided) to the **ETHERNET** jack on the back of your TV and to your home network.



For step-by-step instructions to set up a wired Internet connection, see "Configuring a wired connection" on page 86.

Turning on your TV for the first time

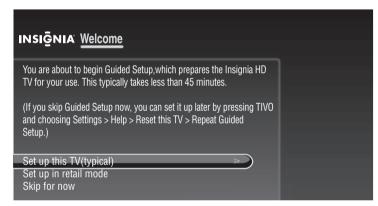
Note

Unless otherwise noted, all tasks in this section are based on using the remote control.

The first time you turn on your TV, the Setup Wizard opens. The Setup Wizard guides you through setting up basic settings. You can skip these settings or press **EXIT**, **MENU**, **TiVo**, or **LIVE** on your remote control to exit the wizard (except when a software update is in progress).

To set up your TV:

- 1 Make sure that you have:
 - Installed the remote control batteries. (See page 17 for details).
 - Connected an antenna, cable TV, or satellite TV. (See page 18 for details.)
 - Connected to your home network, if available. (See page 26 for details).
 - Connected the power cord. (See page 17 for details.)
- 2 Press (b) (power) to turn on your TV.
- 3 The *Welcome* screen opens. Press ▲ or ▼ to highlight **Set up** this **TV** (typical), then press **SELECT**.

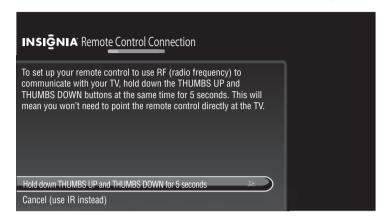


Note

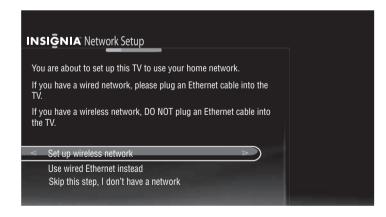
If you are setting up your TV for in-store display, highlight **Set up in retail mode**, then press **SELECT**. The *Retail Mode Energy Usage* screen opens. Highlight **Continue with retail mode**, then press **SELECT**. The *Retail Mode Activated* screen opens. Press **SELECT** to select **Continue**.



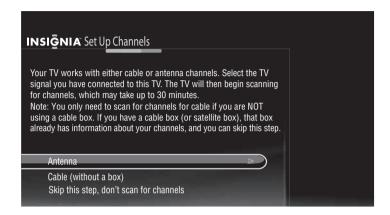
4 The Remote Control Connection screen opens. Press ♀ and ♀ on your remote control to pair the remote control. Press SELECT when the RF Connection Successful screen opens.



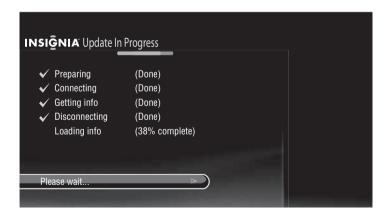
5 The Network Setup screen opens. Press ▲ or ▼ to highlight your network connection type, then press SELECT and follow the on-screen instructions to set up your network and run the network speed test.



6 The Set Up Channels screen opens. Press ▲ or ▼ to highlight your signal type, then press **SELECT** to start the channel scan. If you use a cable or satellite TV box, you do not need to scan for channels.



7 If you connected to a network in Step 5 and a software update is available, the *Update in Progress* screen opens. Follow the on-screen instructions to install the software update.





8 The Date and Time Setup screen opens. Press ▲ or ▼ to highlight Use this date and time, then press SELECT.
OR

Press ▲ or ▼ to highlight **Set date and time manually**, then press **SELECT** and follow the on-screen instructions to set your time zone, daylight saving option, and date and time.



9 The Congratulations screen opens. Press TiVo to enjoy your new TV.



10 If you skipped the channel scan in Step 6 because you are using a cable or satellite TV box, your TV switches to the active input source that you connected the cable or satellite box to before displaying the *Home* menu.

Programming your universal Insignia remote control

Note

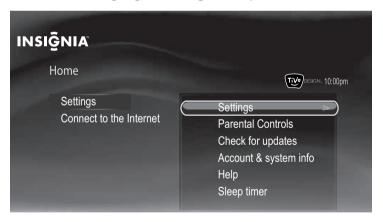
To use the on-screen setup for your remote control, the remote control must be in RF mode. If the remote control is not in RF mode, the *RF Remote Control Required* screen opens when you try to enter the *Remote control setup* menu. Follow the on-screen instructions to switch your remote control to RF mode.

Programming the mode buttons

You can program the mode buttons on your TV remote control (**DVD**, **STB**, or **AUX**) to control the corresponding device using your TV remote control.

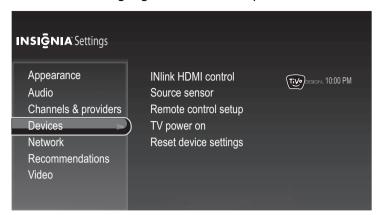
To program the mode buttons:

- 1 Press **TiVo**. The *Home* screen opens. Press ▲ or ▼ to select **Settings**, then press ▶ or **SELECT**.
- 2 Press ▲ or ▼ to highlight **Settings**, then press ▶ or **SELECT**.

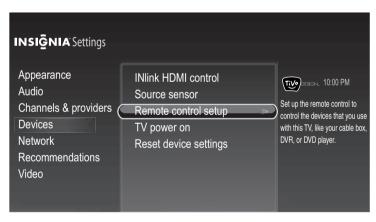




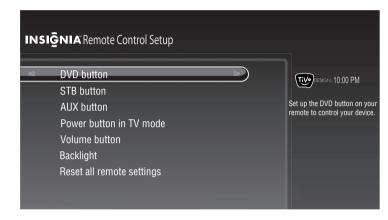
3 Press ▲ or ▼ to highlight **Devices**, then press ▶ or **SELECT**.



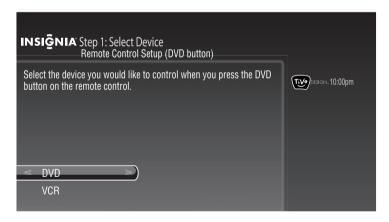
4 Press ▲ or ▼ to highlight Remote control setup, then press
 ▶ or SELECT. If your remote control is not in RF mode,
 follow the on-screen instructions to switch to RF mode.



5 Press ▲ or ▼ to highlight the mode button on your remote control that you want to program (DVD, STB, or AUX), then press ► or SELECT.



6 Press ▲ or ▼ to highlight the device you want to control with the button you are programming, then press ▶ or SELECT and follow the on-screen instructions.

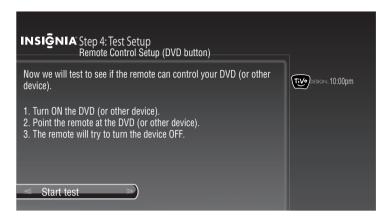


7 Repeatedly press ▶ to highlight the list of brands, press ▲ or ▼ to highlight the brand of your device, then press SELECT.





- Repeatedly press ➤ to highlight the list of models, press ▲ or
 ▼ to highlight the model number of your device, then press
 SELECT.
- **9** Follow the on-screen instruction to test the remote control on the device.

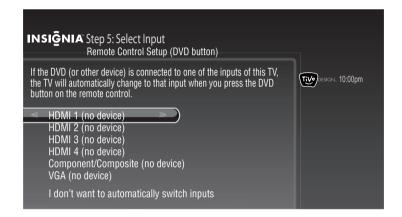


10 Press **△** or **▼** to highlight **Yes, continue**, then press **SELECT**.



11 Press ▲ or ▼ to highlight the input jack you want to assign to this button, then press SELECT. When you press the mode button, your TV switches to the input source you selected for the device.

If you do not want to switch to the input source you selected for the device when you press the mode button, select I don't want to automatically switch inputs, then press SELECT

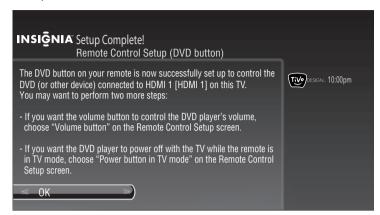


12 Press ▲ or ▼ to highlight the device you want to turn on and off when you press the power button in this mode, then press SELECT. A check mark appears next to the selected device. Press ▲ or ▼ to highlight Use these settings, then press SELECT.





13 Press **SELECT** to select **OK** and return to the remote control setup menu.



Programming the button lock

You can set the power button to turn selected devices on and off with the TV while in TV mode.

You can set the volume button to control a selected device, regardless of what mode you are in. For example, if you lock the volume to your DVD player, then go to TV mode, when you press the volume button on your Insignia remote control, the volume will change on your DVD player and not on your TV.

Before you program the button lock, you need to program the mode buttons. For more information, see "Programming the mode buttons" on page 29.

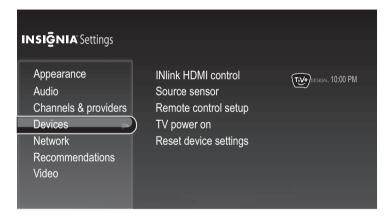
To program the button lock:

1 Press **TiVo**. The *Home* screen opens. Press ▲ or ▼ to select **Settings**, then press ▶ or **SELECT**.

2 Press ▲ or ▼ to highlight **Settings**, then press ▶ or **SELECT**.

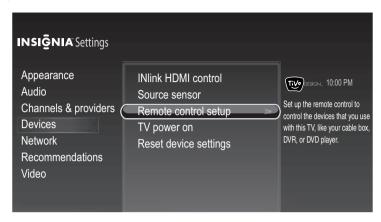


3 Press ▲ or ▼ to highlight **Devices**, then press ▶ or **SELECT**.

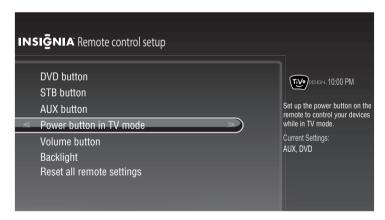




4 Press ▲ or ▼ to highlight Remote control setup, then press ► or SELECT.

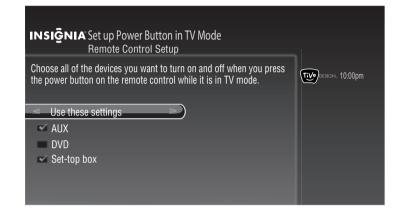


5 Press ▲ or ▼ to highlight the button on your remote control that you want to lock (power or volume), then press ► or SELECT.



6 Press ▲ or ▼ to highlight the device you want the locked button to control, then press ▶ or **SELECT** to return to the *Remote Control Setup* menu.

You can assign more than one device for the power button to control while in TV mode. Highlight **Use these settings**, then press **SELECT** after adding the devices.



Resetting all the remote settings

You can reset the remote control to the factory defaults. This will clear all the programming and button lock settings.

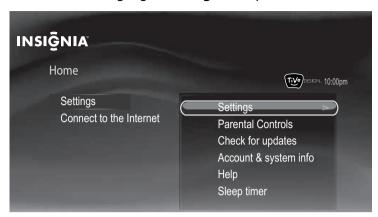
To reset all the remote settings:

1 Press **TiVo**. The *Home* screen opens. Press ▲ or ▼ to select **Settings**, then press ▶ or **SELECT**.

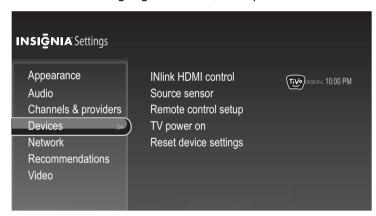
Did you know? Insignia has a variety of high-quality speaker systems for your new TV.



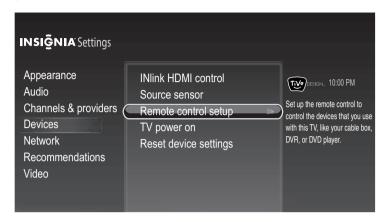
2 Press ▲ or ▼ to highlight **Settings**, then press ▶ or **SELECT**.



3 Press ▲ or ▼ to highlight **Devices**, then press ▶ or **SELECT**.



4 Press ▲ or ▼ to highlight Remote control setup, then press ► or SELECT.



5 Press ▲ or ▼ to highlight **Reset all remote settings**, then press ► or **SELECT**.



6 Press ▲ or ▼ to highlight **Yes, reset all remote settings**, then press **SELECT**.

Understanding the basics

Turning your TV on or off

To turn your TV on and off:

- 1 Make sure that the power cord is already connected to a power outlet.
- 2 Press (b) (power) to turn on your TV. The power indicator LED turns blue.
- 3 Press & (power) again to turn off your TV. Your TV enters Standby mode and the power indicator turns red or purple, depending on the TV power on mode you select. For more information, see "Setting the TV power on mode" on page 93.

Warning

When your TV is off, power still flows into it. To disconnect power, unplug the power cord.

Note

If your TV does not detect a signal and you do not press any buttons for several minutes, your TV goes into Standby mode automatically.

Selecting the video input source

Note

If the source sensor is turned on, the inputs that do not have devices connected are grayed in the input source list. When you press INPUT, your TV moves between the inputs that have devices connected. You can select a grayed input by pressing ▲ or ▼. For more information, see "Turning the source sensor on or off" on page 95.

To select the video input source:

1 Turn on your TV, then press **INPUT** on the remote control. The input source list opens.

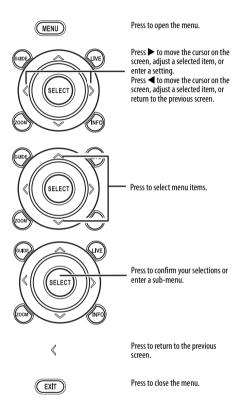


- 2 Press ▲ or ▼ to highlight a video input source, then press **SELECT**. You can select:
 - TV
 - HDMI 1
 - HDMI 2
 - HDMI 3
 - HDMI 4
 - Component/Composite (to select a component or composite device)
 - VGA



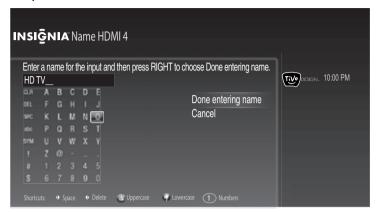
Navigating menus and using the on-screen keyboard

Navigating the menus



Using the on-screen keyboard

The keyboard screen lets you create custom labels (names) for input sources or channels.



To use the on-screen keyboard:

- Press ▲▼◀ or ▶ to highlight a character, then press
 SELECT to enter the character in the text entry area.
- Highlight CLR, then press SELECT to clear the text entry area.
- Highlight **DEL**, then press **SELECT** to delete one character to the left of the cursor in the text entry area.
- Highlight **SPC**, then press **SELECT** to add one space to the right of the cursor in the text entry area.
- Highlight ABC, then press SELECT to change all keyboard characters to uppercase. The ABC key changes to abc.
- Highlight **abc**, then press **SELECT** to change all keyboard characters to lowercase. The **abc** key changes to **ABC**.
- Highlight SYM, then press SELECT to replace the characters with symbols. The SYM key changes to ABC or abc, depending on the character mode you were in before you entered symbol mode.



To use the remote control shortcuts:

- Press on your remote control to add one space to the right of the cursor in the text entry area.
- Press ◀ on your remote control to delete one character to the left of the cursor in the text entry area.
- Press 🖢 on your remote control to switch to ABC mode.
- Press $\widehat{\forall}$ on your remote control to switch to abc mode.
- Press number buttons on your remote control to enter numbers in the text entry area.

Selecting a channel

To select a channel:

- Press CH▲ or CH▼ to go to the next higher or lower channel in the channel list.
- Press the number buttons to enter the channel number you want, then wait for the channel to change or press SELECT to immediately change the channel.
- To select a digital sub-channel, press the number buttons to select the main digital channel, press (dash), then press the number button for the sub-channel. Wait for the channel to change, or press **SELECT** to immediately change the channel. For example, to tune to channel 5-1, press 5, (dash), then 1.
- Press **LAST** to go to the last viewed channel.
- Press FAV to open the favorite channel list, press ▲ or ▼ to highlight a channel, then press SELECT.

Note

If a list has more than one page, press ▲ or ▼ to scroll through the pages.

Adjusting the volume

To adjust the volume:

- Press VOL+ or VOL- to increase or decrease the volume.
- Press MUTE to turn off the sound. Press MUTE again to turn the sound back on.

Displaying additional information

To view channel information:

- Press INFO to view an information banner. The information banner shows the current program information such as channel number, video input source, and resolution.
 - Digital channel information—Displays the channel number, station name, channel label, broadcast program name, TV rating, signal type, audio information, resolution, CC mode, current time, and current program start and end times.
 - Analog channel information—Displays channel number, channel label (if available), signal type, audio information, and resolution.
- Press GUIDE to show the digital program guide, which may list available programs, program times, and program summaries, depending on the information provided by the broadcaster.

INSIGNIA



Using Your TV

Using the applications offered on your TV	40
Adjusting the video	42
Adjusting audio settings	46
Changing channel settings	67
Setting parental controls	71
Using closed captioning	76
Adjusting time settings	80
Adjusting Internet settings	81
Using INlink to control HDMI devices	90
Adjusting other options	92



Using the applications offered on your TV

Enjoy all your TV has to offer! Access Internet content through the Internet applications that came with your TV. New and exciting applications are continually being added to the TV. Be sure to watch for those to come.

To enjoy the online content you need high speed Internet access, such as cable or DSL, hooked up through a wireless or wired Internet connection.

Note

Your TV does not have a full web browser. To access Internet content use the applications provided on the TV.



Watching movies with CinemaNow

With CinemaNow on TV, you can rent some of your favorite movies from the comfort of your couch. All you need is your Insignia remote control. Once you have a CinemaNow account from CinemaNow.com, grab some popcorn and enjoy the show.

To watch movies with CinemaNow:

- 1 First set up your CinemaNow account through your PC. Go to www.cinemanow.com/activate to get an activation PIN.
- 2 Click **Activate a New Device**, then sign in again with your user name and password.
- 3 Enter any name in the **Name Your Device** section, then click **Continue**.
 - You now have been provided with a valid activation number to enter into the activation field within the CinemaNow application on your TV.
- 4 Once you have successfully established an Internet connection on your TV, select the CinemaNow application on your TV using your remote control.

- **5** Select the **Settings** tab at the bottom of the screen.
- **6** Select **Activate** and enter your activation code. You can now rent movies using CinemaNow.



Watching movies with Netflix

With Netflix on TV and a Netflix unlimited plan, you can instantly watch thousands movies and TV episodes streamed from Netflix to your TV. Just add shows to your Netflix Instant Queue and start watching.

To watch movies with Netflix you must first activate your TV for Netflix.

To activate your TV:

- **1** Select the Netflix application.
- 2 If you do not have a Netflix account, select **no-start my FREE trial**. Go to your computer and sign up at www.netflix.com/Insignia, then come back to your TV and select **I'm now a member**. An activation code will be displayed on your TV.

OR

If you do have an existing Netflix account, select **yes-activate instant streaming from Netflix**. Enter your e-mail address and password to log into your account. An activation code will be displayed on your TV.

- 3 Go to your computer and go to www.netflix.com/activate.
- 4 Enter the activation code that is displayed on your TV.

To watch movies with Netflix:

- 1 Activate your account following the previous steps.
- 2 Select the Netflix application using your remote control.
- 3 Add movies to your Instant Queue from either your TV or from the Netflix Web site.
- 4 Select and play movies or TV episodes.
- **5** Use your Insignia remote control to control playback of movies or TV episodes.



6 For questions regarding the Netflix service please visit: www.netflix.com/help or call 1-866-579-7113.

PANDORA[®]

Listening to music with Pandora

Pandora on TV lets you choose exactly the music you want to hear and creates personal Internet radio stations that play it for you. Just enter a song title or band name that represents the kind of music you want to hear, and Pandora will start a unique "Pandora station" that plays similar music. Add variety by entering other titles and bands to your station, and even more variety by creating multiple Pandora stations (up to 100!). Check us out today.

For existing Pandora customers:

- 1 Select the **Pandora** application.
- 2 Select I have a Pandora account from the options, then sign in with your account information.

For new Pandora customers:

- 1 Select the **Pandora** application.
- 2 Select I am new to Pandora from the options. You will receive an activation code.
- **3** On your PC, go to www.pandora.com and enter the activation code from Step 2, then click **Activate**.
- 4 Click **Create a Pandora Account** and follow the on-screen instructions.
- 5 Select a previously created station or create a new station by entering a favorite song or artist using the on-screen keyboard. The music begins playing and information about the song is displayed. You can also create stations on the Pandora Web site.
- **6** Use your Insignia remote control when listening to a song to control the playback.

To create a new Pandora account using a PC:

• Go to http://www.pandora.com/ to create a new account.

TiVo Search

You can search for specific shows by title or actor name, or you can discover new shows recommended for you.

Finding content you want to watch using TiVo Search

To find content you want to watch using TiVo search:

- 1 Press **TiVo**. The *Home* screen opens.
- 2 Select TV & movies on demand, then select Search.
- 3 Use the letter grid to spell out the title, person, or word you're looking for. Press the arrow buttons to move around, then press **SELECT** on each letter you want. As you select letters, a list of possible matches sorted by popularity appears on the right. For example, if you enter the letters **HOW**, you might see matches for the show "How I Met Your Mother," the video on demand movie "How To Lose A Guy In Ten Days," and the director Ron Howard.

Results are sorted by popularity, with better matches higher in the list.

4 Keep selecting letters until you see what you're searching for. If you make a mistake, you can press **CLEAR** to erase everything, or ◀ to erase one letter at a time. Insert a space by pressing ▶.

Insignia is constantly working to find all of your favorite entertainment for you. Connecting to your high-speed Internet connection opens up a whole new world of home entertainment. With a broadband connection and video on demand, your TV is the hub for movies, music, and TV shows from a host of video providers, including Insignia video on demand!

Want to stream a whole season of your favorite show? Give Netflix a try. Would you rather rent or buy a new released movie, go to CinemaNow? Do it all, with your Insignia TV.



Adjusting the video

Adjusting the video settings

Notes

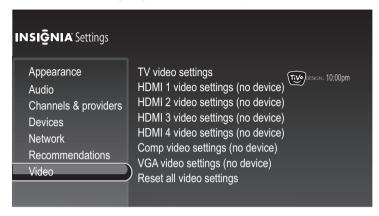
- You can press PICT, then ◀ or ▶ to select the Profile setting. If you want to manually adjust the video settings, select Custom, then press SELECT to access the video settings menu.
- Different video inputs have different setting options.

To adjust video settings:

- 1 Press **TiVo**. The *Home* screen opens. Press ▲ or ▼ to select **Settings**, then press ▶ or **SELECT**.
- 2 Press ▲ or ▼ to highlight **Settings**, then press ▶ or **SELECT**.



3 Press ▲ or ▼ to highlight Video, then press ▶ or SELECT.



4 Press ▲ or ▼ to highlight an active video input, then press SELECT.



- 5 Press ▲ or ▼ to highlight an option, then press ◀ or ▶ to adjust a setting or change a value. You can select:
 - **Profile**—Selects the video mode.
 - Vivid—Provides bright and dynamic video.
 - Standard—Provides standard video.
 - **Energy savings**—Decreases the backlight brightness for energy savings.
 - **Theater**—Provides finely detailed cinema-like viewing.



- **Sports**—Provides a sharp, high contrast picture.
- **Game**—Provides optimal performance for playing games.
- PC—For use with a computer.
- **Custom**—Lets you manually adjust video settings.

Note

The **Vivid**, **Energy savings**, **Theater**, and **Sports** options are not available in VGA mode.

- **Aspect ratio**—Selects the picture aspect ratio.
 - **Normal**—Preserves the 4:3 aspect ratio. Black bars are shown on edges.
 - Zoom—Enlarges the picture but may crop the top and bottom.
 - Wide—Stretches the 4:3 content to eliminate left and right bars.
 - Cinema—Stretches the picture at the edges, but maintains a good aspect ratio at the center of the screen.

Note

You can also press **ZOOM** to select the aspect ratio.

- **Brightness**—Adjusts the brightness of dark areas of the video.
- **Contrast**—Adjusts the white level of the picture.
- Sharpness—Adjusts the sharpness of the picture.
- Dynamic backlight
 — Automatically adjusts the overall brightness of the picture. When any option other than Off is selected, the Backlight option cannot be adjusted.
- **Backlight**—Controls the overall brightness of the picture.
- Color saturation—Adjusts color intensity.
- Color tint—Adjusts the picture hue (red, green).
- **Color temperature**—Selects the color temperature.
 - **Cool**—Produces a gentle, blue-hued image.
 - Normal—Produces a vivid image.
 - **Warm**—Produces a red-hued image.
- Advanced contrast—Dynamically adjusts picture detail and brightness. You can select **On** or **Off**.

- Insignia motion—Selects the Insignia motion mode to enhance video detail and motion smoothness. You can select Low (reduce ghosting or halo), Middle, High, 24p film mode (which provides smooth and clear motion for film-based videos), or Off.
- Noise reduction—Selects the noise reduction mode to reduce video noise (snow). You can select Low, Middle, High, or Off.
- Overscan—Adjusts the picture's display range. You can select **On** or **Off**.
- Clock adjust—Minimizes vertical stripes.
- Auto power—Puts your TV into sleep mode after 15 minutes of inactivity in VGA mode. You can select On or Off.
- Phase adjust—Minimizes horizontal stripes.
- **Adjust picture position**—Adjusts the horizontal and vertical picture position.
- **Use these settings**—Uses the current settings. Press **SELECT** to return to the previous screen.
- **Reset <input> video settings**—Resets the video settings of the selected input to the factory defaults.

Notes

- The Sharpness, Color saturation, Color tint, Advanced contrast, Noise reduction, and Overscan settings are not available in VGA
- Clock adjust, Auto Power, Phase adjust, and Adjust picture position settings are only available in VGA mode.
- 6 Press **SELECT** to save your settings and return to the previous screen.



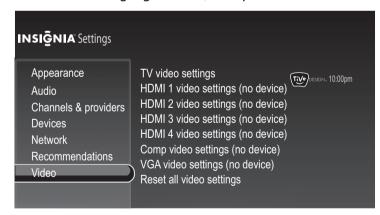
Resetting all video settings

To reset all video settings:

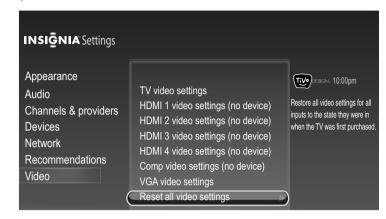
- 1 Press **TiVo**. The *Home* screen opens. Press ▲ or ▼ to select **Settings**, then press ▶ or **SELECT**.
- 2 Press ▲ or ▼ to highlight **Settings**, then press ▶ or **SELECT**.



3 Press ▲ or ▼ to highlight Video, then press ▶ or SELECT.



4 Press ▲ or ▼ to highlight Reset all video settings, then press ► or SELECT.



5 Press ▲ or ▼ to highlight Yes, reset all video settings, then press SELECT. The video settings are reset to factory defaults.

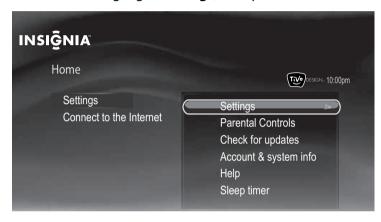


Turning the video window on or off

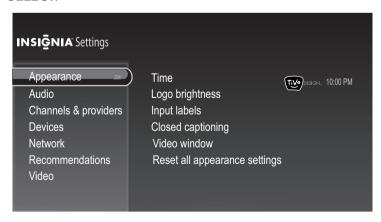
Your TV can display a video window on the top right corner of the screen so you can continue watching your show while using the menu.

To turn the video window on or off:

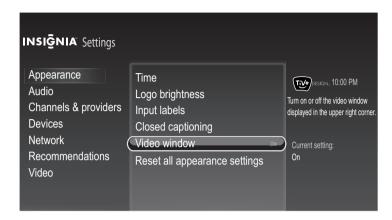
- 1 Press **TiVo**. The *Home* screen opens. Press ▲ or ▼ to select **Settings**, then press ▶ or **SELECT**.
- 2 Press ▲ or ▼ to highlight **Settings**, then press ▶ or **SELECT**.



3 Press ▲ or ▼ to highlight Appearance, then press ► or SELECT.



4 Press ▲ or ▼ to highlight Video window, then press ▶ or SELECT.



5 Press ▲ or ▼ to highlight **On** or **Off**, then press **SELECT** to save your setting and return to the previous screen.

Note You can temporarily turn the video window on or off by pressing ▶/SLOW regardless of whether this option is turned on or off.



Adjusting audio settings

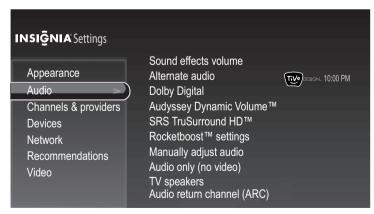
Manually adjusting audio settings

To manually adjust audio settings:

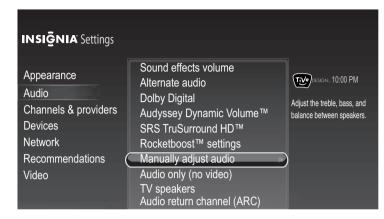
- 1 Press **TiVo**. The *Home* screen opens. Press ▲ or ▼ to select **Settings**, then press ▶ or **SELECT**.
- 2 Press ▲ or ▼ to highlight **Settings**, then press ▶ or **SELECT**.



3 Press ▲ or ▼ to highlight Audio, then press ► or SELECT.



4 Press ▲ or ▼ to highlight Manually adjust audio, then press ► or SELECT.



- 5 Press ▲ or ▼ to highlight an option, then press ◀ or ▶ to adjust its setting. You can adjust:
 - Treble—Adjusts the high sounds.
 - Bass—Adjusts the low sounds.
 - **Balance**—Adjusts the balance between the left and right audio channels.



6 Press **SELECT** to highlight **Use these settings**, then press **SELECT** again to save your settings and return to the previous screen.

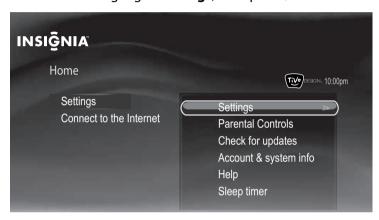


Selecting the Dolby digital output

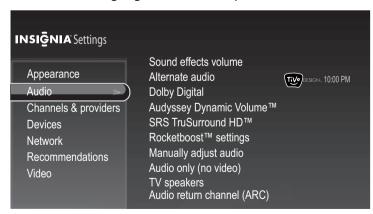
You can select the format for your digital audio output If you have connected an amplifier or receiver to the **SPDIF** jack on your TV.

To select the Dolby digital output:

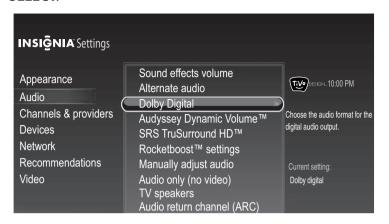
- 1 Press **TiVo**. The *Home* screen opens. Press ▲ or ▼ to select **Settings**, then press ▶ or **SELECT**.
- 2 Press ▲ or ▼ to highlight **Settings**, then press ▶ or **SELECT**.



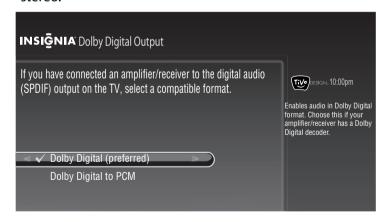
3 Press ▲ or ▼ to highlight Audio, then press ▶ or SELECT.



4 Press ▲ or ▼ to highlight Dolby Digital, then press ▶ or SELECT.



- **5** Press **△** or **▼** to highlight an option. You can select:
 - Dolby Digital (preferred)—Outputs audio in Dolby Digital format if your amplifier or receiver has a Dolby Digital decoder.
 - Dolby Digital to PCM—Outputs audio in 2-channel stereo.



6 Press **SELECT** to save your setting and return to the previous menu.

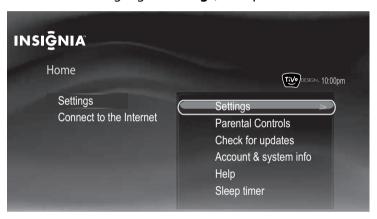


Setting the Audyssey Dynamic Volume control

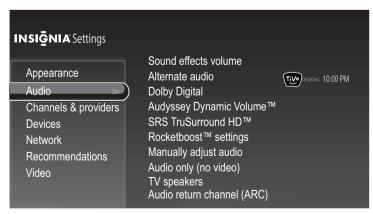
Audyssey Dynamic Volume control adjusts the volume so that commercials and loud scenes in a program are more consistent with the rest of the scenes.

To set the Audyssey Dynamic Volume control:

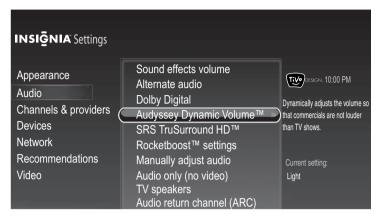
- 1 Press **TiVo**. The *Home* screen opens. Press ▲ or ▼ to select **Settings**, then press ▶ or **SELECT**.
- 2 Press ▲ or ▼ to highlight **Settings**, then press ▶ or **SELECT**.



3 Press ▲ or ▼ to highlight Audio, then press ► or SELECT.



4 Press ▲ or ▼ to highlight Audyssey Dynamic Volume™, then press ▶ or SELECT.



- 5 Press ▲ or ▼ to highlight an option. You can select:
 - Off—Turns off the Audyssey Dynamic Volume™ control.
 - **Light**—Adjusts the volume level slightly.
 - Medium—Adjusts the volume level moderately.
 - Heavy—Adjusts the volume level heavily.
- **6** Press **SELECT** to save your setting and return to the previous screen.





Setting the SRS TruSurround HD mode

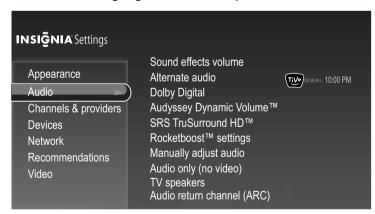
The SRS TruSurround HD simulates surround sound through TV speakers.

To set the SRS TruSurround HD mode:

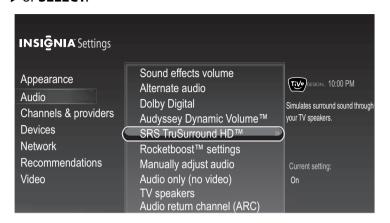
- 1 Press **TiVo**. The *Home* screen opens. Press ▲ or ▼ to select **Settings**, then press ▶ or **SELECT**.
- 2 Press ▲ or ▼ to highlight **Settings**, then press ▶ or **SELECT**.



3 Press ▲ or ▼ to highlight Audio, then press ▶ or SELECT.



4 Press ▲ or ▼ to highlight SRS TruSurround HD™, then press ► or SELECT.



5 Press ▲ or ▼ to highlight **On** or **Off**, then press **SELECT** to save your setting and return to the previous screen.

Note If the SRS TruSurround HD™ is set to On, the Audyssey Dynamic Volume feature is automatically set to Off.



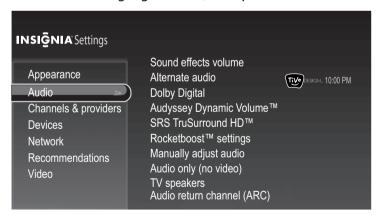
Turning your TV speakers on or off

To turn your TV speakers on or off:

- 1 Press **TiVo**. The *Home* screen opens. Press ▲ or ▼ to select **Settings**, then press ▶ or **SELECT**.
- 2 Press ▲ or ▼ to highlight **Settings**, then press ▶ or **SELECT**.



3 Press ▲ or ▼ to highlight Audio, then press ► or SELECT.



4 Press ▲ or ▼ to highlight **TV speakers**, then press ▶ or **SELECT**.



5 Press ▲ or ▼ to highlight On or Off, then press ▶ or SELECT.





Setting up Rocketboost™

Congratulations on your purchase of this Rocketboost $^{\text{\tiny{TM}}}$ Ready TV.

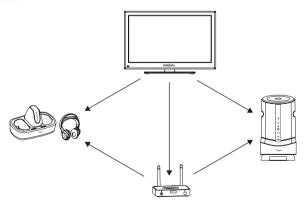
Rocketboost uses state of the art 2.4 GHz wireless audio technology. When used with other Rocketboost products, you can enjoy your music or other audio throughout your house without the limitations of cables.

How does Rocketboost work?

Rocketboost technology can connect all audio devices throughout your home to form a home audio network. Rocketboost products include "Senders," which send or transmit audio streams, and "Receivers," which receive the audio. This lets you listen to music from your Sender in other rooms using your Receiver. Your Rocketboost Ready TV can be used as both a sender and receiver.

As a sender you can listen to your TV audio using any other Rocketboost receiver. As a receiver you can listen to the audio from any other Rocketboost sender.

Rocketboost is expandable. Each Rocketboost Receiver can select the audio from any Sender in your Rocketboost audio network. The following shows an example Rocketboost network. You can set up your network to meet your specific needs.



We hope you enjoy your new Rocketboost system. Remember that it's designed to grow with your home entertainment needs and that it's easy to add a new device to the network as you expand your system.

For more information on Rocketboost products, go to www.rocketboost.com.

Establishing communication

Rocketboost products form an audio network and each Rocketboost receiver can select the audio from any Rocketboost sender in the network.

Note

Every Rocketboost network must contain one hub or manager device, which helps devices join the network. The network can have only one hub, which you can enable using the hub switch on Rocketboost senders and sender/receivers.

If this is your first Rocketboost product, you should make the TV the hub or manager. If you already have a working Rocketboost network, then one of your other devices is already the hub or manager.

Note

Hub devices must always have power for your network to operate. The hub device can be in standby (power saving) mode, but must stay plugged in.

Is this your first Rocketboost product?

YES—If this is your first Rocketboost enabled product, follow the steps under "Setting up Rocketboost with your TV as the hub or manager" on page 52.

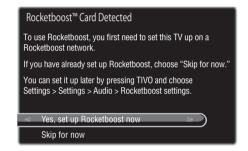
NO—If this is not your first Rocketboost enabled product and you already have a working Rocketboost network, go to "Setting up Rocketboost with another device as the hub or manager" on page 53.



Setting up Rocketboost with your TV as the hub or manager

To set up Rocketboost with your TV as the hub or manager:

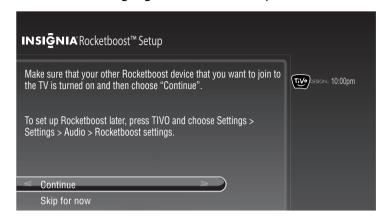
- 1 Insert a Rocketboost Wireless Card (RF-RBCARD, sold separately) in the Rocketboost slot on the side of your TV. The card connector is keyed so it can only be installed one way. When inserting the card, make sure that it is oriented so the Rocketboost logo on the card is facing you.
- 2 Make sure that the hub switches (if available) on your other Rocketboost devices are set to **DISABLE** because your TV is acting as manager. Refer to the documentation that came with your other Rocketboost devices to set up the audio system.
- 3 Press ▲ or ▼ to highlight Yes, set up Rocketboost now, then press SELECT.



4 Press ▲ or ▼ to highlight No, then press SELECT.



5 Press ▲ or ▼ to highlight Continue, then press SELECT.



6 Press and hold the power button of the Rocketboost device.



7 When your TV finds the device, press ▲ or ▼ to highlight
 OK, then press SELECT to exit the setup.
 OR



Press ▲ or ▼ to highlight Add another Rocketboost device, then press SELECT to add another Rocketboost device to the network.



Note

You can add up to eight devices to the Rocketboost network, but only five devices (sources) can be transmitting audio at a time.

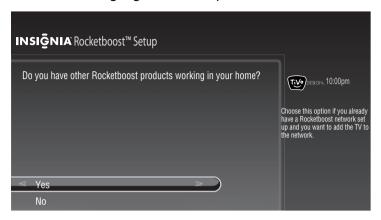
Setting up Rocketboost with another device as the hub or manager

To set up Rocketboost with another device as the hub or manager:

- 1 Refer to the documentation that came with your Rocketboost device to set up the Rocketboost network with one of your Rocketboost devices as manager (hub status set to **ENABLE**).
- 2 Insert a Rocketboost™ Wireless Card (RF-RBCARD, sold separately) into the Rocketboost slot on the side of your TV.
- 3 Press ▲ or ▼ to highlight Yes, set up Rocketboost now, then press SELECT.



4 Press ▲ or ▼ to highlight Yes, then press SELECT.



5 Press ▲ or ▼ to highlight Continue, then press SELECT.





6 Press and hold the power button of the Rocketboost manager.



7 Press **SELECT** to exit the setup.



Note

To add another Rocketboost device to the network, refer to the device's documentation for more information.

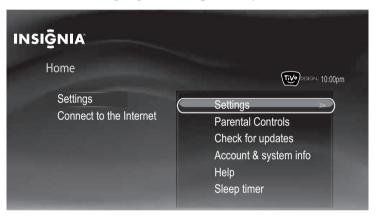
Adding another Rocketboost device

Note

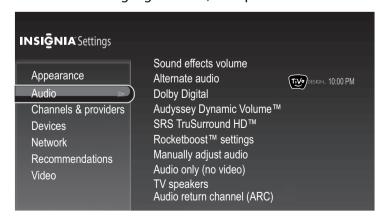
If one of your other Rocketboost devices is the hub or manager, refer to that device's documentation for how to add additional Rocketboost devices to the network.

To add another Rocketboost device with your TV as the hub or manager:

- 1 Press **TiVo**. The *Home* screen opens. Press ▲ or ▼ to select **Settings**, then press ▶ or **SELECT**.
- 2 Press ▲ or ▼ to highlight **Settings**, then press ▶ or **SELECT**.

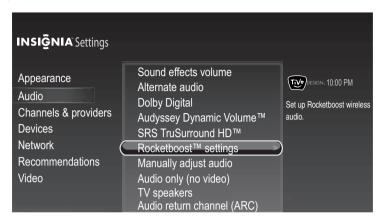


3 Press ▲ or ▼ to highlight Audio, then press ▶ or SELECT.

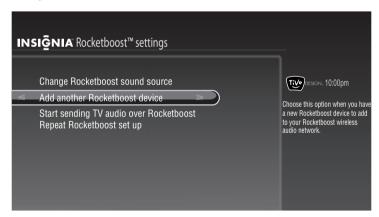




4 Press ▲ or ▼ to highlight **Rocketboost™ settings**, then press ▶ or **SELECT**.



5 Press ▲ or ▼ to highlight Add another Rocketboost device, then press ▶ or SELECT.



6 Press and hold the power button of the Rocketboost device.



7 Press ▲ or ▼ to highlight **OK**, then press ▶ or **SELECT** to return to the previous screen.

OR

Press ▲ or ▼ to highlight Add another Rocketboost device, then press ▶ or SELECT to add another device.



Changing the Rocketboost sound source

You can select the Rocketboost sound source that you want to hear through the TV speakers.

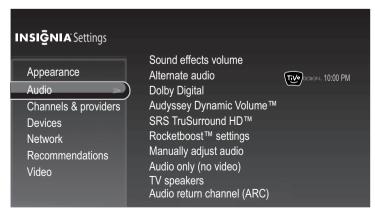
This can only be done when a Rocketboost card has been inserted into your TV and the Rocketboost network has been setup.

To change the Rocketboost sound source:

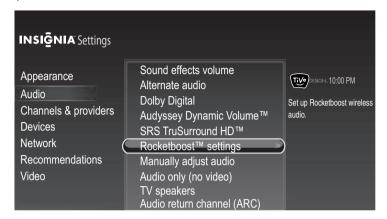
- 1 Press **TiVo**. The *Home* screen opens. Press ▲ or ▼ to select **Settings**, then press ▶ or **SELECT**.
- 2 Press ▲ or ▼ to highlight **Settings**, then press ▶ or **SELECT**.



3 Press ▲ or ▼ to highlight Audio, then press ► or SELECT.



4 Press ▲ or ▼ to highlight Rocketboost™ settings, then press ► or SELECT.

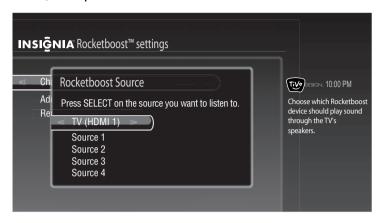


5 Press ▲ or ▼ to highlight Change Rocketboost sound source, then press ▶ or SELECT.





6 If multiple devices are listed, press ▲ or ▼ to highlight the device, then press **SELECT**.



Warning

You can have up to five Rocketboost sound sources (transmitting audio simultaneous) in the network. This includes the TV transmit sound source if you are sending the TV audio over Rocketboost. If you want to display five other sources in the list, do not send TV audio over Rocketboost. For more information, see "Listening to TV audio through other Rocketboost devices" on page 58.

Using a different Rocketboost manager

When you are using the Rocketboost network with another device as the manager, you can switch to use a different Rocketboost network configured with a different manager. This may be useful if you want to limit the available sound sources to specific Rocketboost networks.

You can also use the following steps if you change your Rocketboost hub or manager to a different Rocketboost device.

Note

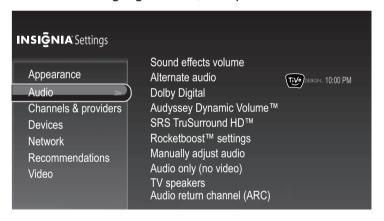
To add other Rocketboost device to the network with another device as the manager, refer to the devices' documentation for more information.

To use a different Rocketboost manager:

1 Press TiVo. The Home screen opens. Press ▲ or ▼ to select Settings, then press ► or SELECT. 2 Press ▲ or ▼ to highlight **Settings**, then press ▶ or **SELECT**.

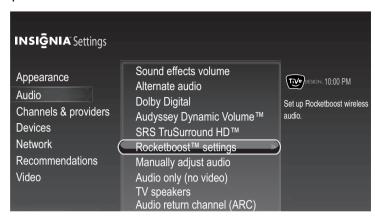


3 Press ▲ or ▼ to highlight Audio, then press ▶ or SELECT.

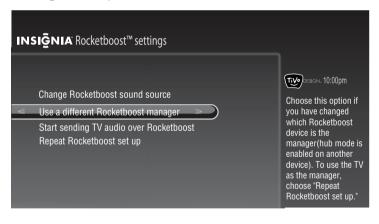




4 Press ▲ or ▼ to highlight Rocketboost™ settings, then press ▶ or SELECT.



5 Press ▲ or ▼ to highlight Use a different Rocketboost manager, then press ▶ or SELECT.



6 Press and hold the power button of the Rocketboost manager.



7 Press **SELECT** to return to the previous screen.



Listening to TV audio through other Rocketboost devices

You can listen to your TV audio through other Rocketboost devices. For example, you can listen to TV audio around your house using Rocketboost enabled headphones (RF-RBWHP01) or the Rocketboost indoor/outdoor speaker (RF-RBWS02).

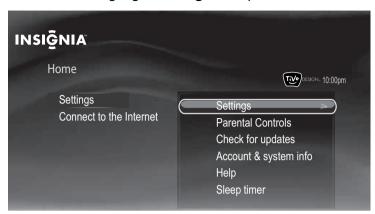


To listen to TV audio through other Rocketboost devices:

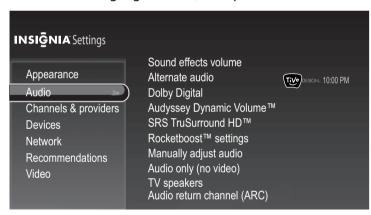
1 Press **TiVo**. The *Home* screen opens. Press ▲ or ▼ to select **Settings**, then press ▶ or **SELECT**.



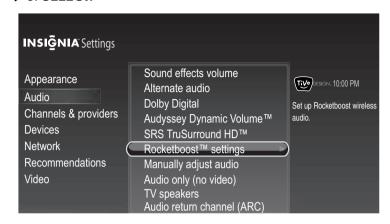
2 Press ▲ or ▼ to highlight **Settings**, then press ▶ or **SELECT**.



3 Press ▲ or ▼ to highlight Audio, then press ▶ or SELECT.



4 Press ▲ or ▼ to highlight Rocketboost[™] settings, then press ► or SELECT.



- 5 Press ▲ or ▼ to highlight Start sending TV audio over Rocketboost, then press ▶ or SELECT.
- 6 Press ▲ or ▼ to highlight Yes, start sending TV audio to Rocketboost, then press ▶ or SELECT.

Note

You can have up to five simultaneous Rocketboost sound sources (transmitting audio) in your network. If your network already has five Rocketboost sound sources, you will have to turn off one of the other sound sources if you want to enable the TV audio on the Rocketboost network.



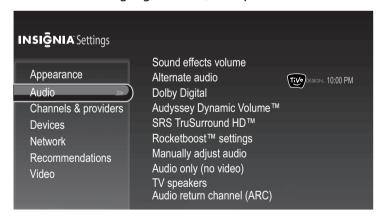
Repeating the Rocketboost set up

To repeat the Rocketboost set up:

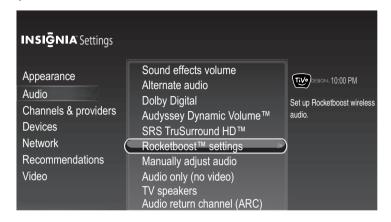
- 1 Press **TiVo**. The *Home* screen opens. Press ▲ or ▼ to select **Settings**, then press ▶ or **SELECT**.
- 2 Press ▲ or ▼ to highlight **Settings**, then press ▶ or **SELECT**.



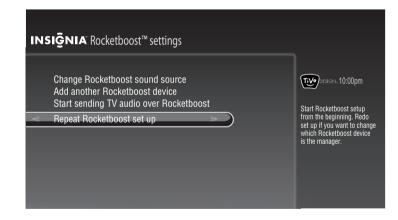
3 Press ▲ or ▼ to highlight Audio, then press ▶ or SELECT.



4 Press ▲ or ▼ to highlight Rocketboost™ settings, then press ► or SELECT.



5 Press ▲ or ▼ to highlight Repeat Rocketboost set up, then press ▶ or SELECT. For instructions, see "Setting up Rocketboost™" on page 51.





Expanding your Rocketboost System

Rocketboost technology is expandable. Each Rocketboost Receiver can select the audio from any Sender in your Rocketboost audio network.

You can set up your network to meet your specific needs. The following highlight some of the Rocketboost products you may want to use with your Rocketboost enabled TV:

- RF-RBWHP01, Rocketboost Wireless Headphones, include a Sender device and wireless headphones. You can listen to audio sources connected to the Sender or directly from your TV using the wireless headphones.
- RF-RBWS02, Rocketboost Wireless Indoor/Outdoor Speaker, includes a wireless speaker and the RF-RBAUX wireless sender/receiver. You can listen to audio sources connected to the sender/receiver or audio from your TV using the wireless speaker.
- RF-RBAUX, Rocketboost Wireless Sender/Receiver can be used as both a Sender and Receiver. As a Sender, you can connect it to your other audio source devices (like a home theater or mp3 player) and receive that audio using your TV or any other Rocketboost Receiver. As a Receiver you can connect it to your stereo system or amplified speakers and listen to the audio from your TV or any other Rocketboost sender.
- RF-RBREC, Rocketboost Amplified Audio Receiver, is an amplified Receiver. You connect speakers to this and listen to audio from your TV or any of your Rocketboost Sender devices. This is a great way to expand your Rocketboost system to listen to your music anywhere in the house.
- RF-RBKIT, Rocketboost Wireless HD Starter Kit, includes a Sender device and the RF-RBREC, amplified Receiver. This product can be used for home theater wireless surround sound for multi-room audio.

For more information, and to see what other Rocketboost products are available, visit www.rocketboost.com.

Rocketboost Network Capabilities

The maximum number of Rocketboost devices in a Rocketboost Network is nine. If you already have nine devices and attempt to join another one, the joining will fail for the new device.

Note

If you want to remove a device from your Rocketboost network you need to rejoin it to a different hub device (this basically creates a second Rocketboost network).

The maximum number of audio streams that can be sent simultaneously on the Rocketboost network is one of the following:

- 5 stereo CD quality
- 1 stereo HD quality + 3 CD quality
- 2 stereo HD quality + 2 stereo CD quality
- 3 stereo HD quality

Note

HD streams are available if using the RF-RBKIT sender. If your system is in a maximum audio stream state, the TX indicator will not light on the Sender devices that have exceeded the maximum. To use those devices' audio streams, you need to turn off one of your other senders.



Playing TV audio only

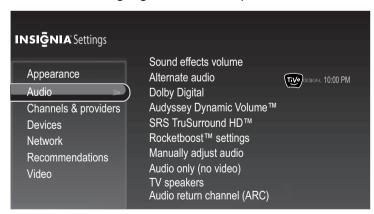
You can turn off the picture on your TV and listen to the program audio only.

To play TV audio only:

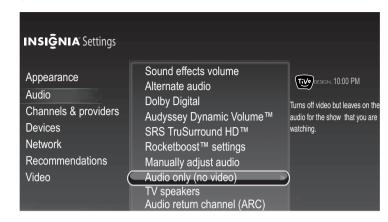
- 1 Press **TiVo**. The *Home* screen opens. Press ▲ or ▼ to select **Settings**, then press ▶ or **SELECT**.
- 2 Press ▲ or ▼ to highlight **Settings**, then press ▶ or **SELECT**.



3 Press ▲ or ▼ to highlight Audio, then press ▶ or SELECT.



4 Press ▲ or ▼ to highlight Audio only (no video), then press ► or SELECT.



5 Press ▲ or ▼ to highlight Yes, play audio and turn off video, then press SELECT to save your setting and return to the previous screen.

Notes

- Audio Only works only when the input source is TV and your TV is receiving a broadcast signal.
- To exit audio only mode, press any button on your remote control to display the video again.

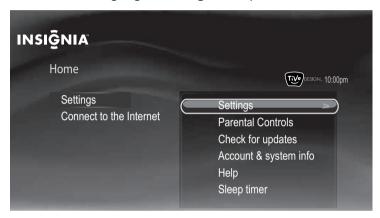


Setting the button sound effects volume

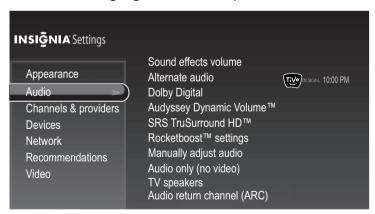
You can set the volume level of the sound you hear when pressing the buttons on the remote control.

To set the button sound effects volume:

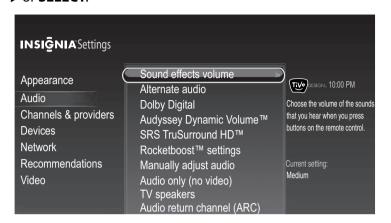
- 1 Press **TiVo**. The *Home* screen opens. Press ▲ or ▼ to select **Settings**, then press ▶ or **SELECT**.
- 2 Press ▲ or ▼ to highlight **Settings**, then press ▶ or **SELECT**.



3 Press ▲ or ▼ to highlight Audio, then press ▶ or SELECT.



4 Press ▲ or ▼ to highlight **Sound effects volume**, then press ► or **SELECT**.



5 Press ▲ or ▼ to highlight Off, Low, Medium, or High, then press SELECT to save your setting and return to the previous screen.



Selecting the language for a TV program

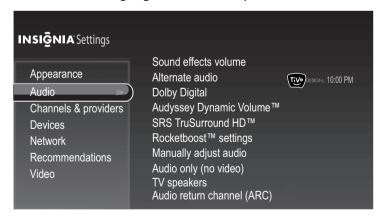
You can select the default audio language and audio program for upcoming shows that have multiple language tracks.

To select the language for a TV program:

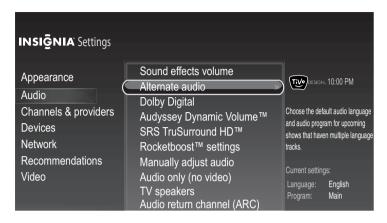
- 1 Press **TiVo**. The *Home* screen opens. Press ▲ or ▼ to select **Settings**, then press ▶ or **SELECT**.
- 2 Press ▲ or ▼ to highlight **Settings**, then press ▶ or **SELECT**.



3 Press ▲ or ▼ to highlight Audio, then press ▶ or SELECT.



4 Press ▲ or ▼ to highlight Alternate audio, then press ► or SELECT.



- 5 Press ▲ or ▼ to highlight an option, then press ◀ or ▶ to select a setting. You can select:
 - Audio language
 —Selects the default audio language for shows that have multiple language tracks. Options are English, Español (Spanish), and Français (French).
 - Audio program
 –Select Main to listen to standard audio for all shows, or select Secondary (SAP) to listen to a secondary audio program, if available.



6 Press **SELECT** to highlight **Use these options**, then press **SELECT** again to save the setting and return to the previous screen.

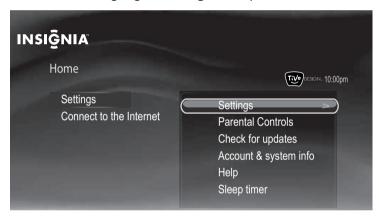


Using Audio Return Channel (ARC)

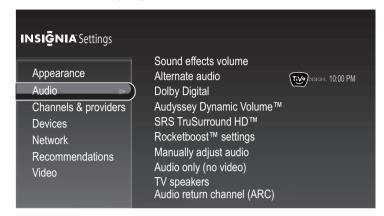
The Audio Return Channel feature sends the TV audio signal to the A/V receiver or amplifier through the HDMI cable. You do not need to connect a cable from the audio output of your TV to the audio input of the A/V receiver or amplifier.

To use Audio Return Channel:

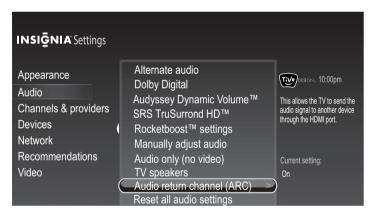
- 1 Connect an ARC-enabled device to the **HDMI 1 ARC** jack on the side of your TV, and make sure that the ARC feature on the connected device is turned on.
- 2 Press **TiVo**. The *Home* screen opens. Press ▲ or ▼ to select **Settings**, then press ▶ or **SELECT**.
- 3 Press ▲ or ▼ to highlight **Settings**, then press ▶ or **SELECT**.



4 Press ▲ or ▼ to highlight Audio, then press ▶ or SELECT.

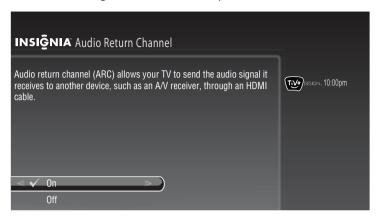


5 Press ▲ or ▼ to highlight Audio return channel (ARC), then press ▶ or SELECT.





6 Press ▲ or ▼ to highlight **On** or **Off**, then press **SELECT** to save the setting and return to the previous screen.

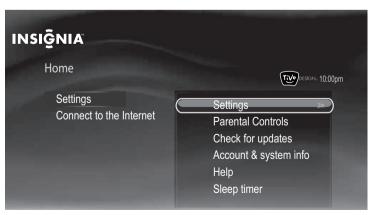


Resetting all Audio menu settings

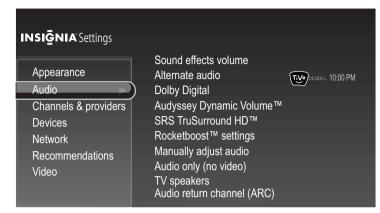
The audio settings will be reset to the factory defaults.

To reset all Audio menu settings:

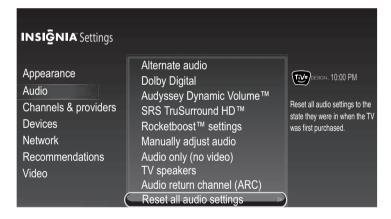
- 1 Press **TiVo**. The *Home* screen opens. Press ▲ or ▼ to select **Settings**, then press ▶ or **SELECT**.
- 2 Press ▲ or ▼ to highlight **Settings**, then press ▶ or **SELECT**.



3 Press ▲ or ▼ to highlight Audio, then press ▶ or SELECT.



4 Press ▲ or ▼ to highlight Reset all audio settings, then press ► or SELECT.



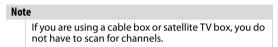
5 Press ▲ or ▼ to highlight Yes, reset all audio settings, then press SELECT. The audio settings are reset to factory defaults.

Changing channel settings

Automatically scanning for channels

When you scan for channels, your TV searches for channels with signals and stores the channel information in the channel list. When you press CH▲ or CH▼, your TV goes to the next or previous channel in the channel list.

If the TV signal source changes, for example you change from an outdoor antenna to cable TV (no box), you need to scan for channels.

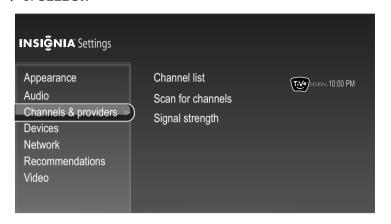


To automatically scan for channels:

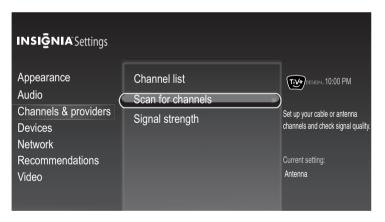
- 1 Press **TiVo**. The *Home* screen opens. Press ▲ or ▼ to select **Settings**, then press ▶ or **SELECT**.
- 2 Press ▲ or ▼ to highlight **Settings**, then press ▶ or **SELECT**.



3 Press ▲ or ▼ to highlight Channels & providers, then press ► or SELECT.

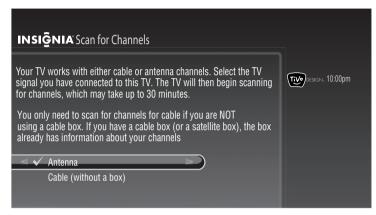


4 Press ▲ or ▼ to highlight Scan for channels, then press ► or SELECT.





- 5 Press ▲ or ▼ to highlight Cable (without a box) or Antenna, then press SELECT. The Channel Scan starts.
 - If you are using an antenna for a standard or HDTV signal, select **Antenna**.
 - If your cable is connected directly to the TV (using no cable box), select **Cable (without a box)**.



If your cable or satellite TV is connected to your TV through a cable or satellite box, the channel search is not necessary because the cable or satellite box already has the channel information needed to communicate with your TV.

Note

You can press **CLEAR**, **MENU**, or **EXIT** to stop the channel scan, but you will need to run the channel scan again to create a channel list.

Setting up the channel and favorite channel lists

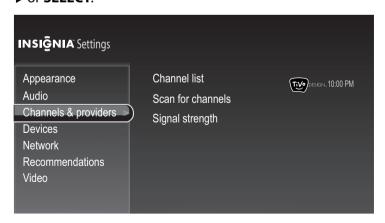
You can add, hide, or mark favorite channels in the channel list.

To set up the channel and favorite channel lists:

- 1 Press **TiVo**. The *Home* screen opens. Press ▲ or ▼ to select **Settings**, then press ▶ or **SELECT**.
- 2 Press ▲ or ▼ to highlight **Settings**, then press ▶ or **SELECT**.

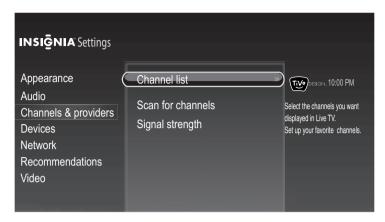


3 Press ▲ or ▼ to highlight Channels & providers, then press ► or SELECT.





4 Press ▲ or ▼ to highlight Channel list, then press ▶ or SELECT.



- **5** Press ▲ or ▼ to highlight a channel, then press:
 - · SELECT:
 - If the channel is selected, unselects the channel, then highlights the next channel in the list.
 - If the channel is unselected, selects the channel, then highlights the next channel in the list.
 - \triangle to add the channel to the favorite list or press \bigcirc to remove the channel from the favorite list.

• **INFO** to rename a channel. Use the on-screen keyboard to enter a new name and assign it to the channel. For more information, see "Using the on-screen keyboard" on page 36.



6 Press **◄** to go to the previous screen or press **EXIT** to close the menu.

Viewing a favorite channel

To view a favorite channel:

- 1 Press FAV. The favorite channel list opens.
- 2 Press ▲ or ▼ to highlight a favorite channel, then press SELECT.

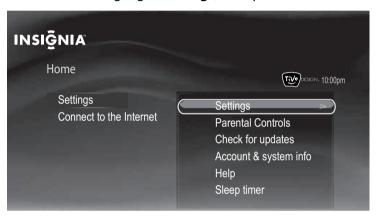


Checking the signal strength

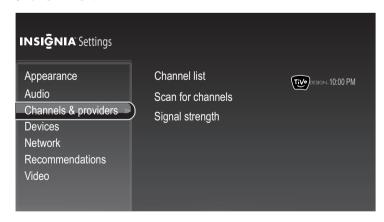
You can check the signal strength to determine if you need to adjust your antenna or cable input. The higher the signal strength, the less likely you are to experience picture degradation.

To check the signal strength:

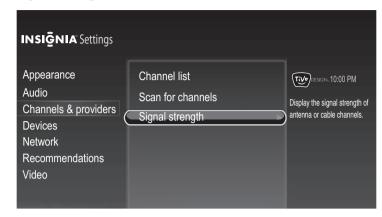
- 1 Press **TiVo**. The *Home* screen opens. Press ▲ or ▼ to select **Settings**, then press ▶ or **SELECT**.
- 2 Press ▲ or ▼ to highlight **Settings**, then press ▶ or **SELECT**.



3 Press ▲ or ▼ to highlight Channels & providers, then press ► or SELECT.



4 Press ▲ or ▼ to highlight **Signal strength**, then press ▶ or **SELECT**. The *Signal Strength* screen opens showing the signal strength meter for the last watched channel.



5 Press CH or CH vio change channels, or press CLEAR or EXIT to close the Signal Strength screen and return to full screen video.

Signal Strength	۱
Channel 2 KTVUDT	ı
CHAN UP/DOWN or 0-9 to change channels, CLEAR to exit.	



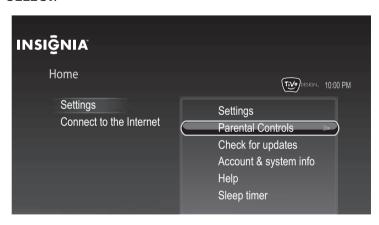
Setting parental controls

Parental controls let you control what your children watch on TV. When set, parental controls read the rating of the program (with some exceptions, such as news and sports) and deny access to programs that exceed the rating level you select. To watch programs that exceed the selected rating, you must enter your PIN (password).

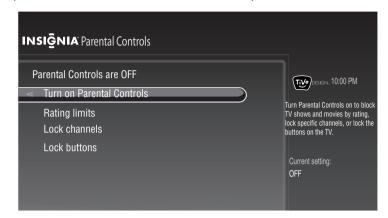
Setting the PIN (password)

To set PIN (password):

- 1 Press **TiVo**. The *Home* screen opens. Press ▲ or ▼ to select **Settings**, then press ▶ or **SELECT**.
- 2 Press ▲ or ▼ to highlight Parental Controls, then press ► or SELECT.



3 Press ▲ or ▼ to highlight any *Parental Controls* option, then press ► or **SELECT**. The *Set PIN* screen opens.



4 Press the number buttons to enter your personal four-digit PIN. The *Confirm PIN* screen opens. Enter the PIN again.

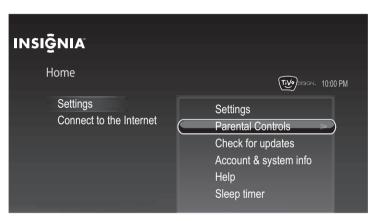


Changing the PIN (password)

You can only change the PIN if you have set a PIN and turned on Parental Controls.

To change the PIN:

- 1 Press **TiVo**. The *Home* screen opens. Press ▲ or ▼ to select **Settings**, then press ▶ or **SELECT**.
- 2 Press ▲ or ▼ to highlight Parental Controls, then press ▶ or SELECT.



3 Press the number buttons to enter your four-digit PIN. The *Parental Controls* screen opens.

4 Press ▲ or ▼ to highlight **Change PIN**, then press ► or **SELECT**. The *Current PIN* screen opens.



- **5** Press the number buttons to enter the current four-digit PIN. If you forgot your PIN, enter **9999**. The *New PIN* screen opens.
- **6** Press the number buttons to enter the new four-digit PIN. The *Confirm PIN* screen opens.
- **7** Press the number buttons to enter the new four-digit PIN again. The *Parental Controls* screen opens.



Turning Parental Controls on or off

Tuning Parental Controls on or off:

- 1 Press **TiVo**. The *Home* screen opens. Press ▲ or ▼ to select **Settings**, then press ▶ or **SELECT**.
- 2 Press ▲ or ▼ to highlight Parental Controls, then press ▶ or SELECT.



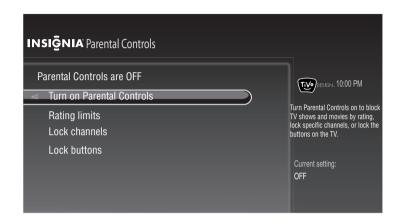
Note

If Parental Controls is set to **On**, you have to enter your PIN to access the *Parental Controls* menu.

3 Press ▲ or ▼ to highlight Turn on Parental Controls or Disable Parental Controls, then press SELECT.

Note

If you select **Disable Parental Controls**, you have to enter your PIN.





Setting Parental Control levels

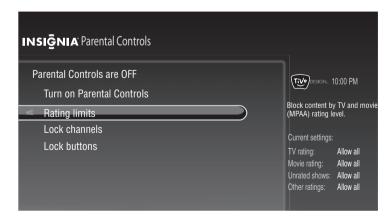
To set Parental Control levels:

- 1 Press **TiVo**. The *Home* screen opens. Press ▲ or ▼ to select **Settings**, then press ▶ or **SELECT**.
- 2 Press ▲ or ▼ to highlight Parental Controls, then press ▶ or SELECT.





3 Press ▲ or ▼ to highlight Rating limits, then press ► or SELECT.



- 4 Press ▲ or ▼ to highlight a rating option, then press ◄ or ► to select a rating level.
- **5** After setting all the options, press **SELECT** to highlight **Use these settings**, then press **SELECT** again to save your settings and return to the previous screen.

Note

You can watch a program that exceeds the rating limits you set by entering your PIN to turn off Parental Controls temporarily. To turn on Parental Controls again, turn your TV off, then on again

U.S. TV ratings

Rating	Description
Not rated	NONE
TV-Y	All children
TV-Y7	Children over seven years of age
TV-G	General audiences
TV-PG	Parental guidance suggested
TV-14	Parents strongly cautioned
TV-MA	Mature audiences only

U.S. movie (MPAA) ratings

Rating	Description
None	Movie not rated
G	General audiences
PG	Parental guidance suggested
PG-13	Suitable for children 13 and older
R	Parental guidance suggested for children under 17
NC-17	Not suitable for children under 17
AO (Adult Only)	Adults only

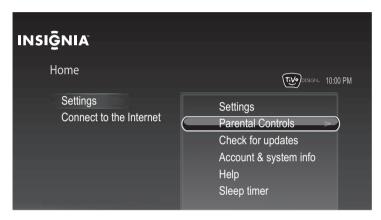


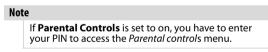
Setting channel locks

You can lock specific channels. To view a locked channel, you have to enter your PIN.

To set channel locks:

- 1 Press **TiVo**. The *Home* screen opens. Press ▲ or ▼ to select **Settings**, then press ▶ or **SELECT**.
- 2 Press ▲ or ▼ to highlight Parental Controls, then press ► or SELECT.





- 3 Press ▲ or ▼ to highlight **Lock channels**, then press **SELECT**.
- 4 Press ▲ or ▼ to select a specific channel.
- 5 Press **SELECT** to lock or unlock the channel. A locked channel is displayed with a a.
- 6 Press ▲ or ▼ to select Use these settings, then press SELECT to save your settings and return to the previous screen.

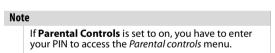
Locking control buttons

You can lock the buttons on the front of your TV to prevent children from accidentally changing your TV settings. When the buttons are locked, you can only operate your TV using the remote control.

To lock control buttons:

- 1 Press **TiVo**. The *Home* screen opens. Press ▲ or ▼ to select **Settings**, then press ▶ or **SELECT**.
- 2 Press ▲ or ▼ to highlight Parental Controls, then press ► or SELECT.





- 3 Press ▲ or ▼ to highlight Lock buttons, then press SELECT.
- 4 Press ▲ or ▼ to highlight Lock TV buttons, then press SELECT to save your setting and return to the previous screen.



Using closed captioning

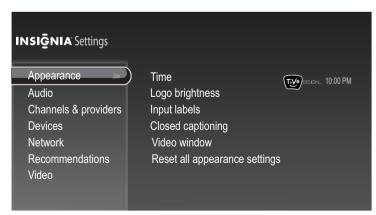
Turning closed captioning on or off

To turn closed captioning on or off:

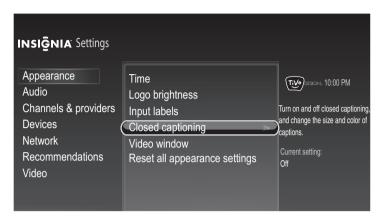
- 1 Press **TiVo**. The *Home* screen opens. Press ▲ or ▼ to select **Settings**, then press ▶ or **SELECT**.
- 2 Press ▲ or ▼ to highlight **Settings**, then press ▶ or **SELECT**.



3 Press ▲ or ▼ to highlight Appearance, then press ► or SELECT.

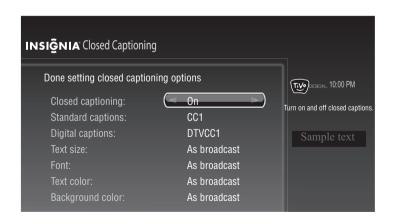


4 Press ▲ or ▼ to highlight Closed captioning, then press ► or SELECT.



5 Press ▲ or ▼ to highlight Closed captioning, then press ◀ or ▶ to select On or Off, or On when mute.

You can also press CC to turn closed captioning on or off. If Closed captioning is set to Off, other closed captioning options are grayed out and are not available.



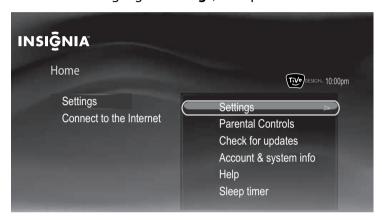
6 Press **SELECT** to highlight **Done setting closed captioning options**, then press **SELECT** again to save your setting and return to the previous screen.



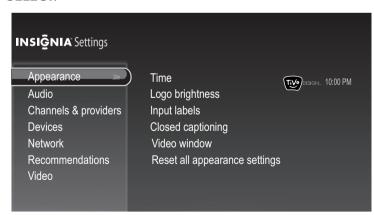
Selecting the analog closed captioning mode

To select the analog closed captioning mode:

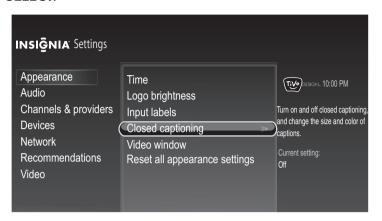
- 1 Press **TiVo**. The *Home* screen opens. Press ▲ or ▼ to select **Settings**, then press ▶ or **SELECT**.
- 2 Press ▲ or ▼ to highlight **Settings**, then press ▶ or **SELECT**.



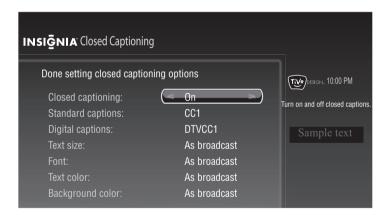
3 Press ▲ or ▼ to highlight Appearance, then press ► or SELECT.



4 Press ▲ or ▼ to highlight Closed captioning, then press ► or SELECT.

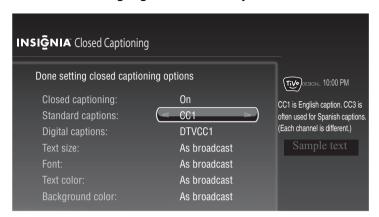


5 Press ▲ or ▼ to highlight Closed captioning, then press ◄ or
 ▶ to select On.





6 Press ▲ or ▼ to highlight Standard captions.

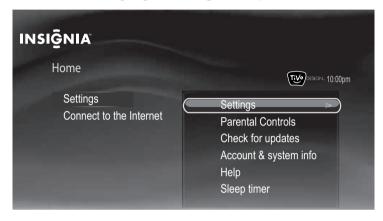


- 7 Press ◀ or ▶ to select an analog closed captioning setting. You can select CC1 through CC4. Closed captioning appears in a small banner across the bottom of the screen. CC1 is usually the "printed" version of the audio. CC2 through CC4 display content provided by the broadcaster.
- 8 Press **SELECT** to highlight **Done setting closed captioning options**, then press **SELECT** again to save your setting and return to the previous screen.

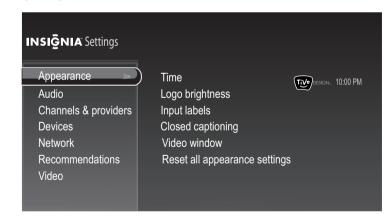
Customizing digital closed captioning

To customize digital closed captioning:

- 1 Press **TiVo**. The *Home* screen opens. Press ▲ or ▼ to select **Settings**, then press ▶ or **SELECT**.
- 2 Press ▲ or ▼ to highlight **Settings**, then press ▶ or **SELECT**.



3 Press ▲ or ▼ to highlight Appearance, then press ▶ or SELECT.

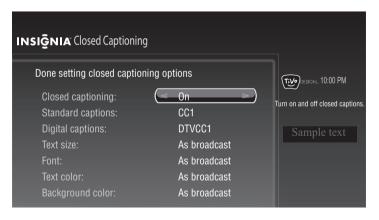




4 Press ▲ or ▼ to highlight **Closed captioning**, then press ▶ or **SELECT**.



5 Press ▲ or ▼ to highlight **Closed captioning**, then press **◄** or ▶ to select **On**.



- 6 Press ▲ or ▼ to highlight a digital closed captioning option, then press ◀ or ▶ to select a digital closed caption setting. You can select:
 - **Digital captions**—Selects the digital captioning setting. You can select **DTVCC1** through **DTVCC6**.
 - Text size—Selects the font size.
 - Font—Selects the font style.
 - **Text color**—Selects the color for the words.
 - Background color—Selects the color for the background.



7 Press **SELECT** to highlight **Done setting closed captioning options**, then press **SELECT** again to save your setting and return to the previous screen.



Adjusting time settings

Setting the date and time

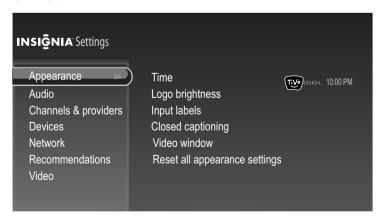
You can set the date and time setting shown in the on-screen preview pane.

To set the date and time:

- 1 Press **TiVo**. The *Home* screen opens. Press ▲ or ▼ to select **Settings**, then press ▶ or **SELECT**.
- 2 Press ▲ or ▼ to highlight **Settings**, then press ▶ or **SELECT**.



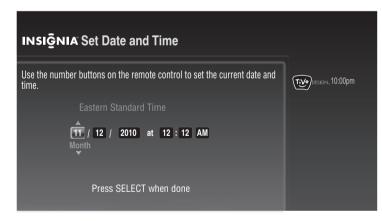
3 Press ▲ or ▼ to highlight Appearance, then press ► or SELECT.



4 Press ▲ or ▼ to highlight **Time**, then press ▶ or **SELECT**.



- 5 Press ▲ or ▼ to highlight your time zone, then press ► or SELECT.
- 6 Press ▲ or ▼ to select the daylight saving setting, then press ▶ or **SELECT**.
- **7** Follow the on-screen instructions to set the date and time values.



8 Press **SELECT** to save your settings and return to the previous screen.

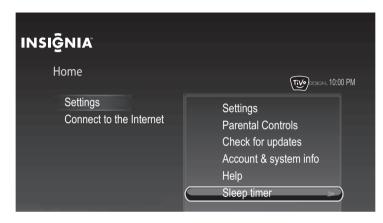


Setting the sleep timer

You can specify the amount of time you want your TV to wait before it automatically turns off.

To set the sleep timer:

- 1 Press **TiVo**. The *Home* screen opens. Press ▲ or ▼ to select **Settings**, then press ▶ or **SELECT**.
- 2 Press ▲ or ▼ to highlight Sleep timer, then press ► or SELECT.



3 Press ▲ or ▼ to select the amount of time you want your TV to wait before it turns off automatically. To turn off the sleep timer, select **Cancel**.



4 Press **SELECT** to save your setting and close the *Sleep Timer* screen.



Adjusting Internet settings

Your TV can be connected to your wired network using the Ethernet port on the back of your TV or using a wireless network.

Using a wired network provides the best performance, because the attached devices connect directly to the network and are not subject to radio frequency interference.

Configuring a wireless connection

Regular wireless (not WPS)

You will need your network password if your router is set up to use one.

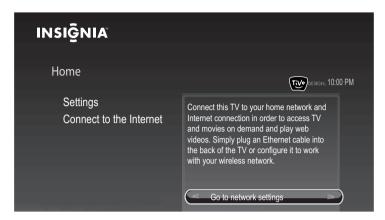
To connect the wireless network without WPS:

1 Press **TiVo**. The *Home* screen opens. Press ▲ or ▼ to highlight **Connect to the Internet**, then press ▶ or **SELECT**.

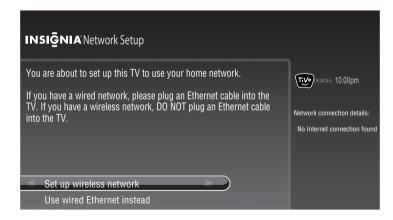




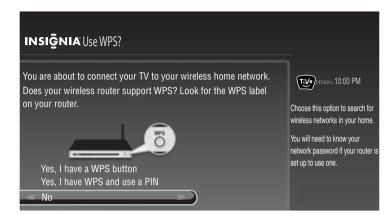
2 When **Go to network settings** is highlighted, press **SELECT**.



3 Press ▲ or ▼ to highlight Set up wireless network, then press ▶ or SELECT.



4 Press ▲ or ▼ to highlight No, then press SELECT. Your TV starts scanning for wireless networks.



5 Press ▲ or ▼ to highlight **Choose wireless network**, then press **SELECT** to access the wireless network list.





6 Press ▲ or ▼ to highlight the network you want, then press **SELECT**. If your network has a password, enter the password.

If your router is set to keep your network name hidden, select **Enter wireless network name** to manually enter the name and the password.

When the connection is successful, the *Network settings* screen opens.

If this is the first time you have set up the Internet, the *Network Speed Test* screen opens. Follow the on-screen instructions to complete the network setup.

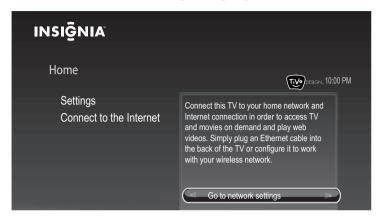
Using WPS with a router that has a WPS button

To configure a wireless connection using WPS:

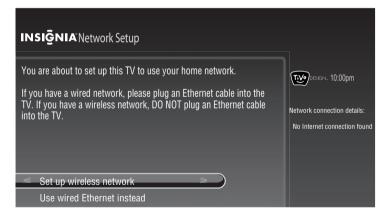
1 Press **TiVo**. The *Home* screen opens. Press ▲ or ▼ to highlight **Connect to the Internet**, then press ▶ or **SELECT**.



2 When Go to network settings is highlighted, press SELECT.



3 Press ▲ or ▼ to highlight Set up wireless network, then press ► or SELECT.





4 Press ▲ or ▼ to highlight **Yes, I have a WPS button**, then press **SELECT**.



5 Press the WPS button on your router.



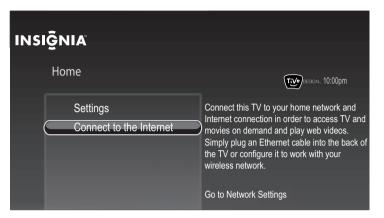
When the connection is successful, the *Network settings* screen opens.

If this is the first time you have set up the Internet, the *Network Speed Test* screen opens. Follow the on-screen instructions to complete the network setup.

Using WPS and a PIN

To connect the wireless network using WPS and a PIN:

1 Press **TiVo**. The *Home* screen opens. Press ▲ or ▼ to highlight **Connect to the Internet**, then press ▶ or **SELECT**.

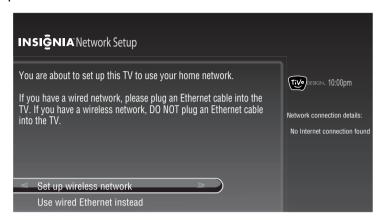


2 When Go to network settings is highlighted, press SELECT





3 Press ▲ or ▼ to highlight **Set up wireless network**, then press ► or **SELECT**.



4 Press ▲ or ▼ to highlight Yes, I have WPS and use a PIN, then press SELECT. Your TV starts scanning for wireless networks.

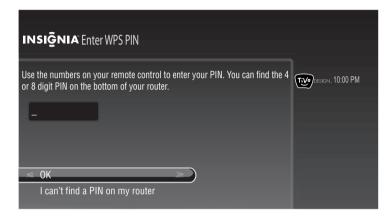


5 Press ▲ or ▼ to highlight the network you want, then press **SELECT**.

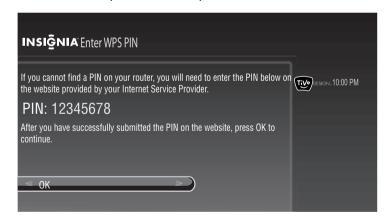
6 Use the number buttons on the remote control to enter the 4 or 8 digit PIN, then press ▲ or ▼ to highlight **OK** and press **SELECT**.

OR

If you do not know your PIN, highlight I can't find a PIN on my router, then press SELECT.



7 Submit the displayed PIN on the website provided by your Internet service provider, then press **SELECT**.





When the connection is successful, the *Network settings* screen opens.

If this is the first time you have set up the Internet, the *Network Speed Test* screen opens. Follow the on-screen instructions to complete the network setup.

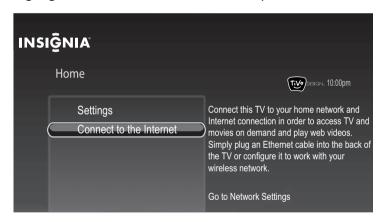
Configuring a wired connection

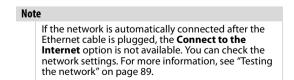
Automatically using DHCP

One of the most common ways to configure a wired connection is using Dynamic Host Configuration Protocol (DHCP). When you use DHCP, your Internet provider automatically assigns an IP address, subnet mask, gateway, and DNS.

To configure a wired connection automatically using DHCP:

1 Press **TiVo**. The *Home* screen opens. press ▲ or ▼ to highlight **Connect to the Internet**, then press ▶ or **SELECT**.

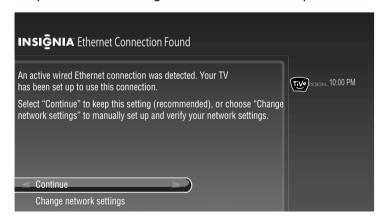




2 When Go to network settings is highlighted, press SELECT.



3 Press ▲ or ▼ to highlight **Continue**, then press **SELECT** to keep the current setting and start the auto setup.



When the connection is successful, the *Network settings* screen opens.

If this is the first time you have set up the Internet, the *Network Speed Test* screen opens. Follow the on-screen instructions to complete the network setup.



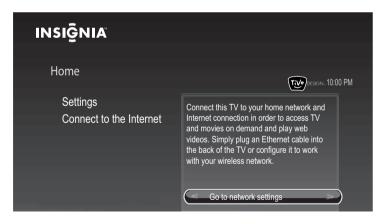
Manually

To set up the wired connection manually:

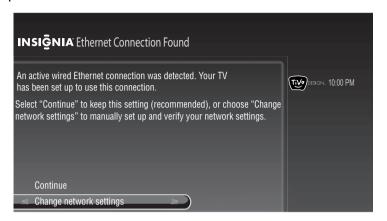
1 Press **TiVo**. The *Home* screen opens. Press ▲ or ▼ to highlight **Connect to the Internet**, then press ▶ or **SELECT**.



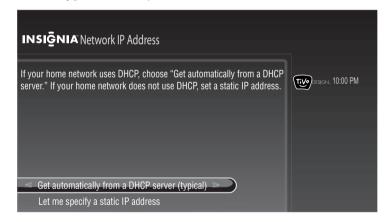
2 When Go to network settings is highlighted, press SELECT.



3 Press ▲ or ▼ to highlight Change network settings, then press SELECT.



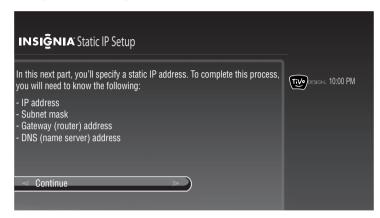
4 Press ▲ or ▼ to highlight Get automatically from a DHCP server (typical), then press SELECT.



OR



If your home network does not use DHCP, select **Let me specify a static IP address**, then press **SELECT**. The following screen opens. Complete Steps 5 through 8 to complete the setup.

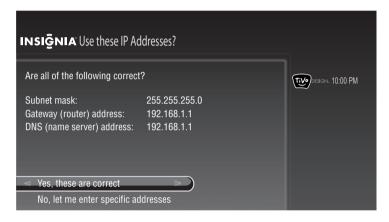


- **5** Press **SELECT**. The *Enter IP Address* screen opens.
- **6** Use the number buttons on the remote control to enter your IP address, then press **SELECT**.



7 If the displayed IP information is correct, press ▲ or ▼ to highlight Yes, these are correct, then press SELECT.
OR

If the displayed IP information is not correct, press ▲ or ▼ to highlight No, let me enter specific address, then press SELECT. Enter your subnet mask, gateway (router) address, and DNS address.



When the connection is successful, the *Network settings* screen opens.

If this is the first time you have set up the Internet, the *Network Speed Test* screen opens. Follow the on-screen instructions to complete the network setup.



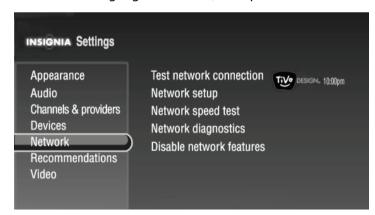
Testing the network

To test the network:

- 1 Press **TiVo**. The *Home* screen opens. Press ▲ or ▼ to select **Settings**, then press ▶ or **SELECT**.
- 2 Press ▲ or ▼ to highlight **Settings**, then press ▶ or **SELECT**.



3 Press ▲ or ▼ to highlight **Network**, then press ▶ or **SELECT**.



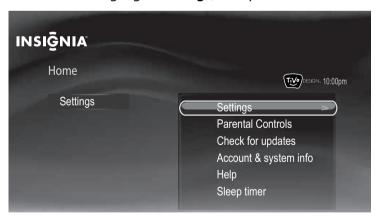
- 4 Press ▲ or ▼ to highlight a network option, then press ▶ or **SELECT.** You can select:
 - **Test network connection**—Tests the network connection automatically. You can view your network connection details in the right preview pane.
 - **Network setup**—Changes the network settings or the type of connection.
 - Network speed test—Helps determine the kinds of On-Demand TV shows and movies that will play best on your TV based on the connection speed.
 - Network diagnostics—Runs network diagnostics such as DNS resolution test, Test network connection, and Network speed test.

Disabling Internet features

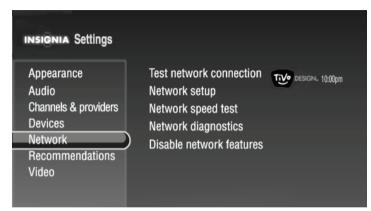
You can disable all the features that use the Internet on your TV, such as Video on Demand (VOD).

To disable Internet features:

- 1 Press **TiVo**. The *Home* screen opens. Press ▲ or ▼ to select **Settings**, then press ▶ or **SELECT**.
- 2 Press ▲ or ▼ to highlight **Settings**, then press ▶ or **SELECT**.







- 4 Press ▲ or ▼ to highlight **Disable network features**, then press **SELECT**.
- 5 Press ▲ or ▼ to highlight Yes, disable all network features, then press **SELECT** to save your setting and return to the previous screen.

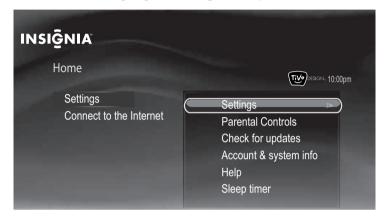
Using INlink to control HDMI devices

INlink lets you use the remote control that came with your TV to turn off devices and control basic functions if you use an HDMI cable to connect devices that support CEC. For example, if you insert a disc into a DVD player and start playing the disc, your TV will automatically turn on and go to the correct input (HDMI 1, 2, 3, or 4). You can now control the DVD player with your TV's remote control.

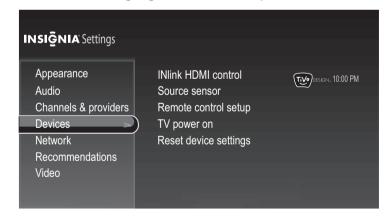
3 Press ▲ or ▼ to highlight Network, then press ➤ or SELECT. Setting up INlink HDMI control

To set up INlink HDMI control:

- 1 Press **TiVo**. The *Home* screen opens. Press ▲ or ▼ to select **Settings**, then press **▶** or **SELECT**.
- 2 Press ▲ or ▼ to highlight **Settings**, then press ▶ or **SELECT**.

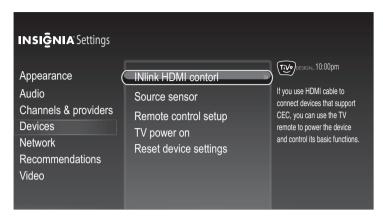


3 Press ▲ or ▼ to highlight **Devices**, then press ▶ or **SELECT**.





4 Press ▲ or ▼ to highlight INlink HDMI control, then press ► or SELECT.



- 5 Press ▲ or ▼ to highlight an option, then press **SELECT** to turn the option on or off. You can select:
 - Turn other devices off when TV turns off—Turns all other CEC devices off when you turn off the TV.
 - **MENU button can control other devices**—The **MENU** button on the TV remote controls the menu on the currently selected input device (if it has CEC support).
 - VOLUME and MUTE buttons can control other devices—The VOL +, VOL-, and MUTE buttons on the TV remote control the volume on the currently selected input device (if it has CEC support).
 - RECORD button starts and stops recordings—Pressing RECORD on the TV remote tells a recording device to start a recording (if it has CEC support). Pressing RECORD again stops the recording.

• Turn TV on when another device turns on—Turns the TV on when you turn on other devices that have CEC support.



6 Press ◀ to return to the previous menu, or press **EXIT** to close the screen.

Notes

- HDMI cables must be used to connect HDMI CEC-compatible devices to your TV.
- The connected device's HDMI CEC feature must be turned on.
- If you connect an HDMI device that is not HDMI CEC-compatible, the INlink HDMI control option does not work.
- Depending on the connected HDMI device, the INlink HDMI control option may not work.



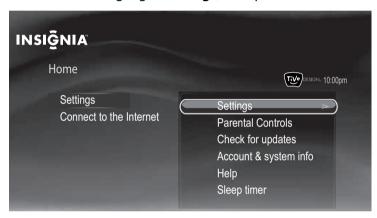
Adjusting other options

Adjusting the INSIGNIA logo brightness

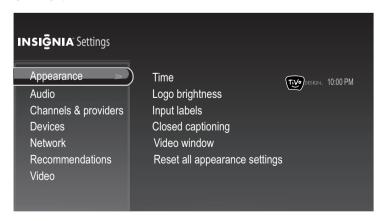
The INSIGNIA logo on the front of your TV can light when your TV is turned on. You can adjust the logo brightness.

To adjust the INSIGNIA logo brightness:

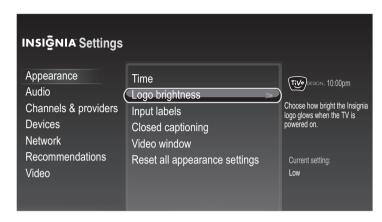
- 1 Press **TiVo**. The *Home* screen opens. Press ▲ or ▼ to select **Settings**, then press ▶ or **SELECT**.
- 2 Press ▲ or ▼ to highlight **Settings**, then press ▶ or **SELECT**.



3 Press ▲ or ▼ to highlight Appearance, then press ► or SELECT.



4 Press ▲ or ▼ to highlight Logo brightness, then press ► or SELECT.



- **5** Press ▲ or ▼ to highlight an option. You can select:
 - Off—Turns off the logo when your TV is on.
 - Low—Sets the brightness level to low when your TV is on.
 - **High**—Sets the brightness level to high when your TV is on.



6 Press **SELECT** to return to the previous menu.

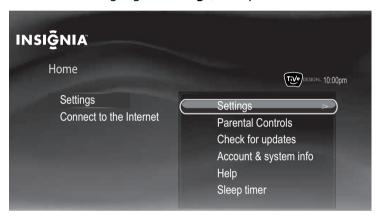


Setting the TV power on mode

While your TV is in standby mode, you can set the TV power on mode to maximize your energy savings (standard power on) or to minimize the time it takes to turn the power back on (power on quickly).

To set the TV power on mode:

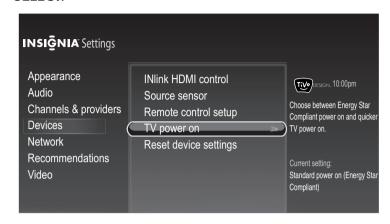
- 1 Press **TiVo**. The *Home* screen opens. Press ▲ or ▼ to select **Settings**, then press ▶ or **SELECT**.
- 2 Press ▲ or ▼ to highlight **Settings**, then press ▶ or **SELECT**.



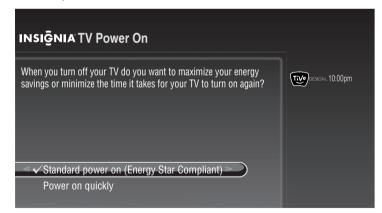
3 Press ▲ or ▼ to highlight **Devices**, then press ▶ or **SELECT**.



4 Press ▲ or ▼ to highlight TV power on, then press ▶ or SELECT.



- **5** Press **△** or **▼** to highlight an option. You can select:
 - **Standard power on (Energy Star Compliant)**—The power indicator lights red in standby mode.
 - **Power on quickly**—The power indicator lights purple in standby mode.



6 Press ➤ or **SELECT** to return to the previous screen. If you select **Power on quickly**, the *Power On Energy Usage* screen opens. Press **SELECT** again to save the setting and return to the previous screen.

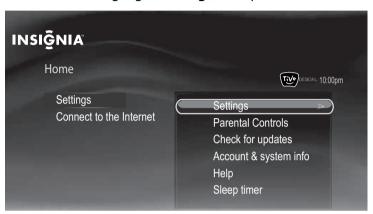


Labeling an input source

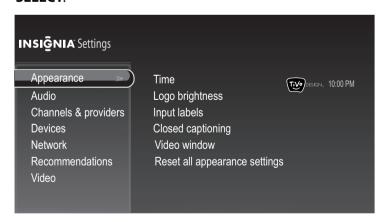
You can label an input source to make it easier to identify.

To label an input source:

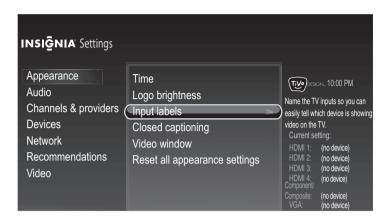
- 1 Press **TiVo**. The *Home* screen opens. Press ▲ or ▼ to select **Settings**, then press ▶ or **SELECT**.
- 2 Press ▲ or ▼ to highlight **Settings**, then press ▶ or **SELECT**.



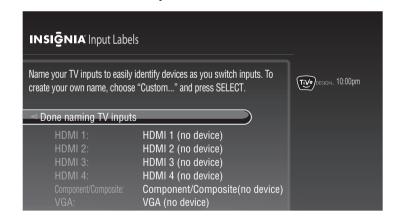
3 Press ▲ or ▼ to highlight Appearance, then press ► or SELECT.



4 Press ▲ or ▼ to highlight Input labels, then press ▶ or SELECT.



5 Press ▲ or ▼ to select the input source you want to label, then press ◀ or ▶ to select from the preset list of labels, including DVD, Blu-Ray, Cable Box, Satellite, DVR, Receiver, Game, Computer, VCR, or Custom.





6 If you selected **Custom**, press **SELECT**, then go to "Creating a custom label" on page 95 to create your own label for the input source.

OR

If you selected a preset label, press **SELECT** to highlight **Done naming TV inputs**, then press **SELECT** again to save your setting and return to the previous screen.

Creating a custom label

To create a custom label:

1 When the on-screen keyboard opens, enter a name for the input source, then highlight **Done entering name**. For instructions for using the on-screen keyboard, see "Using the on-screen keyboard" on page 36.



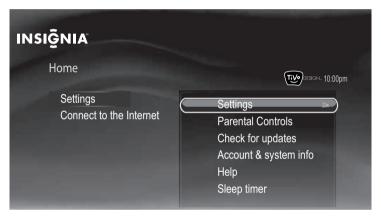
2 Press **SELECT** to save your setting and return to the previous screen.

Turning the source sensor on or off

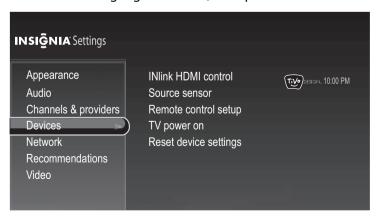
When the source sensor feature is turned on, your TV automatically detects which video jacks have devices connected to them when the devices are turned on. Your TV uses this information to determine how the input source list looks when you press **INPUT**.

To turn the source sensor on or off:

- 1 Press **TiVo**. The *Home* screen opens. Press ▲ or ▼ to select **Settings**, then press ▶ or **SELECT**.
- 2 Press ▲ or ▼ to highlight **Settings**, then press ▶ or **SELECT**.

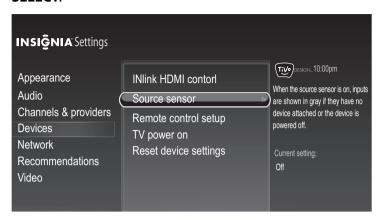


3 Press ▲ or ▼ to highlight **Devices**, then press ▶ or **SELECT**.





4 Press **△** or **▼** to highlight **Source sensor**, then press **▶** or **SELECT**.



5 Press ▲ or ▼ to highlight On or Off, then press ▶ or SELECT.

Warning When the source sensor is set to On, the inactive input sources will be grayed out on the input source list. Pressing INPUT moves between active inputs only. However, you can still move between inactive inputs by pressing ▲ or ▼.

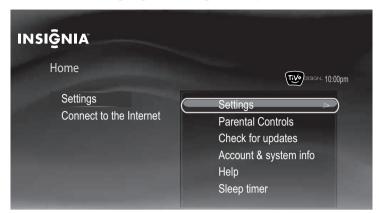
Resetting all options on the Devices menu



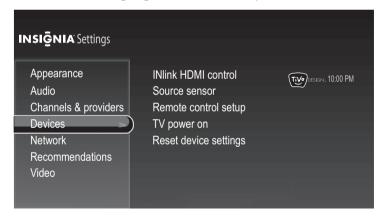
To reset all options on the Devices menu:

1 Press **TiVo**. The *Home* screen opens. Press ▲ or ▼ to select **Settings**, then press ▶ or **SELECT**.

2 Press ▲ or ▼ to highlight **Settings**, then press ▶ or **SELECT**.



3 Press ▲ or ▼ to highlight **Devices**, then press ▶ or **SELECT**.



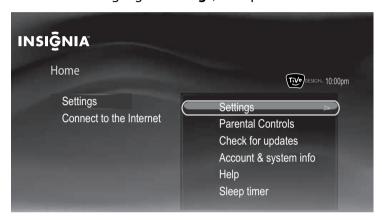
- 4 Press ▲ or ▼ to highlight Reset device settings, then press SELECT.
- 5 Press ▲ or ▼ to select **Yes, reset device settings**, then press **SELECT**. The device settings are reset to factory defaults.



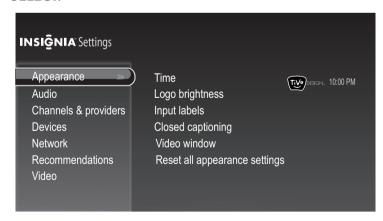
Resetting all options on the Appearance menu

To reset all options on the Appearance menu:

- 1 Press **TiVo**. The *Home* screen opens. Press ▲ or ▼ to select **Settings**, then press ▶ or **SELECT**.
- 2 Press ▲ or ▼ to highlight **Settings**, then press ▶ or **SELECT**.



3 Press ▲ or ▼ to highlight Appearance, then press ► or SELECT.



4 Press ▲ or ▼ to highlight Reset all appearance settings, then press ▶ or SELECT.



5 Press ▲ or ▼ to select **Yes, reset all appearance settings**, then press **SELECT**. The appearance settings are reset to factory defaults.





Maintaining, Troubleshooting, and Specifications

Maintaining	100
Troubleshooting	100
Specifications	104



Maintaining

Cautions

- Make sure that your TV is turned off and the power cord is disconnected from the power outlet before cleaning your TV.
- Never spray or pour any liquid directly onto the LCD screen or the TV cabinet.
- Never use a solvent or alcohol to clean your TV.
 Do not spray insecticide near your TV. Such chemicals may cause damage and discoloration to the exposed surfaces.

Cleaning the TV cabinet

Clean the TV cabinet with a soft, dry cloth. If surfaces are extremely dirty, slightly dampen the cloth with lukewarm water.

Cleaning the LED-LCD screen

Clean the screen with a clean, soft, lint-free cloth. If additional cleaning is necessary, apply a small amount of non-ammonia, non-alcohol-based glass cleaner onto the cloth, then wipe the screen.

Updating your TV software

Note

Before you can receive system updates, you must have your TV connected to the Internet.

To update your TV software:

- 1 Make sure that your TV is connected to the Internet. For more information, see "Connecting your TV to your home network" on page 26 and "Adjusting Internet settings" on page 81.
- 2 Press TiVo. The Home screen opens. Press ▲ or ▼ to select Settings, then press ▶ or SELECT.
- 3 Press ▲ or ▼ to highlight **Check for updates**. Your TV checks for software updates.

Troubleshooting

Caution

Do not try to repair your TV yourself. Refer all servicing to qualified service personnel.

Using the on-screen help

Your TV features on-screen help that provides tips and solutions to common problems.

To use the on-screen help:

- 1 Press **TiVo**. The *Home* screen opens. Press ▲ or ▼ to select **Settings**, then press ▶ or **SELECT**.
- 2 Press ▲ or ▼ to highlight Help, then press ▶ or SELECT.
- 3 Press ▲ or ▼ to highlight a topic, then press **SELECT**. Information that may help you solve a problem appears.

Note

If the information spans more than one page, press \triangle or ∇ to scroll line by line or press CH \triangle / CH ∇ to scroll page by page.

If the on-screen help does not have the solutions you need, see the following list of problems and solutions.

Problem	Solution
Power	
No power	 Make sure that the power cord is correctly connected to a power outlet. See "Connecting the power" on page 17. Unplug the power cord, wait 60 seconds, then plug the cord back in and turn on your TV. Other devices (for example, surround sound receiver, external speakers, fans, or hair dryers) may be interfering with your TV. Try turning off one device at a time to determine which device is causing interference. Once you have determined which device is causing interference, move it further from the TV to eliminate the interference.



Problem	Solution
General remote control	
The Z-Wave remote control does not work	 Make sure that the power cord is correctly connected to a power outlet. Make sure the remote control is added to the Z-Wave network and paired with your TV. See "Setting up your Z-Wave remote control" on page 108. Replace the batteries. Make sure that the + and - symbols on the batteries align with the + and - symbols in the battery compartment. See "Installing the remote control batteries" on page 17. Make sure the remote control is in correct device mode. Press TV to control your TV.
Programmed remote control functi	ons
The LED does not blink when you press a button.	 Try pressing different buttons. The batteries may already be drained. Replace the batteries.
The LED blinks when you press a button but the device does not respond	Make sure the remote is aimed at your device and is not more than 40 feet (12.2 m) away.
The LED blinks one long blink while in program mode	An entry error has occurred (for example, wrong button was pressed). Try entering the sequence again.
No volume on a device	Make sure that the volume is not locked to a different mode. See "Programming the button lock" on page 32.
The device does not power on or off	Make sure that the power button is not locked to a different mode or the power button is not assigned to another device. See "Programming the button lock" on page 32 or Step 12 in "Programming the mode buttons" on page 29.
Picture	
Picture does not fill the screen. There are black bars around the picture.	Change the aspect ratio. An increasing amount of digital TV and movies are presented in wide screen (16:9). See "Adjusting the video settings" on page 42.

Problem	Solution
No picture	 Press () on the TV or remote control. Make sure that the power cord is plugged in. Try another channel. The station may be experiencing problems. Make sure that the video cables are connected securely to the back of your TV. See "Making connections" on page 17. Adjust the contrast and brightness. See "Adjusting the video settings" on page 42. Make sure that the correct video source is selected. See "Selecting the video input source" on page 35. Make sure that the incoming signal is compatible. Make sure the antenna or cable TV is connected correctly and securely. See "Connecting a cable or satellite box" on page 19 or "Connecting an antenna or cable TV without a cable box" on page 18. Check the closed caption settings. Some TEXT modes can block the screen. See "Using closed captioning" on page 76.



Problem	Solution
Dark, poor, or no picture (screen is lit), but sound is good.	 Adjust the contrast, color, and brightness settings. See "Adjusting the video settings" on page 42. Try another channel. The station may be experiencing problems. Make sure the antenna or cable TV is connected correctly and securely. See "Connecting a cable or satellite box" on page 19 or "Connecting an antenna or cable TV without a cable box" on page 18. Make sure that the correct picture mode is selected. See "Adjusting the video settings" on page 42. If you are using an antenna, the digital channel signal may be low. To check the digital channel signal strength, see "Checking the signal strength" on page 70. If you are using an antenna and the signal strength is low, adjust the antenna or use a highly directional outdoor antenna or set-top antenna with a built-in amplifier. Make sure that the Audio only option is set to Off. See "Playing TV audio only" on page 62. Make sure that the video cables are connected securely to the back of your TV. See "Making connections" on page 17. The video cable(s) you are using may be bad. Try a new set. Adjust the color saturation. See "Adjusting the video settings" on page 42. Make sure that the room is not too bright. Light reflecting off the screen can make the picture difficult to see. If an S-VHS camera or a camcorder is connected while another connected device is turned on, the picture may be poor. Turn off one or more devices.
Only snow (noise) appears on the screen.	 Try another channel. The station may be experiencing problems. Make sure the antenna or cable TV is connected correctly and securely. See "Connecting a cable or satellite box" on page 19 or "Connecting an antenna or cable TV without a cable box" on page 18. If you are using an antenna, the digital channel signal may be low. To check the digital channel signal strength, see "Checking the signal strength" on page 70. If you are using an antenna and the signal strength is low, adjust the antenna or use a highly directional outdoor antenna or set-top antenna with a built-in amplifier.

Problem	Solution
Horizontal dotted line	 Make sure the antenna or cable TV is connected correctly and securely. See "Connecting a cable or satellite box" on page 19 or "Connecting an antenna or cable TV without a cable box" on page 18. If you are using an antenna, the digital channel signal may be low. To check the digital channel signal strength, see "Checking the signal strength" on page 70. If you are using an antenna and the signal strength is low, adjust the antenna or use a highly directional outdoor antenna or set-top antenna with a built-in amplifier. Make sure that the video cables are connected securely to the back of your TV. The video cable(s) you are using may be bad. Try a new set. Other devices (for example, surround sound receiver, external speakers, fans, or hair dryers) may be interfering with your TV. Try turning off one device at a time to determine which device is causing interference. Once you have determined which device is causing interference, move it further from the TV to eliminate the interference.
"Ghost" or double image	Obstructions, such as high-rise building or hills, may be preventing your antenna from receiving a clear signal. Using a highly directional antenna may improve the picture quality.
Snowy picture or noise	Make sure that the AV and antenna cables are connected securely. See "Making connections" on page 17.
VGA picture is not stable or synchronized	Make sure that you have selected the correct VGA mode on your computer.
After image appears	Do not display a still image, such as logo, game, or computer image, for an extended period of time. This can cause a permanent after-image to be burned into the screen. This type of damage is not covered by your warranty.
The picture has a few bright or dark spots.	A few bright or dark spots on an LCD screen is normal. It does not affect the operation of this TV.



Problem	Solution	
Audio		
Good picture but no sound	 Increase the volume. Make sure that the sound is not muted. Make sure that the correct audio mode is selected. See "Manually adjusting audio settings" on page 46. Make sure that the audio cables are connected correctly and securely to the back of your TV. See "Making connections" on page 17. Make sure the antenna or cable TV is connected correctly and securely. See "Connecting a cable or satellite box" on page 19 or "Connecting an antenna or cable TV without a cable box" on page 18. If you are using an antenna, the digital channel signal may be low. To check the digital channel signal strength, see "Checking the signal strength" on page 70. The audio cable(s) you are using may be bad. Try a new set. 	
No output from one of the speakers	 Adjust the balance of the speakers. See "Manually adjusting audio settings" on page 46. Make sure that the audio cables are connected correctly and securely to the back of your TV. See "Making connections" on page 17. 	
Audio noise	Other devices (for example, surround sound receiver, external speakers, fans, or hair dryers) may be interfering with your TV. Try turning off one device at a time to determine which device is causing interference. Once you have determined which device is causing interference, move it further from the TV to eliminate the interference.	
Other		
The TV displays "searching for a signal on this source" and never displays a picture	 Press INPUT and make sure that you have selected the correct input for the device or service you are trying to use. If you are using a cable or satellite box, use the remote that came with that box to change channels. Make sure you have the correct input selected to view channels from the cable or satellite box. 	
Buttons on the front of the TV do not work	 Make sure that the Lock buttons option is set to Off. See "Locking control buttons" on page 75. Unplug the power cord, wait a few seconds, then plug the cord back in and turn on your TV. 	

Problem	Solution
INlink does not work	 Make sure that the device you want to control is HDMI CEC-compatible. Make sure that the HDMI device's power cord is connected correctly. Make sure that the INlink HDMI control settings ar configured. See "Setting up INlink HDMI control" on page 90. Connect an INlink device using an HDMI 1.3 cable.
Applications	 If you are having trouble with one of the applications, contact the service provider for that service.
Wired network connection	
No network connection	 Make sure your TV and modem or router is connected securely. Make sure your network address is set up correctly
Automatic network setup fails	 The DHCP service is not enabled on the router, or nouter is present. Refer to your router's documentation for instructions on enabling DHCF If you do not have a router, you must manually se up the network address. Internet service is not available. Check your cable or DSL modem or contact your ISP for Internet service issues.
Manual network setup fails	Make sure you enter correct IP address.
Network connection is unstable	Unplug the Ethernet cables, then plug them back in.
Wireless connection	
No network connection	Make sure your wireless access point is turned on and set up correctly.
Network connection is unstable	Move your wireless access point closer to your TV.

Resetting your TV to the factory defaults

You can reset your TV to the factory defaults and repeat the setup process that you went through when you first turned on your TV.

To reset your TV:

- 1 Press **TiVo**. The *Home* screen opens. Press ▲ or ▼ to select **Settings**, then press ▶ or **SELECT**.
- 2 Press ▲ or ▼ to highlight Help, then press ▶ or SELECT.



- 3 Press ▲ or ▼ to highlight Reset this TV, then press SELECT. Screen
- 4 Press ▲ or ▼ to highlight Clear and delete everything, then press SELECT. If Parental Controls is turned on, the Enter PIN screen opens. Enter your four-digit PIN to continue.
- 5 Press ${\Bbb Q}$ three times, then press **SELECT** to confirm this selection and start the Setup Wizard setup.

Specifications

Design specifications are subject to change without notice. Dimensions and weight specifications are approximate.

Warranty

NS-32E859A11	NS-42E859A11
Parts: 2 years	Parts: 2 years
Labor: 2 years	Labor: 2 years

Dimensions and weight

NS-32E859A11	NS-42E859A11	
Without stand:	Without stand:	
$30.62 \times 1.8 \times 19.32$ in.	$39.84 \times 1.96 \times 24.5$ in.	
$(777.8 \times 45.8 \times 490.8 \text{ mm})$	$(1011.9 \times 49.8 \times 622.9 \text{ mm})$	
With stand:	With stand:	
$30.62 \times 7.37 \times 20.94$ in.	$39.84 \times 11.19 \times 28.62$ in.	
(777.8 × 187.2 × 531.9 mm)	$(1011.9 \times 284.3 \times 727.0 \text{ mm})$	
Without stand:	Without stand:	
20.4 lb. (9.25 kg)	32.84 lb. (14.9 kg)	
With stand:	With stand:	
23.1 lb. (10.5 kg)	39.24 lb. (17.8 kg)	

	NS-32E859A11	NS-42E859A11
Screen size measured diagonally	31.55"	42"
Display type	LCD	LCD
	Active matrix full high- definition TFT	Active matrix full high- definition TFT
Panel 60 Hz vs.120 Hz	120Hz	120Hz
Display resolution	1080p	1080p
Panel resolution	1920 × 1080 (RGB vertical stripe)	1920 × 1080 (RGB vertical stripe)
Aspect ratio	16:9	16:9
Contrast ratio (typical)-panel	4000 : 1	4000: 1
Dynamic contrast ratio—list value	10000:1	12000:1
Brightness (center typical) cd/m2	450 nits	450 nits
Comb filter	3d y/c digital	3d y/c digital
Response time	6.5 ms	5.5 ms
Horizontal viewing angle	178°	178°
Vertical viewing angle	178°	178°

Display resolutions/VGA scan rates

	NS-32E859A11	NS-42E859A11
HDMI	Suggested Resolutions: 1080p, 1080i, 720p, 480p, 480i	Suggested Resolutions: 1080p, 1080i, 720p, 480p, 480i
Component video	Suggested Resolutions: 1080p, 1080i, 720p, 480p, 480i	Suggested Resolutions: 1080p, 1080i, 720p, 480p, 480i
PC/VGA	Suggested scan rates: 640 × 480/60Hz, 800 × 600/60Hz, 1024 × 768/60Hz, 1280 × 1024/60Hz, 1680 × 1050/60Hz, 1920 × 1080/60Hz	Suggested scan rates: 640 × 480/60Hz, 800 × 600/60Hz, 1024 × 768/60Hz, 1280 × 1024/60Hz, 1680 × 1050/60Hz, 1920 × 1080/60Hz

Tuner

	NS-32E859A11	NS-42E859A11
Analog	NTSC	NTSC
Digital	ATSC, 8-VSB, Clear-QAM	ATSC, 8-VSB, Clear-QAM



Inputs

	NS-32E859A11	NS-42E859A11	
HDMI	4 (side) E-EDID-compliant HDCP-compliant	4 (side) E-EDID-compliant HDCP-compliant	
Component video	1 (back)	1 (back)	
Composite video	1 (back)	1 (back)	
Shared audio (component and composite)	Yes	Yes	
S-Video	No	No	
PC/VGA	1 (side)	1 (side)	
3.5mm PC audio input	1 (side)	1 (side)	
DVI	1- HDMI/DVI (side)	1- HDMI/DVI (side)	
USB	Compliance: USB 2.0 For service only	Compliance: USB 2.0 For service only	
Antenna	F type	F type	
INc	Uart	Uart	
Rocketboost	PCI-e	PCI-e	

Outputs

	NS-32E859A11	NS-42E859A11	
Video	No	No	
Analog audio	1 (side)	1 (side)	
Digital audio	1 (back) SPDIF	1 (back) SPDIF	
Headphone	1 (side)	1 (side)	
WiFi	802.11n / dual band	802.11n / dual band	
Ethernet	10/100 base-T/TX	10/100 base-T/TX	

Audio

	NS-32E859A11	NS-42E859A11	
Simulated Surround Sound	Yes -SRS TruSurround HD	Yes -SRS TruSurround HD	
Audyssey Dynamic Volume	Yes - Audyssey DVL, ABX, EQ	Yes - Audyssey DVL, ABX EQ	
Speaker output	10 W (R) + 10 W (L)	5 W (R) + 5 W (L) + 10 W (woofer)	

Power

	NS-32E859A11	NS-42E859A11
Power consumption	0n: <77W	On: <115W
	Standby: <1W	Standby: <1W
Power input	120V/60Hz	120V/60Hz

Miscellaneous

	NS-32E859A11	NS-42E859A11
OSD languages	English	English
INlink	Yes Yes	
Game Mode	Yes	Yes
ENERGY STAR qualified	Yes	Yes
Internet connectable	Yes	Yes
TV base screws	M4 type (17 mm length) (8 pcs)	M4 type (17 mm length) (8 pcs)
V-Chip (version 2.0)	Yes	Yes
Sleep timer	Yes	Yes
Channel labeling	Yes	Yes
VESA mount (mm) (horizontal × vertical)	200 × 100	200 × 200

Note

The length of the wall-mount screws vary depending on the wall-mount bracket you purchased. See the instructions that came with the wall-mount bracket for screw lengths.







Appendix

Setting up your Z-Wave remote control	108
Advanced remote control programming	111
Controlling the remote control backlight	113



Setting up your Z-Wave remote control

The remote control that came with your TV is different from a traditional IR remote control. Using Z-Wave technology, your remote control allows RF communication with your TV. You do not have to point the remote control toward the remote control sensor on the front of your TV.

Adding your remote control to the TV Z-Wave network

To turn on the RF communication between your TV and the remote control, you have to add the remote control to the Z-Wave network first.

Note

Your Insignia TV is configured as a AV Control Point Device, and as such does not support or control with the Basic Command Class.

To add your remote control to your TV Z-Wave network (TV as Primary Controller):

- 1 Press and hold VOL

 and vOL

 on the front of your TV at the same time. The Set up a New Remote Control screen opens.
- **2** Press and hold a and a on the remote control for about five seconds. The remote control LED blinks four times and the *Remote Control Setup Complete* screen opens.

Set up a New Remote Control

Hold down the THUMBS UP and THUMBS DOWN buttons at the same time for 5 seconds to set up your new remote control to work with this TV.

Press any button on the TV to cancel.

3 Press **SELECT** to complete the setup. You can now use the RF communication between the remote control and your TV.



Note

To add other Z-Wave devices to your TV Z-Wave network, perform Step 1 above, then follow the instructions in the user manual of that device to complete the setup.

Toggling between IR and RF communication

Once your remote control is added to the TV Z-Wave network, you can use Z-Wave RF communication to control your TV. However, you can also switch to IR communication, which requires you to point the remote control toward the remote control sensor when you try to control your TV.

RF communication with your TV does not require you to point the remote control toward the remote control sensor on the front of your TV. Also your remote control and TV can talk to each other which will help with setting up your Insignia Universal remote to work with other home theater devices.

To toggle between IR and RF communication:

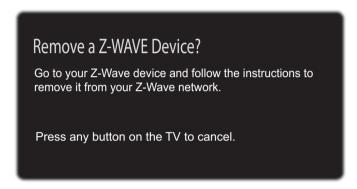
- If you are using RF communication, press and hold \P and **EXIT** at the same time. The remote control switches to IR mode and the LED blinks four times.



Removing your remote control from the TV Z-Wave network

To remove your remote control from the TV Z-Wave network (TV as Primary Controller):

1 Press and hold **VOL** and **CH** on the front of your TV at the same time. The *Remove a Z-Wave Device* screen opens.



2 Press and hold and on the remote control for about five seconds. The *Z-Wave Device Removed* screen opens. The remote control is removed from the TV Z-Wave network, and RF communication is not available. To close the screen, press **SELECT** or wait a few seconds.

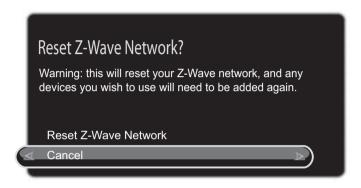
Note

- To enable RF communication, you have to add the remote control to the Z-Wave network again.
- To remove other Z-Wave devices from your TV Z-Wave network, perform Step 1 above, then follow the instructions in the user manual of that device to complete the removal.

Resetting your TV Z-Wave network

To reset your TV Z-Wave network:

1 Press and hold **VOL** , **VOL** , and **CH** on the front of your TV at the same time. The *Reset Z-Wave Network?* screen opens.



2 Press ▲ or ▼ to highlight **Reset Z-Wave Network**, then press **SELECT**.



3 Press **SELECT** to complete the reset.



Note

After resetting your TV Z-Wave network, to use your remote control, you have to switch to IR communication or remove then add the remote control to the TV Z-Wave network again to enable RF communication.

For more information, see "Toggling between IR and RF communication" on page 108 or "Removing your remote control from the TV Z-Wave network" on page 109 and "Adding your remote control to the TV Z-Wave network" on page 108.

Managing Z-Wave network (other device as Controller)

Your TV can be operated in another Z-Wave network with Z-Wave certified devices from other manufacturers or other applications. The different listening nodes within the network can act as repeaters regardless of vendor.

Note

To setup your Z-Wave network with other devices, refer to the user manual of the devices for more information.

To add your TV to other Z-Wave network:

- Refer to the user manual of the Z-Wave device (Primary Controller) for programming information.
- When the Z-Wave device is in programming (setup) mode, press CH and CH on the TV at the same time to add your TV to the Z-Wave network.

To remove your TV from other Z-Wave network:

- Refer to the user manual of the Z-Wave device (Primary Controller) for programming information.
- When the Z-Wave device is in programming (setup) mode, press CH and CH on the TV at the same time to remove your TV from the Z-Wave network.

Z-Wave Terminology

Primary Controller—This is the main device used to set up and control your Z-Wave network. There can only be one primary controller, and it must be used to add or delete devices. A primary controller can be a portable device like a hand-held remote control, a static controller (permanently installed and never moved), a Z-Wave enabled PC, or a Z-Wave enabled Ethernet router/bridge.

Secondary Controller—The Z-Wave network supports multiple controllers so you can use additional Z-Wave remotes throughout the home. If the secondary controller is the same brand and model as the primary, it will have all of the same capabilities as the primary with one exception; the secondary controller can not be used to add or delete devices.

Home Control Network—Your controllers and every Z-Wave device you have added with the primary controller are linked together into a wireless network. Each device in your network has a unique address assigned to it and cannot be activated by your neighbor's Z-Wave controller.

Node/Device—Node is the technical term used to describe a Z-Wave device in your home control network. The terms "Node" and "Device" both refer to an individual Z-Wave enabled device and are interchangeable within context of instructions.



Notes on Z-Wave network management

- Adding a node or device can also be referred to as including a node or device. Removing a node or device can also be referred to as excluding or deleting a node or device.
- Every Z-Wave enabled device acts as a signal repeater and multiple devices result in more possible transmission routes which helps eliminate "RF dead-spots."

Advanced remote control programming

Programming a learned button

Your remote control includes a learning feature that lets you add functions that are unique to your home entertainment devices (such as VCR tracking up or down). However, there are some considerations to keep in mind:

- Your original remote controls must be in working order for learning to work correctly.
- Learned buttons are mode-specific, so each button can store a unique function for each mode.
- Do not use the mode buttons or **TiVo** button.
- Certain device functions are not learnable, including multi-frequency types, some high-frequency functions, and other unusual formats.
- When setting up learned buttons, avoid high levels of ambient light such as natural sunlight or energy efficient fluorescent lights.

Note

Have your original remote controls handy before programming learning.

To program a learned button:

1 Press and hold the **A** and **D** buttons at the same time until the LED blinks twice, then release.

2 Enter 9 7 5. The LED blinks twice.

Notes

- If more than 10 seconds pass between button presses, the remote control exits programming.
- If the LED displays one long flash instead, replace the batteries. If the remote control continues to display one long flash, the remote control cannot learn a new button.
- 3 Press the mode button you want to learn functions on, then press the button on the Insignia remote you want to program.
- 4 Place your Insignia remote control head-to-head (about 2" apart) from your original remote control (the one that came with the device).
- 5 On the original remote, press and hold the button to be learned. Continue holding the button on the original remote until the Insignia's LED blinks twice.
- 6 Repeat Step 3 through 5 to program another button. After you have completed programming all the buttons you want, press and hold **SELECT** until the LED blinks twice to save all data learned.

Deleting a single learned button

This process returns the button to its original programming for the mode you select. You can also delete learned programming by teaching a different function to the button (see "Programming a learned button" on page 111).

Notes

- If more than 10 seconds pass between button presses, the remote control exits programming.
- If the LED displays one long flash instead, replace the batteries. If the remote control continues to display one long flash, the remote control cannot learn a new button.

To delete a single learned button:

- 1 Press and hold the **A** and **D** buttons at the same time until the LED blinks twice, then release.
- 2 Enter 9 7 6. The LED blinks twice.



3 Press the mode button that you want to remove the learned button from, then press the button containing the learned function to be deleted, twice. The LED blinks twice and programming ends.

Deleting all learned buttons in a specific mode

Notes

- If more than 10 seconds pass between button presses, the remote control exits programming.
- If the LED displays one long flash instead, replace the batteries. If the remote control continues to display one long flash, the remote control cannot learn a new button.

To delete all learned buttons in a specific mode:

- 1 Press and hold the **A** and **D** buttons at the same time until the LED blinks twice, then release.
- 2 Enter 9 7 6. The LED blinks twice.
- 3 Press the mode button twice (for example, **DVD**, **STB**, or **AUX**) to clear all the learned buttons for that mode. The LED blinks twice and programming ends.

Programming macros

Your can program any button (except the **TiVo** button) on your remote control with a macro function. Each button can be set up to perform a pre-programmed set of sequential button presses with the press of a single button. You can use a macro to control a home theater operation, to set a favorite channel, or for other functions you want to control with one button press. Each macro button can hold up to 32 button presses. You can program two types of macros:

- Mode-independent—Works in any mode.
- · Mode-dependent—Works in a specific mode.

Note

Programming a new macro over an existing one erases the original macro.

To program a mode-independent macro:

- 1 Press and hold the A and D buttons at the same time until the LED blinks twice, then release.
- 2 Enter 9 9 5. The LED blinks twice.

- **3** Press the button you want to assign to a macro.
- 4 Enter the series of commands you want the macro to execute (up to 32 commands).
- 5 Press and hold SELECT until the red LED blinks twice, then release.

When you press the preset macro button, the remote sends the series of commands you have entered, regardless of what mode you are in. For example, you could program a macro button to turn on both your TV and cable box and select a particular channel.

Note

To clear the macro, repeat Steps 1 through 5, but do not enter a series of commands at Step 4.

To program a mode-dependent macro:

- 1 Press the device mode button (DVD, STB, or AUX).
- 2 Press and hold the A and D buttons at the same time until the LED blinks twice, then release.
- 3 Enter 9 7 8. The LED blinks twice.
- 4 Press the button you want to assign to a macro.
- **5** Enter the series of commands you want the macro to execute (up to 32 commands).
- 6 Press and hold SELECT until the red LED blinks twice, then release.

When you press the macro button, the remote sends the series of commands you have entered, but only if you are in the mode you selected in Step 1. For example, you could program the macro button to turn on both your TV and cable box and select a particular channel, but only if you are in TV mode. If you are in DVD mode, this button does not execute the macro you set up in TV mode.

Note

To clear the macro, repeat Steps 1 through 6, but do not enter a series of commands at Step 4.

Controlling the remote control backlight

Your remote control has a backlight that can turn on when you press a button. You can set the amount of time your want the backlight to stay on before it automatically turns off.

Turning the remote control backlight on or off

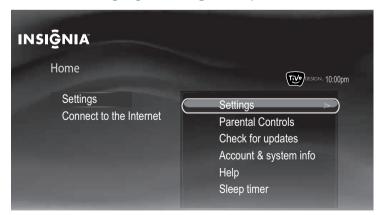
To turn your remote control backlight on or off:

- 1 Press and hold the **A** and **D** buttons at the same time until the power LED blinks twice, then release.
- 2 Enter **9 7 2**. If you are turning on the remote control backlight, the power LED blinks twice. If you are turning off the remote control backlight, the power LED blinks four times.

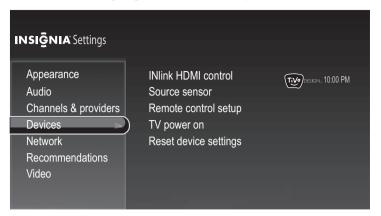
Setting the remote control backlight delay

To set the remote control backlight delay:

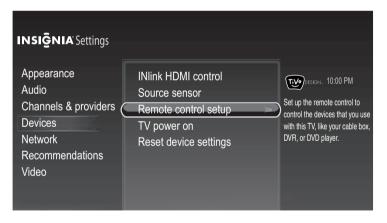
- 1 Press **TiVo**. The *Home* screen opens. Press ▲ or ▼ to select **Settings**, then press ▶ or **SELECT**.
- 2 Press ▲ or ▼ to highlight **Settings**, then press ▶ or **SELECT**.



3 Press ▲ or ▼ to highlight **Devices**, then press ▶ or **SELECT**.

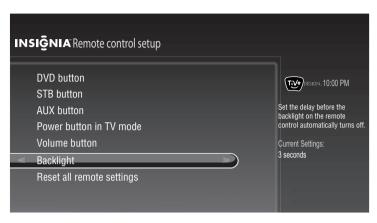


4 Press ▲ or ▼ to highlight Remote control setup, then press ► or SELECT.

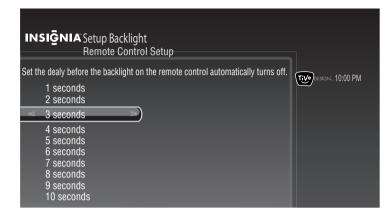




5 Press ▲ or ▼ to highlight Backlight, then press ▶ or SELECT.



6 Press ▲ or ▼ to highlight the amount of time you want the backlight to stay on, then press ▶ or **SELECT**.







Legal Notices

Legal notices	116
Two-year limited warranty	117



Legal notices

FCC Part 15

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

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

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

FCC ID Number Remote: MG38881-R

FCC ID Number WiFi Module: NKR-DNUB-B1"

FCC warning

Changes or modifications not expressly approved by the party responsible for compliance with the FCC Rules could void the user's authority to operate this equipment.

DHHS and FDA safety certification

 This product is made and tested to meet safety standards of the FCC, requirements and compliance with safety performance of the U.S. Department of Health and Human Services, and also with FDA Radiation Performance Standards 21 CFR Subchapter J.

RSS 310 statement

To reduce potential radio interference to other users, the antenna type and its gain should be so chosen that the equivalent isotropically radiated power (e.i.r.p.) is not more than that permitted for successful communication.

HDMI

HDMI, the HDMI logo, and High-Definition Multimedia Interface are trademarks or registered trademarks of HDMI Licensing LLC.



Audyssey

Audyssey Dynamic Volume™



Energy Star

To meet Energy Star requirements, keep TV settings at the factory default settings.

SRS TruSurround HD



is a trademark of SRS Labs, Inc. TruSurround HD technology is incorporated under license from SRS Labs, Inc. SRS TruSurround HD™ creates an immersive, feature-rich surround sound experience from two speakers, complete with rich bass, high frequency detail and clear dialog.

Open Source Software

For OPEN SOURCE SOFTWARE information please refer to the Legal section in the on-screen display (OSD) on the TV.

If you require additional information or you wish to receive the complete corresponding GPL or LGPL licensed source code, please call the Insignia support line at 1-877-467-4289. This source code is available for a period of three (3) years from the date of the distribution of this product by Insignia.

Disclaimer

This Insignia product may contain content and/or services that belong to a third party. Such third party content and/or service may only be used in compliance with the terms and conditions that govern such use. Unless expressly authorized by the applicable third party's terms of use, you may not modify, copy, republish, upload, post, transmit, translate, sell, create derivative works, exploit, or distribute in any manner or medium any third party content or service displayed through the Insignia product.

All third party content or service is provided "as is." Third party content or service may be terminated or interrupted at any time. Insignia has no control over the networks and transmission facilities that third party content and services are transmitted through. Any question or request regarding third party content or services should be made directly to the applicable third party. INSIGNIA EXPRESSLY DISCLAIMS ANY RESPONSIBILITY OR LIABILITY FOR ANY AVAILABILITY, INTERRUPTION OR SUSPENSION OF ANY THIRD PARTY CONTENT OR SERVICE MADE AVAILABLE THROUGH THE INSIGNIA PRODUCT. INSIGNIA DOES NOT WARRANT OR MAKE ANY REPRESENTATION, WHETHER EXPRESS OR IMPLIED, ABOUT THE SUBSTANCE, QUALITY, FUNCTIONALITY, ACCURACY, VALIDITY, TIMELINESS, SUITABILITY, AVAILABILITY, COMPLETENESS. FITNESS FOR A PARTICULAR PURPOSE, MERCHANTABILITY OR ANY OTHER REPRESENTATION ABOUT SUCH CONTENT OR SERVICES. INSIGNIA EXPRESSLY DISCLAIMS ANY AND ALL IMPLIED WARRANTIES, INCLUDING BUT NOT LIMITED TO, WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. UNDER NO CIRCUMSTANCES, INCLUDING NEGLIGENCE, SHALL INSIGNIA BE LIABLE, WHETHER IN CONTRACT OR TORT, FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL OR CONSEQUENTIAL DAMAGES, ATTORNEY FEES, COSTS, EXPENSES, OR ANY OTHER DAMAGES ARISING OUT OF OR IN CONNECTION WITH THE USE OF ANY THIRD PARTY CONTENT OR SERVICES, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGES.



Two-year limited warranty

Definitions:

Insignia Products ("Insignia") warrants to you, the original purchaser of this new Insignia-branded television ("Product"), that the Product shall be free of defects in the original manufacturer of the material or workmanship for a period of two (2) years from the date of your purchase of the Product ("Warranty Period"). For this warranty to apply, your Product must be purchased in the United States or Canada from a Best Buy or Future Shop authorized dealer of Insignia brand products only that are packaged with this warranty statement.

How long does the coverage last?

The Warranty Period lasts for 2 years (730 days) from the date you purchased the Product. Your purchase date is printed on the receipt you received with the Product.

What does this warranty cover?

During the Warranty Period, if the original manufacture of the material or workmanship of the Product is determined to be defective by an authorized Insignia repair center or store personnel, Insignia will (at its sole option): (1) repair the Product with new or rebuilt parts; or (2) replace the Product at no charge with new or rebuilt comparable products or parts. Products and parts replaced under this warranty become the property of Insignia and are not returned to you. If service of Products or parts are required after the Warranty Period expires, you must pay all labor and parts charges. This warranty lasts as long as you own your Insignia Product during the Warranty Period. Warranty coverage terminates if you sell or otherwise transfer the Product.

How to obtain warranty service?

If you purchased the Product at a Best Buy or Future Shop retail store location and your television Product has a screen size of less than 37 inches, please take your original receipt and the Product to any Best Buy or Future Shop store. Make sure that you place the Product in its original packaging or packaging that provides the same amount of protection as the original packaging. If you purchased the Product from a Best Buy or Future Shop online web site, mail your original receipt and the Product to the address listed on the web site. Make sure that you put the Product in its original packaging or packaging that provides the same amount of protection as the original packaging. To obtain in-home warranty service for a television with a screen 37 inches or larger, in the United States call 1-888-BESTBUY, Canada call 1-866-BESTBUY for Future Shop call 1-800-663-2275. Call agents will diagnose and correct the issue over the phone or will have an Insignia-approved repair technician dispatched to your home.

Where is the warranty valid?

This warranty is valid only to the original purchaser of the product in the United States and Canada at Best Buy or Future Shop branded retail stores or websites.

What does the warranty not cover?

This warranty does not cover:

- Customer instruction/education
- Installation
- Set up adjustments
- Cosmetic damage
- Damage due to acts of God, such as power surges
- Accident(s)
- Misuse
- Abuse
- Nealigence
- Commercial purposes/use, including but not limited to use in a place of business or in communal areas of a multiple dwelling condominium or apartment complex, or otherwise used in a place of other than a private home.
- Modification of any part of the Product, including the antenna
- Plasma display panel damaged by static (non-moving) images applied for lengthy periods (burn-in).
- Damage due to incorrect operation or maintenance
- Connection to an incorrect voltage or power supply
- Attempted repair by any person not authorized by Insignia to service the Product
- Products sold "as is" or "with all faults"
- Consumables, including but not limited to batteries (i.e. AA, AAA, C etc.)
- Products where the factory applied serial number has been altered or removed
- Loss or Theft of this product or any part of the product

REPAIR REPLACEMENT AS PROVIDED UNDER THIS WARRANTY IS YOUR EXCLUSIVE REMEDY FOR BREACH OF WARRANTY. INSIGNIA SHALL NOT BE LIABLE FOR ANY INCIDENTAL OR CONSEQUENTIAL DAMAGES FOR THE BREACH OF ANY EXPRESS OR IMPLIED WARRANTY ON THIS PRODUCT, INCLUDING, BUT NOT LIMITED TO, LOST DATA, LOSS OF USE OF YOUR PRODUCT, LOST BUSINESS OR LOST PROFITS. INSIGNIA PRODUCTS MAKES NO OTHER EXPRESS WARRANTIES WITH RESPECT TO THE PRODUCT, ALL EXPRESS AND IMPLIED WARRANTIES FOR THE PRODUCT, INCLUDING, BUT NOT LIMITED TO, ANY IMPLIED WARRANTIES OF AND CONDITIONS OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE, ARE LIMITED IN DURATION TO THE WARRANTY PERIOD SET FORTH ABOVE AND NO WARRANTIES, WHETHER EXPRESS OR IMPLIED, WILL APPLY AFTER THE WARRANTY PERIOD. SOME STATES, PROVINCES AND JURISDICTIONS DO NOT ALLOW LIMITATIONS ON HOW LONG AN IMPLIED WARRANTY LASTS, SO THE ABOVE LIMITATION 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 OR PROVINCE TO PROVINCE.

Contact Insignia:

For customer service please call 1-877-467-4289

www.insigniaproducts.com

Distributed by Best Buy Purchasing, LLC

7601 Penn Avenue South, Richfield, Minnesota, U.S.A. 55423-3645

© 2011 BBY Solutions, Inc.

All rights reserved. INSIGNIA is a trademark of BBY Solutions, Inc. Registered in some countries. All other products and brand names are trademarks of their respective owners.



www.insigniaproducts.com (877) 467-4289
Distributed by Best Buy Purchasing, LLC 7601 Penn Avenue South, Richfield, MN USA 55423-3645
© 2011 BBY Solutions, Inc. All rights reserved. INSIGNIA is a trademark of BBY Solutions, Inc. Registered in some countries.
All other products and brand names are trademarks of their respective owners.