

OWNER'S MANUAL

LCD TV

Please read this manual carefully before operating your set and retain it for future reference.

32LG710H	32LD650H	32LD655H
37LG710H	37LD650H	37LD655H
42LG710H	42LD650H	42LD655H
	47LD650H	
	55LD650H	

WARNING / CAUTION



WARNING
RISK OF ELECTRIC SHOCK
DO NOT OPEN



TO REDUCE THE RISK OF ELECTRIC SHOCK
DO NOT REMOVE COVER (OR BACK). NO
USER SERVICEABLE PARTS INSIDE. REFER TO
QUALIFIED SERVICE PERSONNEL.



The lightning flash with arrowhead symbol, within an equilateral triangle, is intended to alert the user to the presence of uninsulated “dangerous voltage” within the product’s enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.



The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

WARNING/CAUTION

TO REDUCE THE RISK OF FIRE AND ELECTRIC SHOCK, DO NOT EXPOSE THIS PRODUCT TO RAIN OR MOISTURE.

NOTE TO CABLE/TV INSTALLER

This reminder is provided to call the CATV system installer’s attention to Article 820-40 of the National Electric Code (U.S.A.). The code provides guidelines for proper grounding and, in particular, specifies that the cable ground shall be connected to the grounding system of the building, as close to the point of the cable entry as practical.

WARNING / CAUTION

To prevent fire or shock hazards, do not expose this product to rain or moisture.

FCC NOTICE

Class B digital device

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

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment to 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.

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

Any changes or modifications in construction of this device which are not expressly approved by the party responsible for compliance could void the user’s authority to operate the equipment.

CAUTION

Do not attempt to modify this product in any way without written authorization from LG Electronics. Unauthorized modification could void the user’s authority to operate this product

SAFETY INSTRUCTIONS

IMPORTANT SAFETY INSTRUCTIONS

Read these instructions.

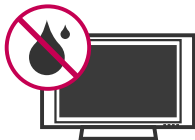
Keep these instructions.

Heed all warnings.

Follow all instructions.



- 1** Do not use this apparatus near water.



- 2** Clean only with a dry cloth.



- 3** Do not block any ventilation openings. Install in accordance with the manufacturer's instructions.



- 4** Do not install near any heat sources such as radiators, heat registers, stoves, or other apparatus (including amplifiers) that produce heat.



- 5** 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.



- 6** Protect the power cord from being walked on or pinched particularly at plugs, convenience receptacles, and the point where they exit from the apparatus.



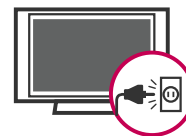
- 7** Only use attachments/accessories specified by the manufacturer.



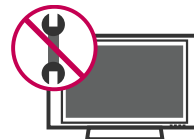
- 8** Use only with the cart, stand, tripod, bracket, or table specified by the manufacturer, or sold with the apparatus. When a cart is used, use caution when moving the cart/apparatus combination to avoid injury from tip-over.



- 9** Unplug this apparatus during lighting storms or when unused for long periods of time.



- 10** 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.



- 11** Never touch this apparatus or antenna during a thunder or lightning storm.

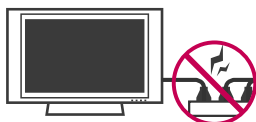
- 12** When mounting a TV on the wall, make sure not to install the TV by the hanging power and signal cables on the back of the TV.

- 13** Do not allow an impact shock or any objects to fall into the product, and do not drop onto the screen with something.

- 14** **CAUTION** concerning the Power Cord :
It is recommend that appliances be placed upon a dedicated circuit; that is, a single outlet circuit which powers only that appliance and has no additional outlets or branch circuits. Check the specification page of this owner's manual to be certain.
Do not connect too many appliances to the same AC power outlet as this could result in fire or electric shock.

Do not overload wall outlets. Overloaded wall outlets, loose or damaged wall outlets, extension cords, frayed power cords, or damaged or cracked wire insulation are dangerous. Any of these conditions could result in electric shock or fire. Periodically examine the cord of your appliance, and if its appearance indicates damage or deterioration, unplug it, discontinue use of the appliance, and have the cord replaced with an exact replacement part by an authorized servicer. Protect the power cord from physical or mechanical abuse, such as being twisted, kinked, pinched, closed in a door, or walked upon. Pay particular attention to plugs, wall outlets, and the point where the cord exits the appliance.

Do not make the TV with the power cord plugged in. Do not use a damaged or loose power cord. Be sure do grasp the plug when unplugging the power cord. Do not pull on the power cord to unplug the TV.



- 15** **WARNING** - To reduce the risk of fire or electrical shock, do not expose this product to rain, moisture or other liquids. Do not touch the TV with wet hands. Do not install this product near flammable objects such as gasoline or candles or expose the TV to direct air conditioning.



- 16** As long as this unit is connected to the AC wall outlet, it is not disconnected from the AC power source even if you turn off this unit by SWITCH.

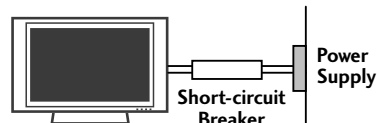
- 17** Do not expose to dripping or splashing and do not place objects filled with liquids, such as vases, cups, etc. on or over the apparatus (e.g. on shelves above the unit).



18 **GROUNDING**

Ensure that you connect the earth ground wire to prevent possible electric shock. (i.e. a TV with a three-prong grounded AC plug must be connected to a three-prong grounded AC outlet) If grounding methods are not possible, have a qualified electrician install a separate circuit breaker.

Do not try to ground the unit by connecting it to telephone wires, lightening rods, or gas pipes.



19 **DISCONNECTING DEVICE FROM MAINS**

Mains plug is the disconnecting device. The plug must remain readily operable.

20 **Dot Defect**

The Plasma or LCD panel is a high technology product with resolution of two million to six million pixels. In a very few cases, you could see fine dots on the screen while you're viewing the TV. Those dots are deactivated pixels and do not affect the performance and reliability of the TV.

21 **Generated Sound**

"Cracking" noise: A cracking noise that occurs when watching or turning off the TV is generated by plastic thermal contraction due to temperature and humidity. This noise is common for products where thermal deformation is required.

Electrical circuit humming/panel buzzing: A low level noise is generated from a high-speed switching circuit, which supplies a large amount of current to operate a product. It varies depending on the product.

This generated sound does not affect the performance and reliability of the product.

22 ANTENNAS

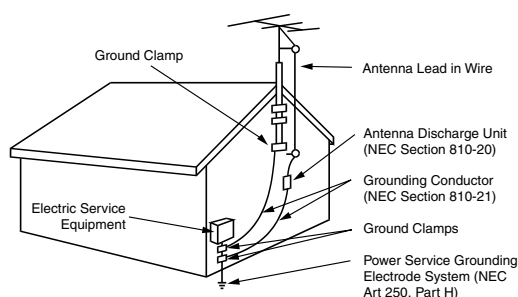
Outdoor antenna grounding

If an outdoor antenna is installed, follow the precautions below. An outdoor antenna system should not be located in the vicinity of overhead power lines or other electric light or power circuits, or where it can come in contact with such power lines or circuits as death or serious injury can occur.

Be sure the antenna system is grounded so as to provide some protection against voltage surges and built-up static charges.

Section 810 of the National Electrical Code (NEC) in the U.S.A. provides information with respect to proper grounding of the mast and supporting structure, grounding of the lead-in wire to an antenna discharge unit, size of grounding conductors, location of antenna discharge unit, connection to grounding electrodes and requirements for the grounding electrode.

Antenna grounding according to the National Electrical Code, ANSI/NFPA 70



NEC: National Electrical Code

23 Cleaning

When cleaning, unplug the power cord and scrub gently with a soft cloth to prevent scratching. Do not spray water or other liquids directly on the TV as electric shock may occur. Do not clean with chemicals such as alcohol, thinners or benzene.

24 Moving

Make sure the product is turned off, unplugged and all cables have been removed. It may take 2 or more people to carry larger TVs. Do not press against or put stress on the front panel of the TV.

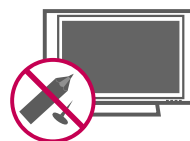
25 Ventilation

Install your TV where there is proper ventilation. Do not install in a confined space such as a bookcase. Do not cover the product with cloth or other materials (e.g.) plastic while plugged in. Do not install in excessively dusty places.

26 Take care not to touch the ventilation openings. When watching the TV for a long period, the ventilation openings may become hot.

27 If you smell smoke or other odors coming from the TV, unplug the power cord contact and authorized service center.

28 Do not press strongly upon the panel with a hand or sharp object such as nail, pencil or pen, or make a scratch on it.



29 Keep the product away from direct sunlight.

30 For LCD TV

If the TV feels cold to the touch, there may be a small “flicker” when it is turned on. This is normal, there is nothing wrong with TV.

Some minute dot defects may be visible on the screen, appearing as tiny red, green, or blue spots. However, they have no adverse effect on the monitor’s performance.

Avoid touching the LCD screen or holding your finger(s) against it for long periods of time. Doing so may produce some temporary distortion effects on the screen.

ON DISPOSAL

(Only Hg lamp used LCD TV)

The fluorescent lamp used in this product contains a small amount of mercury. Do not dispose of this product with general household waste. Disposal of this product must be carried out in accordance to the regulations of your local authority.

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FEATURES OF THIS TV

- This feature is not available for all models.



High-definition television. High-resolution digital television broadcast and playback system composed of roughly a million or more pixels, 16:9 aspect-ratio screens, and AC3 digital audio. A subset of digital television, HDTV formats include 1080i and 720p resolutions.



Unlike other sensors which can only sense brightness of ambient light, LG's "Intelligent Sensor" uses 4,096 sensing steps to evaluate its surroundings. Using a sophisticated algorithm, the LG processes picture quality elements including brightness, contrast, color, sharpness and white balance. The result is a picture optimized for it's surroundings, more pleasing to watch and which can also save up to 50% in power consumption.



View videos and photos and listen to music on your TV through USB 2.0 ('videos' dependent on model).



LG TV include a unique invisible speaker system, tuned by renowned audio expert, Mr. Mark Levinson. Speakers are embedded in strategic spots behind the front cabinet and use minute vibrations to turn the entire front bezel into the speaker system. The result is a clean, polished look, and enhanced audio by increasing the "sweet spot", giving a wider and richer sound field.



Manufactured under license from Dolby Laboratories. "Dolby" and the double-D symbol are trademarks of Dolby Laboratories.



SRS is a trademark of SRS Labs, Inc. TruSurround XT technology is incorporated under license from SRS Labs, Inc.



Automatically enhances and amplifies the sound of human voice frequency range to help keep dialogue audible when background noise swells.



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

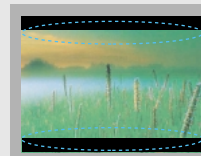
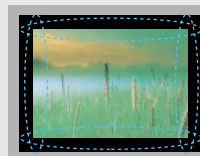
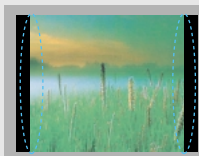


Matches the original frame rate of the film for a more film-like experience



IMPORTANT INFORMATION TO PREVENT "IMAGE BURN / BURN-IN" ON YOUR TV SCREEN

- When a fixed image (e.g. logos, screen menus, video game, and computer display) is displayed on the TV for an extended period, it can become permanently imprinted on the screen. This phenomenon is known as "image burn" or "burn-in." Image burn is not covered under the manufacturer's warranty.
- In order to prevent image burn, avoid displaying a fixed image on your TV screen for a prolonged period (2 or more hours for LCD, 1 or more hours for Plasma).
- Image burn can also occur on the letterboxed areas of your TV if you use the 4:3 aspect ratio setting for an extended period.

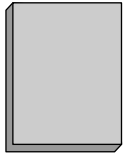


PREPARATION

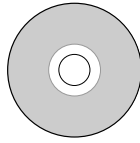
ACCESSORIES

Ensure that the following accessories are included with your TV. If an accessory is missing, please contact the dealer where you purchased the TV.

The accessories included may differ from the images below.



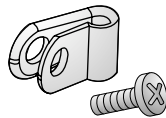
Owner's Manual



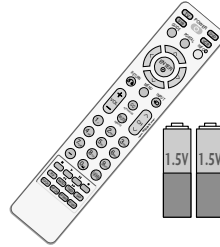
CD Manual



Torx plus
Star head screw
(Refer to P.15, P.16)



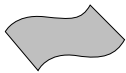
Protective Bracket and
Screw for Power Cord
(Refer to P.17, P.18)



Remote Control,
Batteries



Power Cord

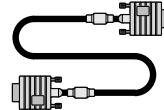


Polishing Cloth
(Not included with all
models.)

* Wipe spots on the exterior only with the polishing cloth.

* Do not wipe roughly when removing stains. Excessive pressure may cause scratches or discoloration.

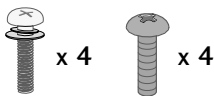
Optional Extras



D-sub 15 pin Cable

When using the VGA (D-sub 15 pin cable) PC connection, the user must use shielded signal interface cables with ferrite cores to maintain standards compliance.

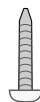
For 32/37/42LG710H



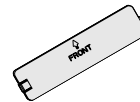
Screws for stand
assembly
(Refer to P.15)



Cable Holder
(Refer to P.17)



Screw for
stand fixing
(Refer to P.20)



Protection Cover
(Refer to P.15)

(For 32LG710H)



Plug-in type Holder
(Refer to P.17)

For 32/37/42/47/55LD650H, 32/37/42LD655H

(For 32/37/42LD650H, 32/37/42LD655H)



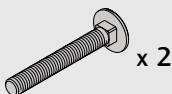
Cable Holder
(Refer to P.18)



Plug-in type Holder
(Refer to P.18)



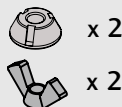
Rubbers for stand
fixing
(Refer to P.20)



Screws for stand
fixing
(Refer to P.20)



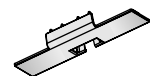
Washers for stand
fixing
(Refer to P.20)



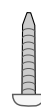
Nuts for stand
fixing
(Refer to P.20)



Screws for stand assembly
(Refer to P.16)



Protection Cover
(Refer to P.16)



Screw for stand fixing
(Refer to P.20)

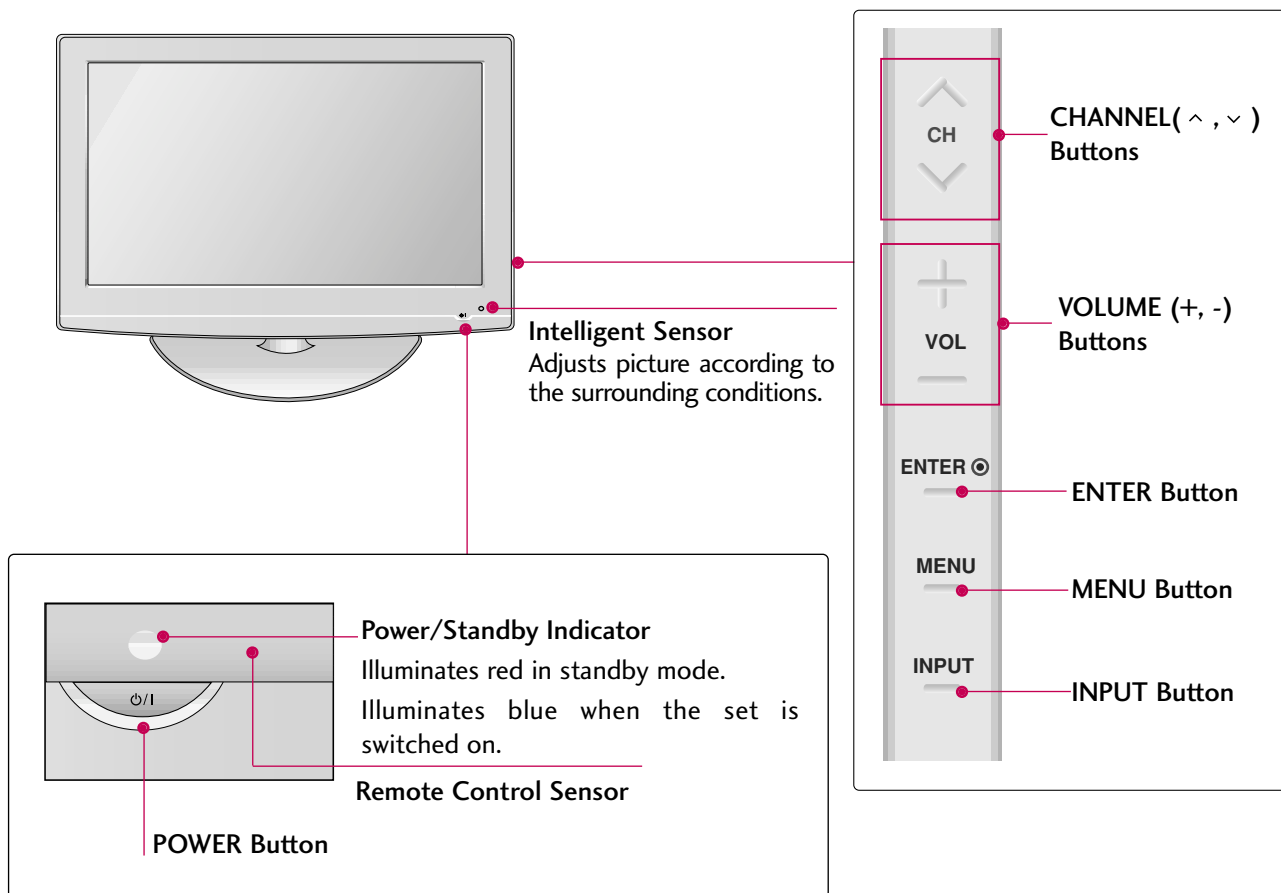
PREPARATION

FRONT PANEL INFORMATION

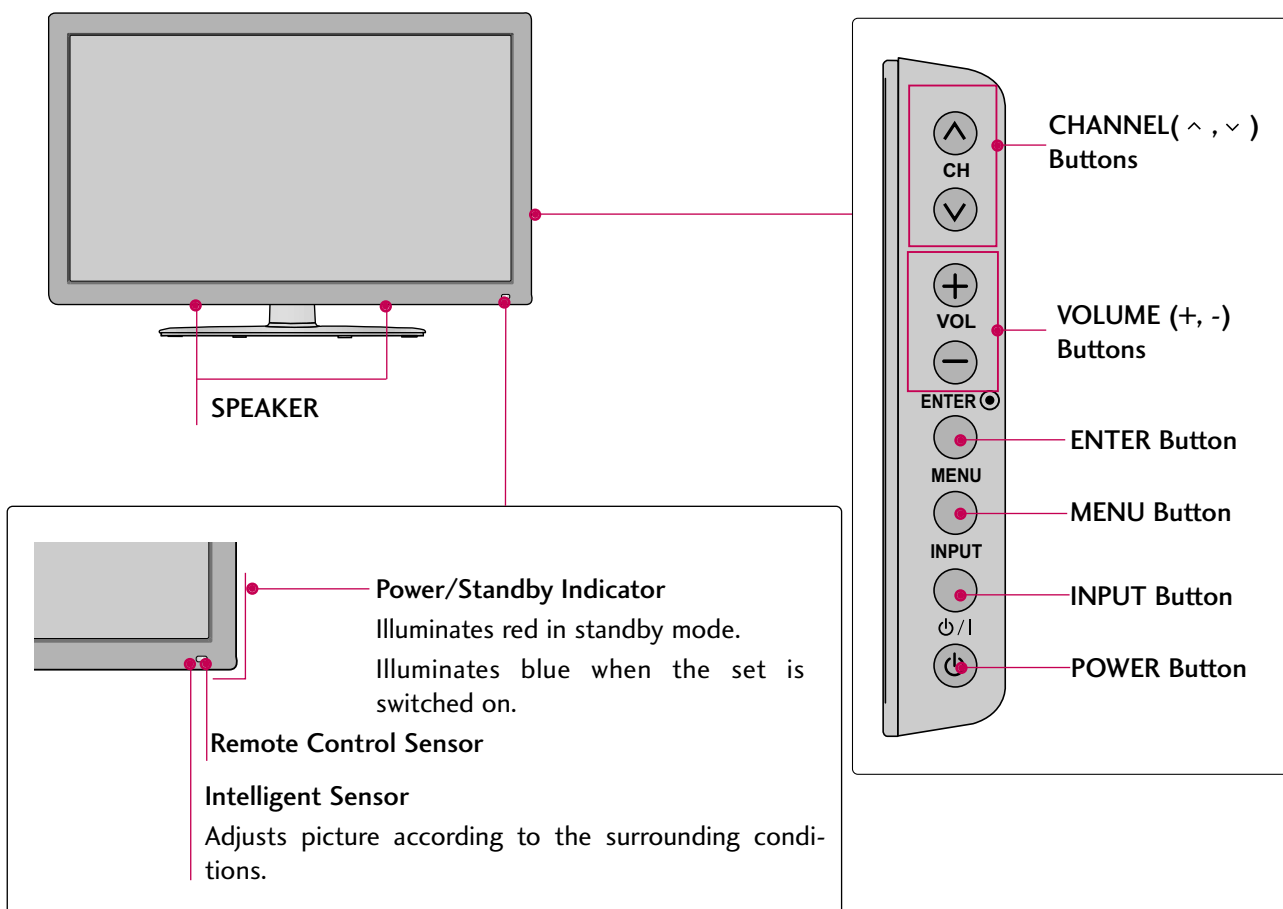
■ Image shown may differ from your TV.

32/37/42LG710H

PREPARATION



32/37/42/47/55LD650H, 32/37/42LD655H

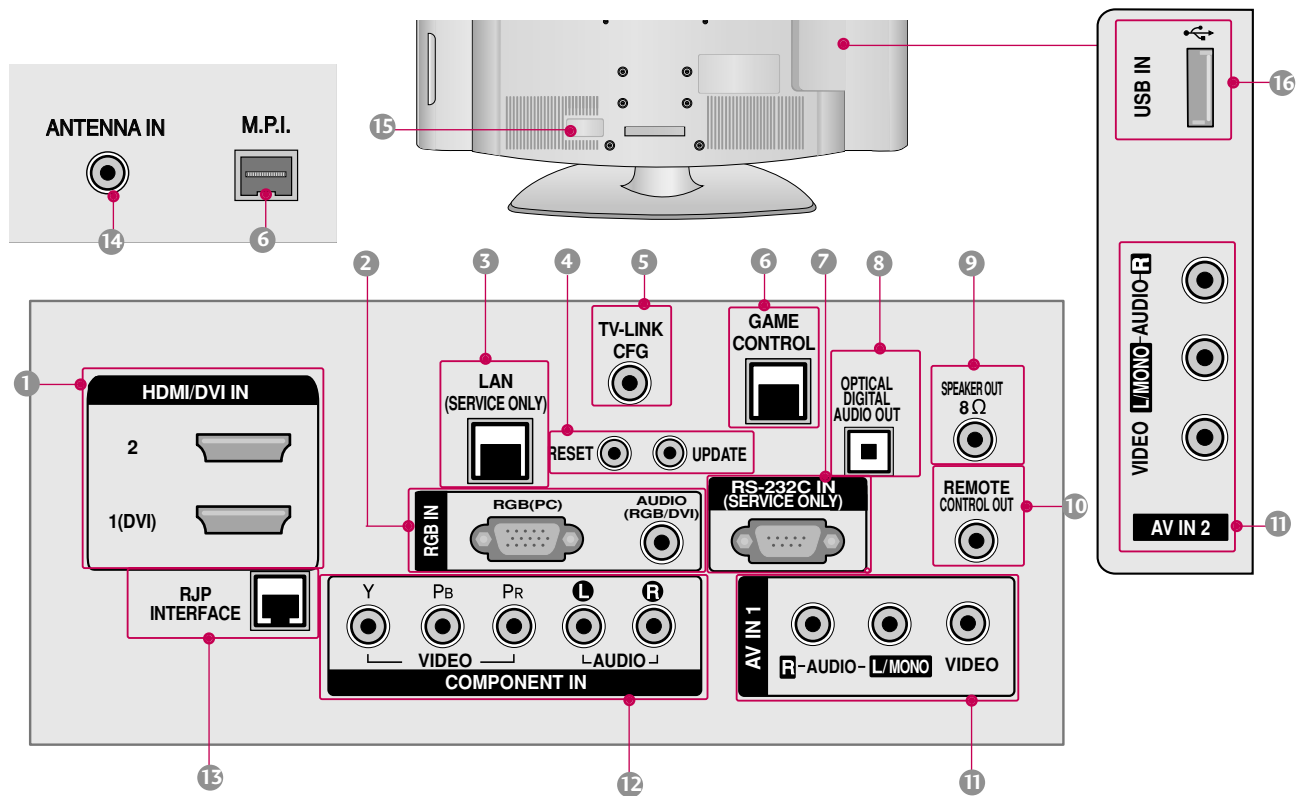


PREPARATION

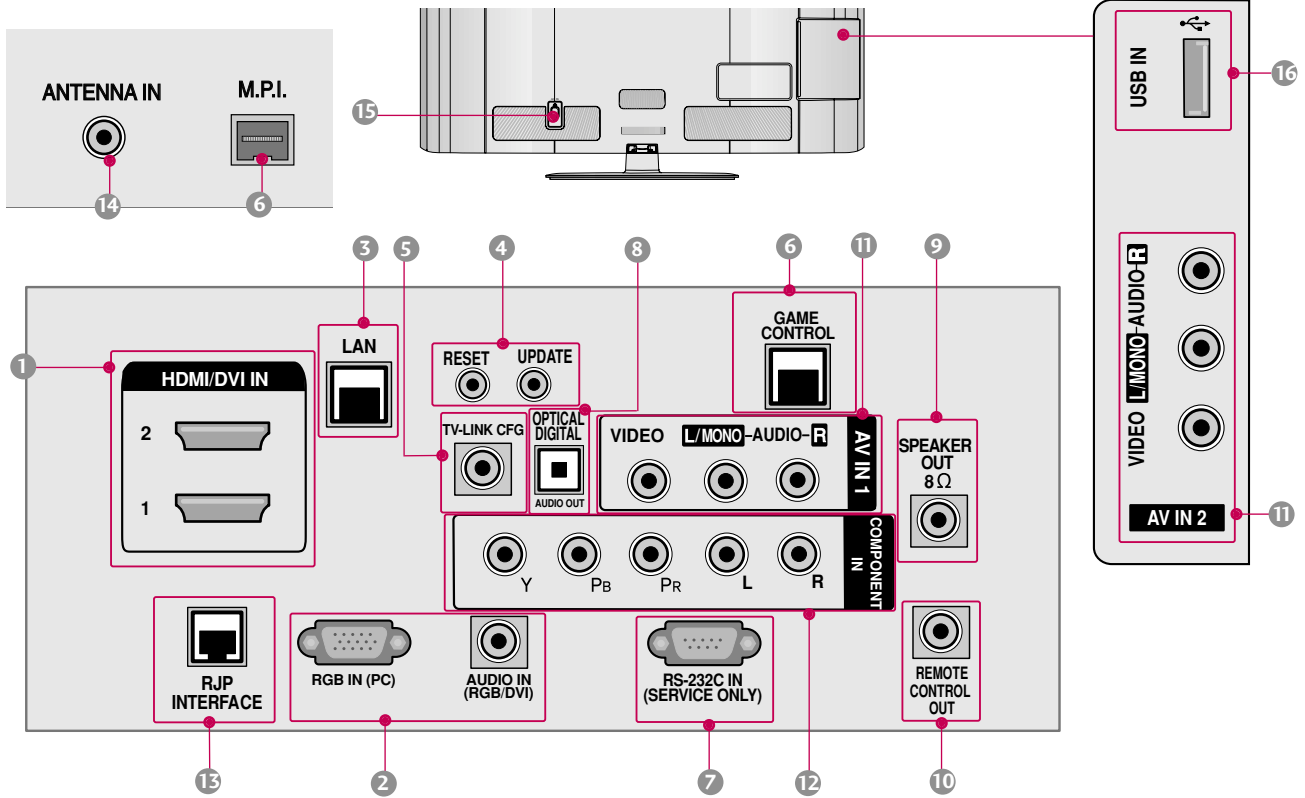
BACK PANEL INFORMATION

■ Image shown may differ from your TV.

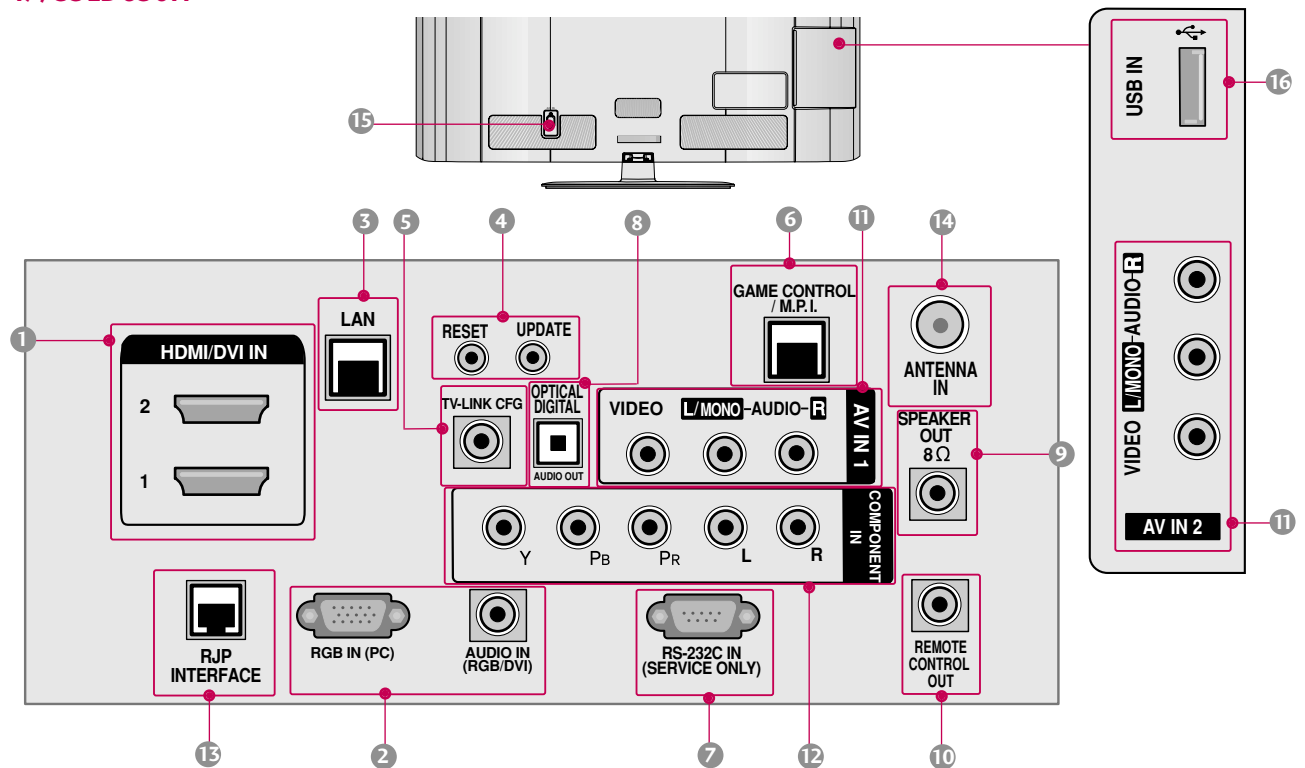
32/37/42LG710H



32/37/42LD650H, 32/37/42LD655H



47/55LD650H



PREPARATION

- 1 HDMI/DVI IN**
Digital Connection. Supports HD video and Digital audio.
Accepts DVI video using an adapter or HDMI to DVI cable (not included)
- 2 RGB (PC)**
Analog PC Connection. Uses a D-sub 15 pin cable (VGA cable).
AUDIO (RGB/DVI)
1/8" headphone jack for analog PC audio input.
- 3 LAN (SERVICE ONLY)**
For connecting to a control network.
- 4 RESET**
Performs a hardware reset.
UPDATE
Enables/disables software downloads and debug mode.
- 5 TV - LINK CFG**
Computer input for programming Free To Guest services.
- 6 GAME CONTROL**
Input port for third party game Controllers.
M.P. I.
Allows VOD/PPV devices or set-top boxes to control the TV.
- 7 RS-232C IN (SERVICE ONLY)**
Used for software updates.
- 8 OPTICAL DIGITAL AUDIO OUT**
Optical digital audio output for use with amps and home theater systems.
Note: In standby mode, this port doesn't work.
- 9 SPEAKER OUT 8Ω**
For use with external speakers.
- 10 REMOTE CONTROL OUT**
IR output for controlling an auxiliary device.
- 11 AV (Audio/Video) IN 1/2**
Analog composite connection. Supports standard definition video only (480i).
- 12 COMPONENT IN**
Analog Connection. Supports HD.
Uses a red, green, and blue cable for video & a red and white cable for audio.
- 13 RJP INTERFACE (REMOTE JACK PACK PORT)**
Connect this to an LG remote jack pack system.
- 14 ANTENNA IN**
Connect an antenna to receive over-the-air (OTA) signals.
- 15 Power Cord Socket**
AC power input.
Caution: Never attempt to operate the TV on DC power.
- 16 USB IN**
Used for viewing multimedia files.

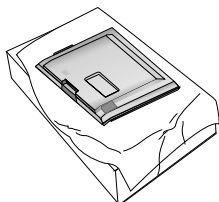
STAND INSTRUCTIONS

■ Image shown may differ from your TV.

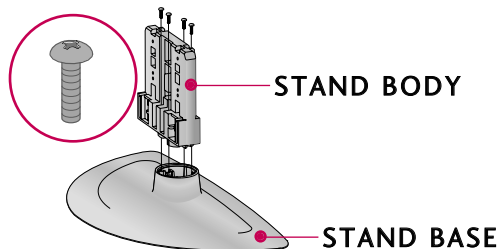
32/37/42LG710H

INSTALLATION

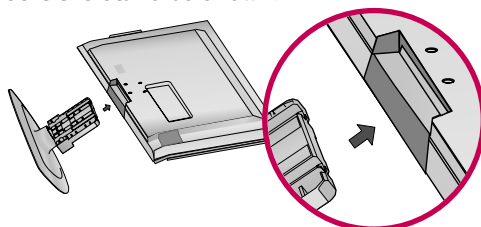
- 1 Carefully place the TV screen side down on a cushioned surface to protect the screen from damage.



- 2 Assemble the parts of the **STAND BODY** with the **STAND BASE** of the TV.



- 3 Insert the stand as shown.



- 4 Tighten the stand with the four screws (provided as parts of the TV).

or

Tighten the two of these four screws and the two Torx plus star head screws (provided as parts of the TV) to secure the TV. Tighten the two Torx plus star head screws with a star head driver (not provided as parts of the TV).

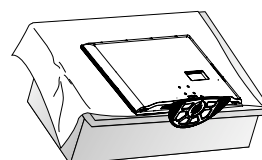


! NOTE

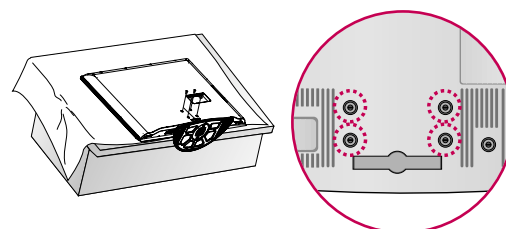
- When assembling the desk type stand, make sure the screws are fully tightened (If not tightened fully, the TV can tilt forward after the product installation). Do not over tighten.

DETACHMENT

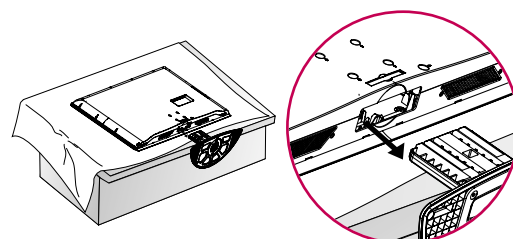
- 1 Carefully place the TV screen side down on a cushioned surface to protect the screen from damage.



- 2 Remove the four screws that hold the base on.

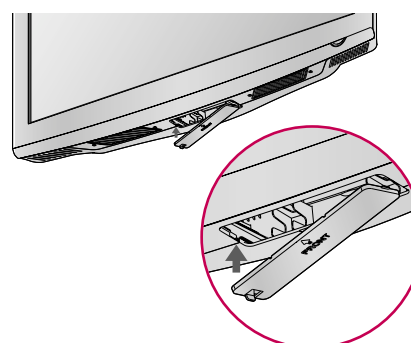


- 3 Detach the stand from the TV.



PROTECTION COVER

After removing the stand, install the included **protection cover** over the hole for the stand. Press the **PROTECTION COVER** into the TV until you hear it click.

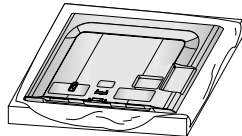


PREPARATION

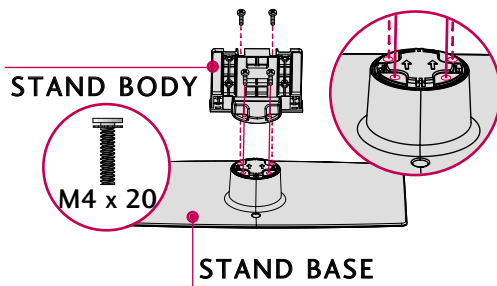
32/37/42/47/55LD650H, 32/37/42LD655H

INSTALLATION

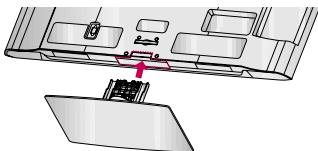
- 1 Carefully place the TV screen side down on a cushioned surface to protect the screen from damage.



- 2 Assemble the parts of the **STAND BODY** with the **STAND BASE** of the TV.



- 3 Assemble the TV as shown.



- 4 Tighten the stand with the four screws (provided as parts of the TV).

or

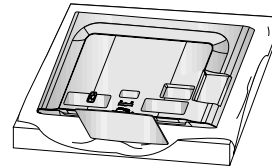
Tighten the two of these four screws and the two Torx plus star head screws (provided as parts of the TV) to secure the TV. Tighten the two Torx plus star head screws with a star head driver bit (not provided as parts of the TV).

NOTE

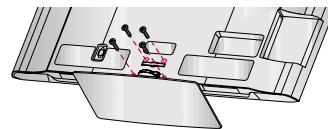
- When assembling the desk type stand, make sure the screws are fully tightened (If not tightened fully, the TV can tilt forward after the product installation). Do not over tighten.

DETACHMENT

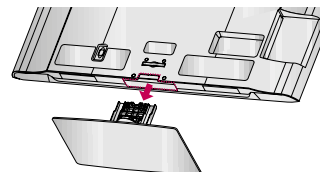
- 1 Carefully place the TV screen side down on a cushioned surface to protect the screen from damage.



- 2 Remove the screws that hold the stand on.

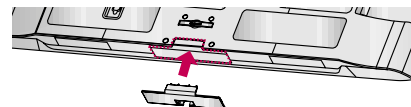


- 3 Detach the stand from TV.



PROTECTION COVER

After removing the stand, install the included **protection cover** over the hole for the stand. Press the **PROTECTION COVER** into the TV until you hear it click.

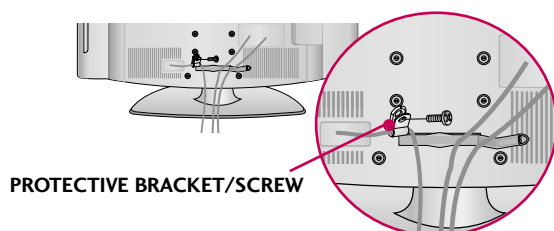


CABLE MANAGEMENT

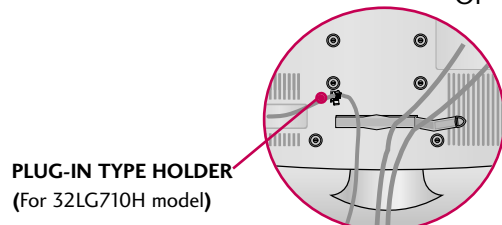
■ Image shown may differ from your TV.

32/37/42LG710H

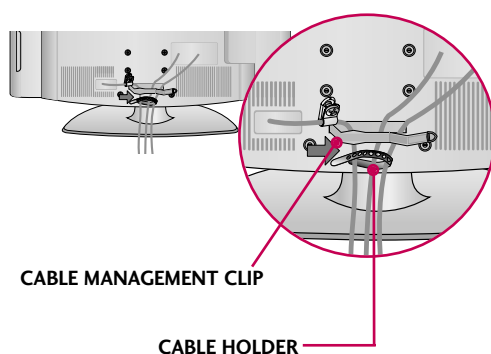
- 1 Connect the cables as necessary.
To connect additional equipment, see the **EXTERNAL EQUIPMENT SETUP** section.
To help prevent the power cable from being removed by accident, secure the power cable with the included **PROTECTIVE BRACKET /SCREW**. The 32LG710H use a **Plug-in type Holder** instead of using a screw.



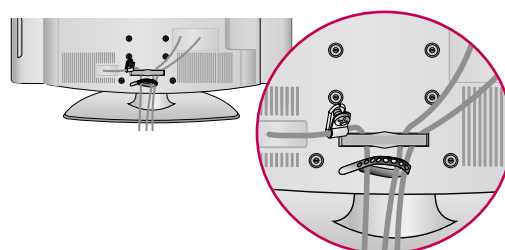
Or



- 2 Open the **CABLE MANAGEMENT CLIP** as shown.
If a **CABLE HOLDER** was included with your TV, install it as shown.



- 3 Put the cables inside the **CABLE MANAGEMENT CLIP** and snap it closed.



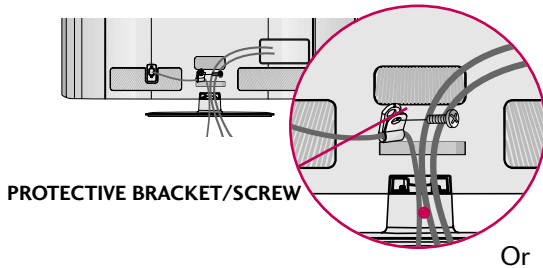
! NOTE

- ▶ Do not hold the **CABLE MANAGEMENT CLIP** when moving the TV.
- If the TV is dropped, you may be injured or the product may be broken.
- ▶ With some TVs, the **PLUG-IN TYPE HOLDER** and the **CABLE HOLDER** are included. If these holders are inserted into the hole provided on back of the TV, they cannot be removed.

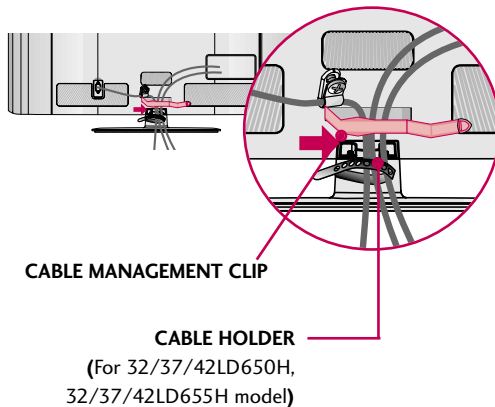
PREPARATION

32/37/42/47/55LD650H, 32/37/42LD655H

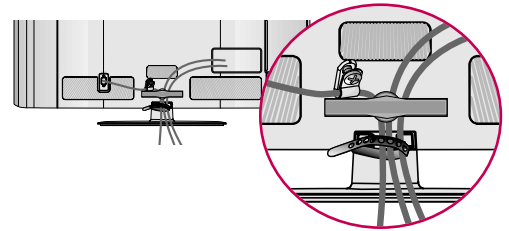
- 1 Connect the cables as necessary.
To connect additional equipment, see the **EXTERNAL EQUIPMENT SETUP** section.
To help prevent the power cable from being removed by accident, secure the power cable with the included **PROTECTIVE BRACKET /SCREW**. The 32/37/42LD650H, 32/37/42LD655H use a **Plug-in type Holder** instead of using a screw.



- 2 Open the **CABLE MANAGEMENT CLIP** as shown.
If a **CABLE HOLDER** was included with your TV, install it as shown.



- 3 Put the cables inside the **CABLE MANAGEMENT CLIP** and snap it closed.



! NOTE

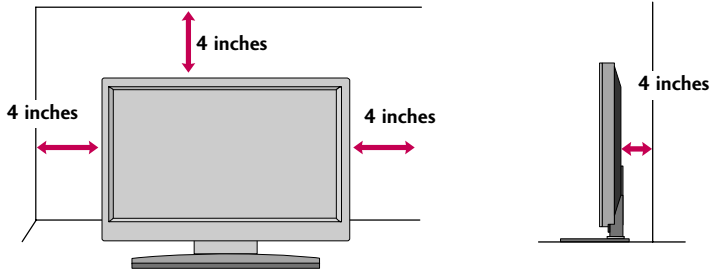
- ▶ Do not hold the **CABLE MANAGEMENT CLIP** when moving the TV.
- If the TV is dropped, you may be injured or the product may be broken.
- ▶ With some TVs, the **PLUG-IN TYPE HOLDER** and the **CABLE HOLDER** are included. If these holders are inserted into the hole provided on back of the TV, they cannot be removed.

PREPARATION

DESKTOP PEDESTAL INSTALLATION

- Image shown may differ from your TV.

For proper ventilation, allow a clearance of 4 inches on all four sides from the wall.

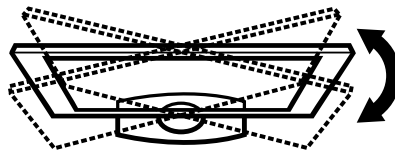


CAUTION

- Ensure adequate ventilation by following the clearance recommendations.
- Do not mount near or above any type of heat source.

SWIVEL STAND

After installing the TV, you can adjust the TV set manually to the left or right direction to suit your viewing position.



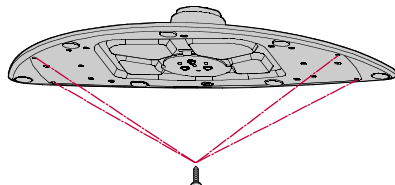
20°: 47/55LD650H
90°: Other Models

PREPARATION

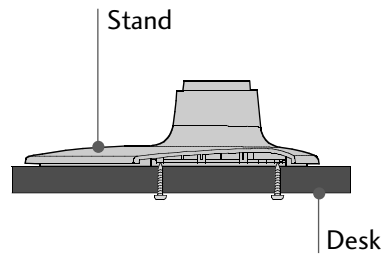
ATTACHING THE TV TO A DESK

The TV should be attached to a desk so it cannot be pulled in a forward/backward direction, potentially causing injury or damaging the product.

32/37/42LG710H



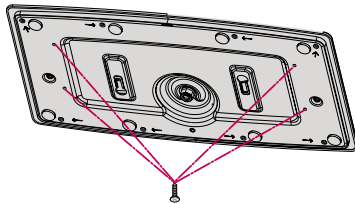
4-Screws
(not provided as parts of the product)



- Recommended screw size: M5 x L (*L: Table depth + 8~10mm)
ex) Table depth: 15mm, Screw: M5 x 25

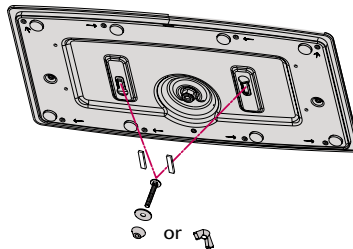
32/37/42LD650H, 32/37/42LD655H

Type 1

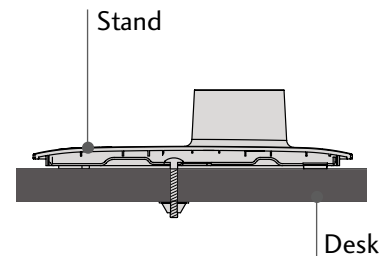


4-Screws
(not provided as parts of the product)

Type 2

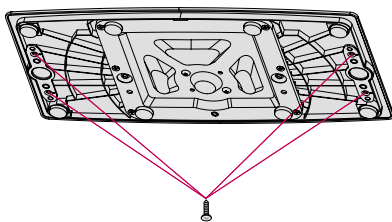


2-Screws, 2-Washers, 2-Nuts, 4-Rubbers
(provided as parts of the product)

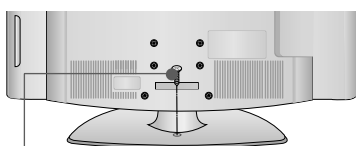
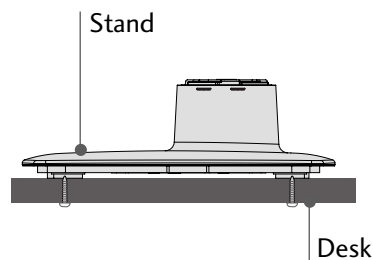


- You can select any type of attachment (Type 1 or Type 2)
- Do not over tighten.

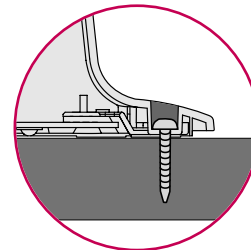
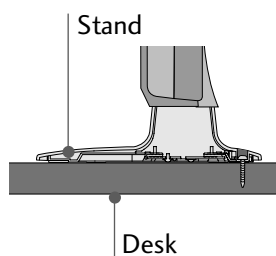
47/55LD650H



4-Screws
(not provided as parts of the product)



1-Screw
(provided as parts of the product)



⚠ WARNING

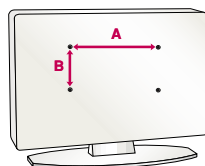
- To prevent TV from falling over, the TV should be securely attached to the floor/wall per installation instructions. Tipping, shaking, or rocking the TV may cause injury.

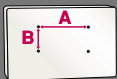
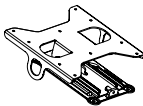
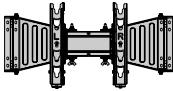
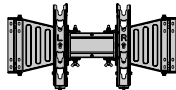
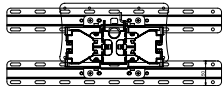
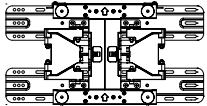
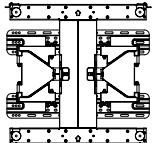
VESA WALL MOUNTING

Install your wall mount on a solid wall perpendicular to the floor. When attaching to other building materials, please contact an installer. If installed on a ceiling or slanted wall, it may fall and result in severe personal injury.

We recommend that you use an LG brand wall mount when mounting the TV to a wall.

LG recommends that wall mounting be performed by a qualified professional installer.



Model	VESA (A * B) 	Standard Screw	Quantity	Wall Mounting Bracket (sold separately)
32LG710H	200 * 100	M4	4	 RW230  AW-47LG30M
37LG710H, 42LG710H	200 * 200	M6	4	 AW-47LG30M
32LD650H, 32LD655H	200 * 100	M4	4	 LSW100B, LSW100BG
37LD650H, 37LD655H, 42LD650H, 42LD655H, 47LD650H	200 * 200	M6	4	 LSW200B, LSW200BG
55LD650H	400 * 400	M6	4	 LSW400B, LSW400BG, DSW400BG

PREPARATION

! NOTE

- ▶ Screw length needed depends on the wall mount used. For further information, refer to the instructions included with the mount.
- ▶ Standard dimensions for wall mount kits are shown in the table.
- ▶ When purchasing our wall mount kit, a detailed installation manual and all parts necessary for assembly are provided.
- ▶ Do not use screws longer than the standard dimension, as they may cause damage to the inside of the TV.
- ▶ For wall mounts that do not comply with the VESA standard screw specifications, the length of the screws may differ depending on their specifications.
- ▶ Do not use screws that do not comply with the VESA standard screw specifications.
Do not use fasten the screws too strongly, this may damage the TV or cause the TV to a fall, leading to personal injury. LG is not liable for these kinds of accidents.
- ▶ LG is not liable for TV damage or personal injury when a non-VESA or non specified wall mount is used or the consumer fails to follow the TV installation instructions.

⚠ CAUTION

- ▶ Do not install your wall mount kit while your TV is turned on. It may result in personal injury due to electric shock.

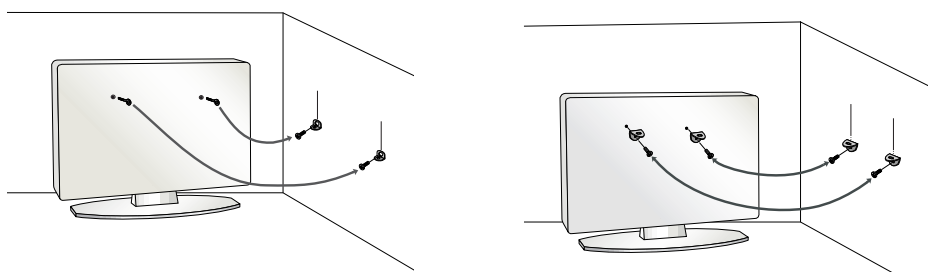
SECURING THE TV TO THE WALL TO PREVENT FALLING WHEN THE TV IS USED ON A STAND

- You should purchase necessary components to prevent the TV from tipping over (when not using a wall mount).
- Image shown may differ from your TV.

We recommend that you set up the TV close to a wall so it cannot fall over if pushed backwards.

Additionally, we recommend that the TV be attached to a wall so it cannot be pulled in a forward direction, potentially causing injury or damaging the product.

Caution: Please make sure that children don't climb on or hang from the TV.



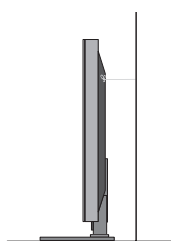
- Insert the eye-bolts (or TV brackets and bolts) to tighten the product to the wall as shown in the picture.

* If your product has the bolts in the eye-bolts position before inserting the eye-bolts, loosen the bolts.

* Insert the eye-bolts or TV brackets/bolts and tighten them securely in the upper holes.

Secure the wall brackets with the bolts (sold separately) to the wall. Match the height of the bracket that is mounted on the wall to the holes in the product.

Ensure the eye-bolts or brackets are tightened securely.



- Use a sturdy rope (sold separately) to tie the product. It is safer to tie the rope so it becomes horizontal between the wall and the product.

! NOTE

- ▶ Use a platform or cabinet strong enough and large enough to support the size and weight of the TV.
- ▶ To use the TV safely make sure that the height of the bracket on the wall and the one on the TV are the same.

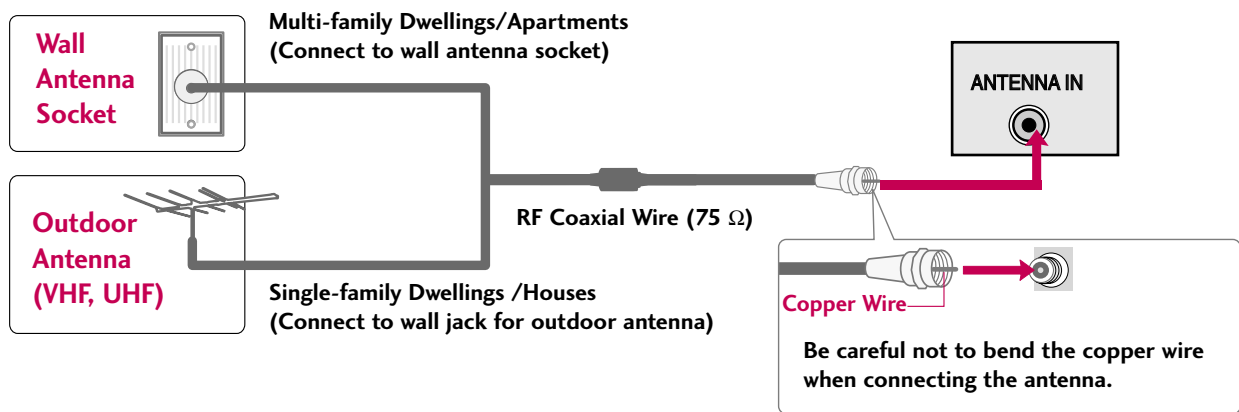
PREPARATION

- To prevent damage, do not connect to the power outlet until all connections are made between the devices.

ANTENNA OR CABLE CONNECTION

1. Antenna (Analog or Digital)

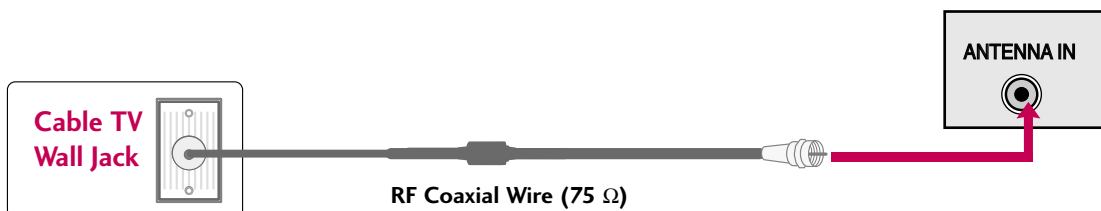
This image refers to using a Wall Antenna Socket or Outdoor Antenna without a Cable Box Connection.



- For optimum picture quality, adjust the antenna direction if needed.
- To improve the picture quality in a poor signal area, please purchase a signal amplifier and install properly.
- If the antenna needs to be split for two TV's, install a 2-Way Signal Splitter.
- If the antenna is not installed properly, contact your dealer for assistance.

2. Cable

This image refers to using a cable connection without a cable box.



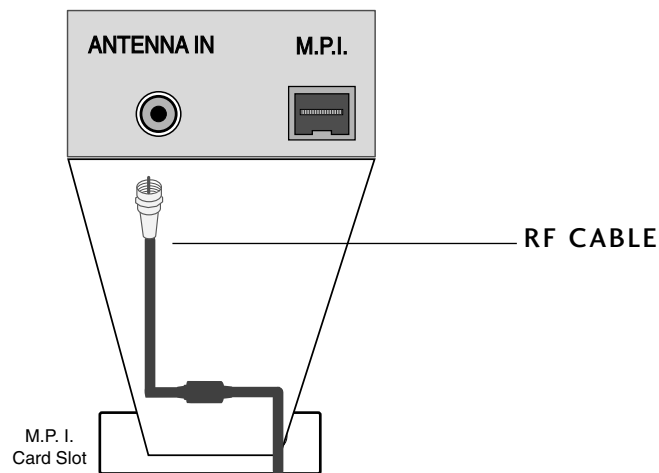
- If you experience a poor signal when using cable, make sure the RF cable is screwed in completely. Contact your cable company if a poor signal persists.

MPI CARD SLOT / PPV CARD INSTALLATION (Except 47/55LD650H)

The MPI card is equipped with an RF jack for antenna/cable signal source connection. This card can be removed and replaced with a third-party PPV (Pay-Per-View) card.

MPI Card Removal / PPV Card Installation

1. Remove the two MPI card retainer screws.
2. Pull out current MPI card far enough so that the RF cable can be detached from the old card.
3. Detach RF cable.
4. Place new PPV card into slot and slide it in far enough to reconnect RF cable.
5. Insert card all the way into the slot making sure it is fully seated into back plane connector.
6. Replace the two card retainer screws.



⚠ WARNING

- There is an RF cable connected to the back of the card. Remove the card slowly.

EXTERNAL EQUIPMENT SETUP

- To prevent the equipment damage, never plug in any power cords until you have finished connecting all equipment.
- Image shown may differ from your TV.

HD RECEIVER SETUP

This TV can receive Digital Over-the-air or Digital Cable signals without an external digital set-top box. However, if you do receive digital signals from a digital set-top box or other digital external device, refer to the figure as shown below.

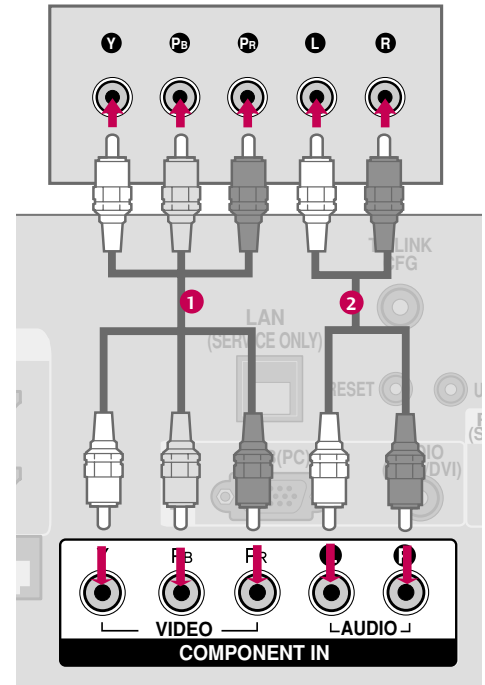
Component Connection

1. How to connect

- 1 Connect the video outputs (Y, PB, PR) of the digital set-top box to the **COMPONENT IN VIDEO** jacks on the TV. Match the jack colors (Y = green, PB = blue, and PR = red).
- 2 Connect the audio output of the digital set-top box to the **COMPONENT IN AUDIO** jacks on the TV.

2. How to use

- Turn on the digital set-top box.
(Refer to the owner's manual for the digital set-top box.)
- Select **Component** input source using the **INPUT** button on the remote control.



Supported Resolutions

Signal	Component	HDMI
480i	Yes	No
480p	Yes	Yes
720p	Yes	Yes
1080i	Yes	Yes
1080p	Yes	Yes

For 37/42/47/55LD650H, 37/42LD655H

Y, CB/PB, CR/PR

Resolution	Horizontal Frequency(kHz)	Vertical Frequency(Hz)
720x480i	15.73	59.94
720x480p	31.47	59.94
1280x720p	44.96	59.94
1920x1080i	33.72	59.94
1920x1080p	67.50	60.00

For 37/42/47/55LD650H, 37/42LD655H

HDMI Connection

1. How to connect

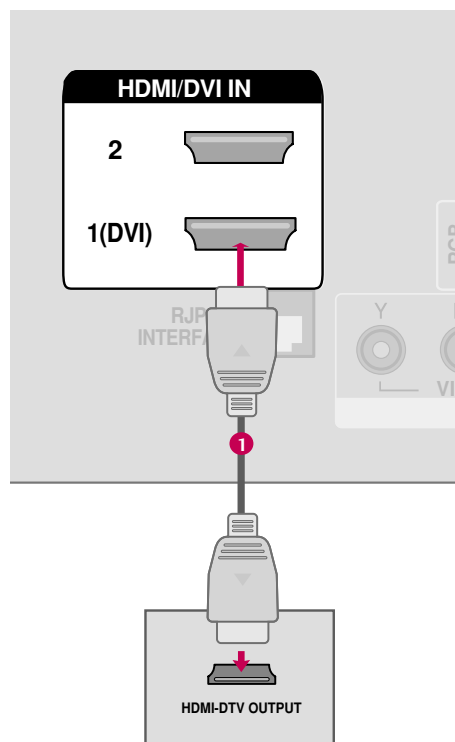
- 1 Connect the digital set-top box to **HDMI/DVI IN 1 (DVI)** or **2** jack on the TV.
- 2 No separate audio connection is necessary. HDMI supports both audio and video.

2. How to use

- Turn on the digital set-top box.
(Refer to the owner's manual for the digital set-top box.)
- Select **HDMI1** or **HDMI2** input source with using the **INPUT** button on the remote control.

! NOTE

- ▶ If the HDMI cables don't support High Speed HDMI, it can cause flickers or no screen display. In this case use the latest cables that support High Speed HDMI.
- ▶ HDMI mode supports PCM, Dolby Digital audio format.



HDMI-DTV

Resolution	Horizontal Frequency(kHz)	Vertical Frequency(Hz)
720x480p	31.47	59.94
	31.47	60.00
1280x720p	44.96	59.94
	45.00	60.00
1920x1080i	33.72	59.94
	33.75	60.00
1920x1080p	26.97	23.94
	27.00	24.00
	33.71	29.97
	33.75	30.00
	67.432	59.939
	67.50	60.00

For 37/42/47/55LD650H, 37/42LD655H

EXTERNAL EQUIPMENT SETUP

DVI to HDMI Connection

1. How to connect

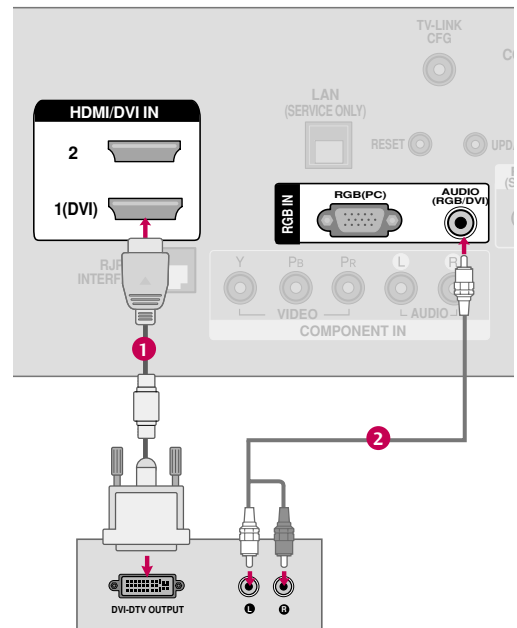
- 1 Connect the DVI output of the digital set-top box to the **HDMI/DVI IN 1 (DVI)** jack on the TV.
- 2 Connect the audio output of the digital set-top box to the **AUDIO (RGB/DVI)** jack on the TV.

2. How to use

- Turn on the digital set-top box. (Refer to the owner's manual for the digital set-top box.)
- Select the **HDMI 1** input source on the TV using the **INPUT** button on the remote control.

! NOTE

- ▶ A DVI to HDMI cable or adapter is required for this connection. DVI doesn't support audio, so a separate audio connection is necessary.

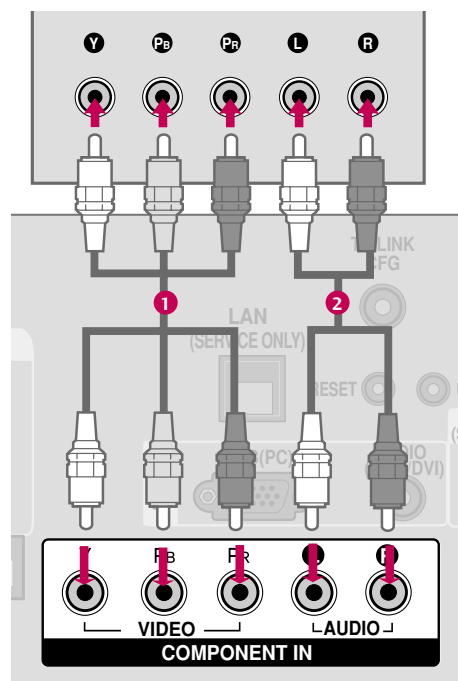


DVD SETUP

Component Connection

1. How to connect

- 1 Connect the video outputs (Y, P_B, P_R) of the DVD to the **COMPONENT IN VIDEO** jacks on the TV.
Match the jack colors (Y = green, P_B = blue, and P_R = red).
- 2 Connect the audio outputs of the DVD to the **COMPONENT IN AUDIO** jacks on the TV.



2. How to use

- Turn on the DVD player, insert a DVD.
- Select the **Component** input source on the TV using the **INPUT** button on the remote control.
- Refer to the DVD player's manual for operating instructions.

Component Input ports

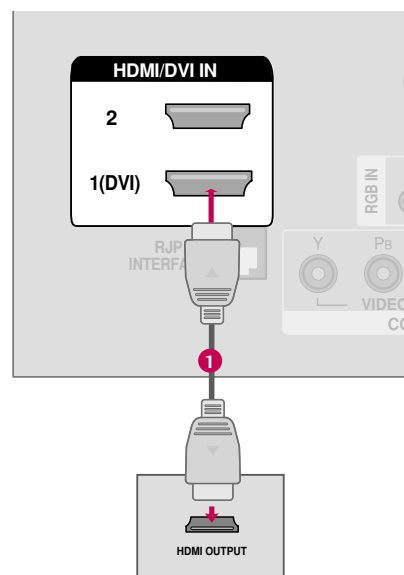
To get better picture quality, connect a DVD player to the component input ports as shown below.

Component ports on the TV	Y	P _B	P _R
Video output ports on DVD player	Y	P _B	P _R
	Y	B-Y	R-Y
	Y	Cb	Cr
	Y	Pb	Pr

HDMI Connection

1. How to connect

- 1 Connect the HDMI output of the DVD to the **HDMI/DVI IN 1 (DVI)** or **2** jack on the TV.
- 2 No separate audio connection is necessary.
HDMI supports both audio and video.



2. How to use

- Select the **HDMI1** or **HDMI2** input source on the TV using the **INPUT** button on the remote control.
- Refer to the DVD player's manual for operating instructions.

EXTERNAL EQUIPMENT SETUP

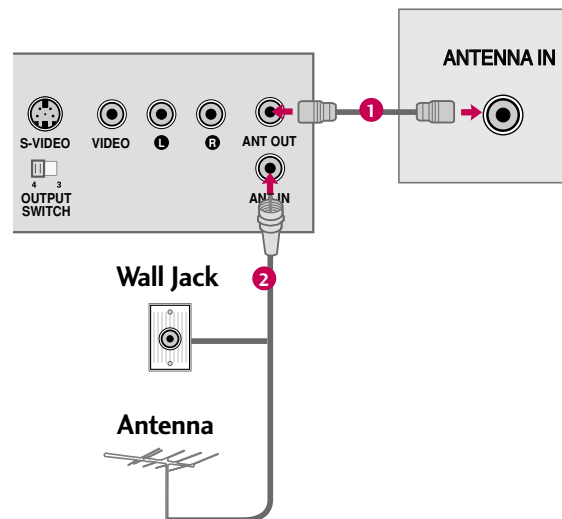
VCR SETUP

- To avoid picture noise (interference), leave an adequate distance between the VCR and TV.

Antenna Connection

1. How to connect

- 1 Connect the RF antenna out socket of the VCR to the **ANTENNA IN** socket on the TV.
- 2 Connect the antenna cable to the RF antenna in socket of the VCR.



2. How to use

- Set VCR output switch to 3 or 4 and then tune TV to the same channel number.
- Insert a video tape into the VCR and press PLAY on the VCR. (Refer to the VCR owner's manual.)

Composite (RCA) Connection

1. How to connect

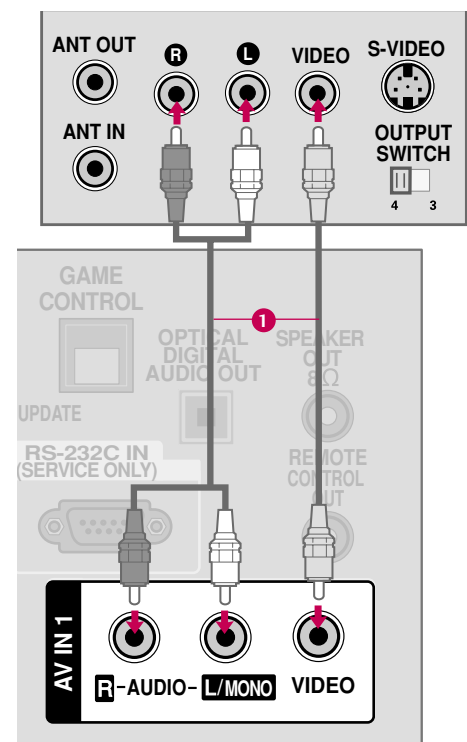
- 1 Connect the **AUDIO/VIDEO** jacks between TV and VCR. Match the jack colors (Video = yellow, Audio Left = white, and Audio Right = red)

2. How to use

- Insert a video tape into the VCR and press PLAY on the VCR. (Refer to the VCR owner's manual.)
- Select the **AV1** input source on the TV using the **INPUT** button on the remote control.
- If connected to **AV IN 2**, select **AV2** input source on the TV.

! NOTE

- ▶ If you have a mono VCR, connect the audio cable from the VCR to the **AUDIO-L/MONO** jack of the TV.



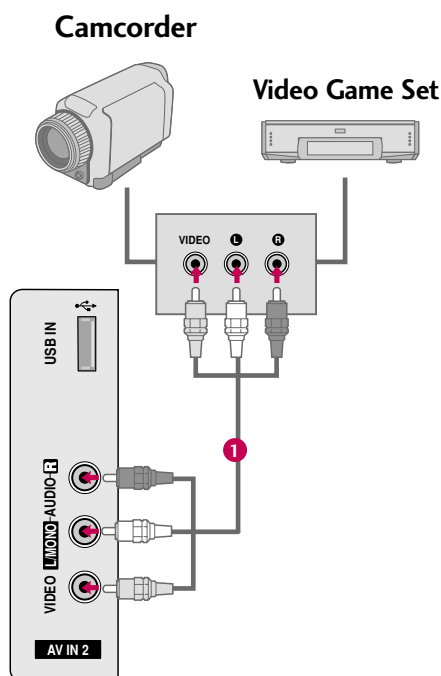
OTHER A/V SOURCE SETUP

1. How to connect

- 1 Connect the **AUDIO/VIDEO** jacks between TV and external equipment. Match the jack colors. (Video = yellow, Audio Left = white, and Audio Right = red)

2. How to use

- Select the **AV2** input source on the TV using the **INPUT** button on the remote control.
- If connected to **AV IN 1** input, select the **AV1** input source on the TV.
- Operate the corresponding external equipment.



AUDIO OUT CONNECTION

Send the TV's audio to external audio equipment via the Audio Output port.

1. How to connect

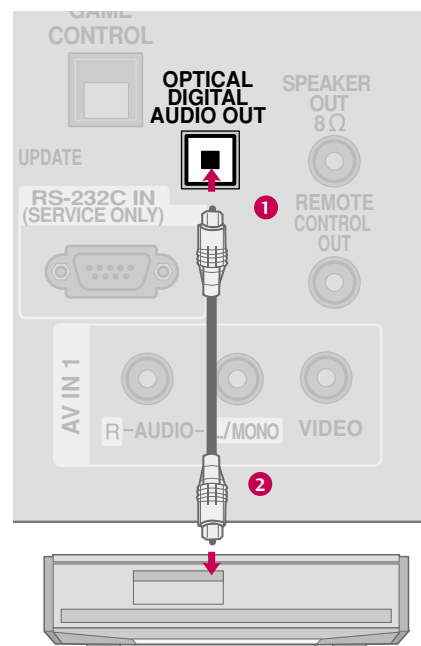
- 1 Connect one end of the optical cable to the TV's **OPTICAL DIGITAL AUDIO OUT**.
- 2 Connect the other end of the optical cable to the digital audio input on the audio equipment.
- 3 Set the "TV Speaker option - Off" in the AUDIO menu. (▶ p.73). See the external audio equipment instruction manual for operation.

! NOTE

- ▶ When connecting with external audio equipment, such as amplifiers or speakers, you can turn the TV speakers off in the menu. (▶ p.73)

! CAUTION

- ▶ Do not look into the optical output port. Looking at the laser beam may damage your vision.
- ▶ Audio with ACP (Audio Copy Protection) function may block digital audio output.



EXTERNAL EQUIPMENT SETUP

PC SETUP

This TV provides Plug and Play capability, meaning that the PC adjusts automatically to the TV's settings.

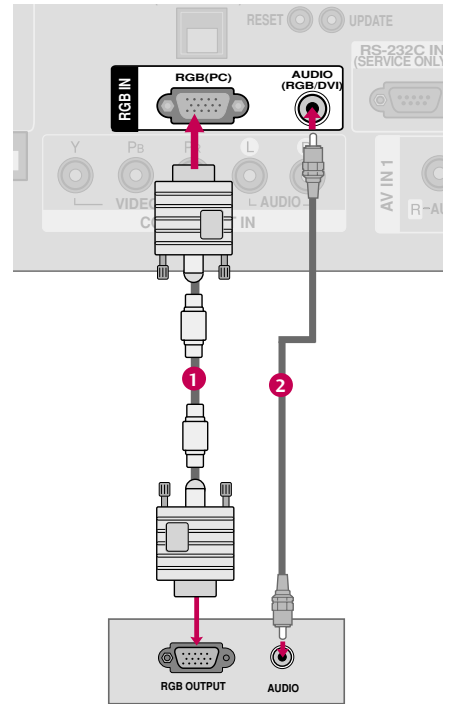
VGA (D-Sub 15 pin) Connection

1. How to connect

- 1 Connect the VGA output of the PC to the **RGB (PC)** jack on the TV.
- 2 Connect the PC audio output to the **AUDIO (RGB/DVI)** jack on the TV.

2. How to use

- Turn on the PC and the TV.
- Select the **RGB-PC** input source on the TV using the **INPUT** button on the remote control.



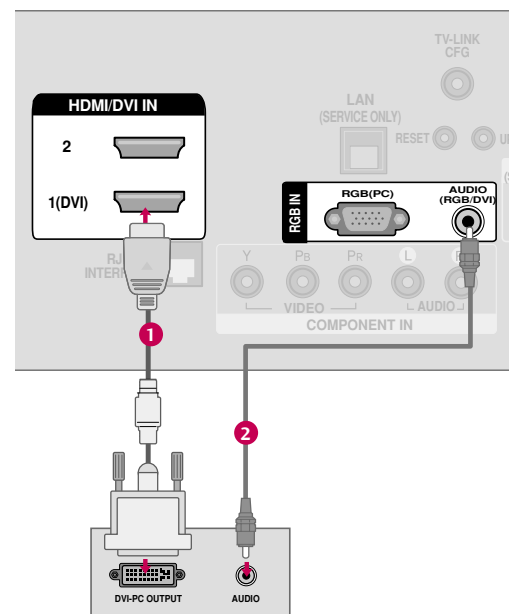
DVI to HDMI Connection

1. How to connect

- 1 Connect the DVI output of the PC to the **HDMI/DVI IN 1 (DVI)** jack on the TV.
- 2 Connect the PC audio output to the **AUDIO (RGB/DVI)** jack on the TV.

2. How to use

- Turn on the PC and the TV.
- Select the **HDMI1** input source on the TV using the **INPUT** button on the remote control.



! NOTES

- ▶ To get the best picture quality, adjust the PC graphics card to **1360x768** (32/37/42LG710H, 32LD650H, 32LD655H) or **1920x1080** (37/42/47/55LD650H, 37/42LD655H).
- ▶ Depending on the graphics card, DOS mode may not work if a HDMI to DVI Cable is in use.
- ▶ In PC mode, there may be noise associated with the resolution, vertical pattern, contrast or brightness. If noise is present, change the PC output to another resolution, change the refresh rate to another rate or adjust the brightness and contrast on the PICTURE menu until the picture is clear. When you use too long RGB-PC cable, there might be a noise on the screen.
- ▶ Avoid keeping a fixed image on the screen for a long period of time. The fixed image could become permanently imprinted on the screen.
- ▶ The synchronization input form for Horizontal and Vertical frequencies is separate.
- ▶ Depending on the graphics card, some resolution settings may not allow the image to be positioned on the screen properly.

Supported Display Specifications

RGB-PC

Resolution	Horizontal Frequency(kHz)	Vertical Frequency(Hz)
720x400	31.469	70.08
640x480	31.469	59.94
	37.861	72.80
800x600	37.879	60.31
	48.077	72.18
1024x768	48.363	60.00
	56.476	70.06
1280x768	47.776	59.870
	60.289	74.893
1360x768	47.712	60.015
1280x1024	63.981	60.020
	79.976	75.025
1920x1080	66.587	59.934

For 37/42/47/55LD650H, 37/42LD655H

HDMI-PC

Resolution	Horizontal Frequency(kHz)	Vertical Frequency(Hz)
720x400	31.469	70.08
800x600	35.156	56.25
	37.879	60.31
1024x768	48.363	60.00
1280x768	47.776	59.87
1360x768	47.712	60.015
1280x1024	63.981	60.02
1920x1080	67.500	60.000

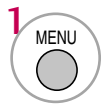
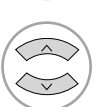
EXTERNAL EQUIPMENT SETUP

Screen Setup for PC mode

Selecting Resolution

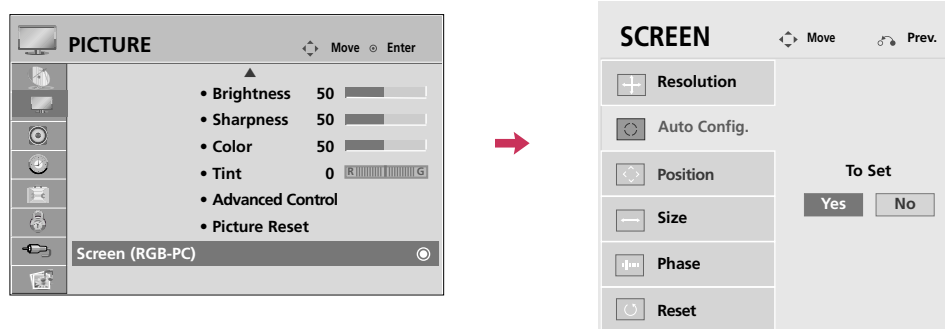
When using RGB-PC input, change the resolution in the menus to match the PC's.
The **Position**, **Phase**, and **Size** can also be adjusted.



-   Select **PICTURE**.
-   Select **Screen (RGB-PC)**.
-   Select **Resolution**.
-   Select the desired resolution.
- 

Auto Configure

Automatically adjusts picture position and minimizes image instability. After adjustment, if the image is still not correct, try using the manual settings or a different resolution or refresh rate on the PC.



- 1   Select **PICTURE**.
- 2   Select **Screen (RGB-PC)**.
- 3   Select **Auto config..**
- 4   Select **Yes**.
- 5  Start Auto Configuration.

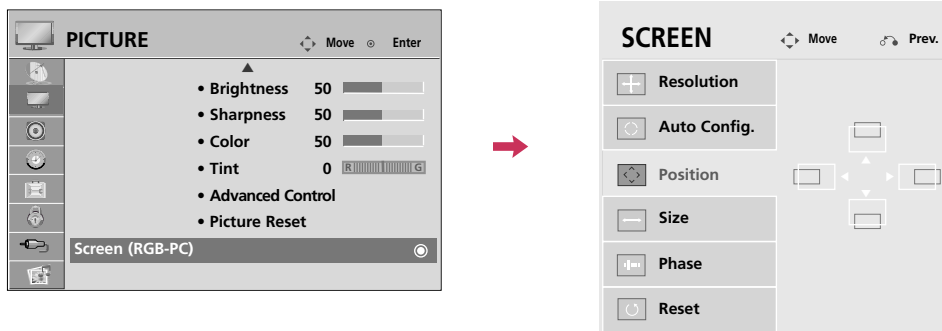
- If the position of the image is still not correct, try Auto adjustment again.
- If picture needs to be adjusted again after Auto adjustment in RGB-PC, you can adjust the **Position**, **Size** or **Phase**.

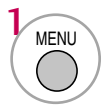
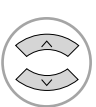
EXTERNAL EQUIPMENT SETUP

Adjustment for screen Position, Size, and Phase

If the picture is not clear after auto adjustment and especially if characters are still trembling, adjust the picture phase manually.

This feature operates only in RGB-PC mode.

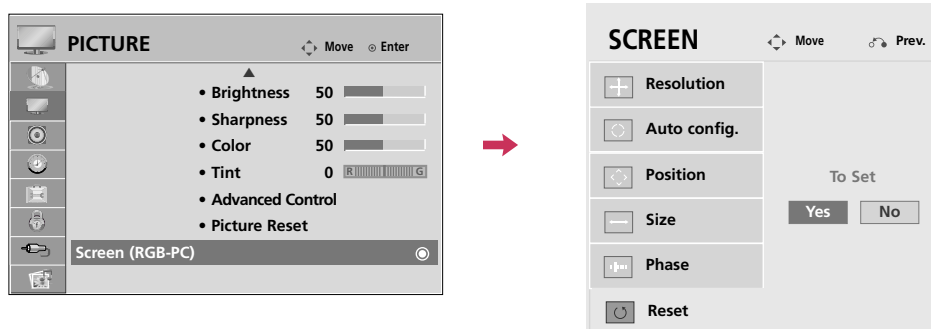


- 1   Select **PICTURE**.
- 2   Select **Screen (RGB-PC)**.
- 3   Select **Position, Size, or Phase**.
- 4   Make appropriate adjustments.
- 5 

- **Position:** This function is to adjust picture to left/right and up/down as you prefer.
- **Size:** This function is to minimize any vertical bars or stripes visible on the screen background. And the horizontal screen size will also change.
- **Phase:** This function allows you to remove any horizontal noise and clear or sharpen the image of characters.

Screen Reset (Reset to original factory values)

Returns **Position**, **Size**, and **Phase** to the default factory settings.
This feature operates only in RGB-PC mode.



- 1   Select **PICTURE**.
- 2   Select **Screen (RGB-PC)**.
- 3   Select **Reset**.
- 4   Select **Yes**.
- 5 

WATCHING TV / CHANNEL CONTROL

REMOTE CONTROL FUNCTIONS

When using the remote control, aim it at the remote control sensor on the TV.

POWER Turns your TV or any other programmed equipment on or off, depending on mode.

TV/STB/DVD/VCR Selects the remote's operating mode: TV, STB, DVD, or VCR.

GUIDE Displays and removes the electronic channel guide.

PORTAL Displays and removes the hotel interactive menu.

INFO Displays information about the selected or current events.

NUMBER button Enters channel numbers or other numbers required. Also supports characters.

— (DASH) Selects a program number for multiple program channels such as 2-1, 2-2, etc.

FLASHBK Tunes to the last channel or input viewed.

VCR/DVD/USB control buttons Controls video cassette recorders or DVD players or USB.

PIP Toggles through picture-in-picture options.

RATIO Changes the aspect ratio. ► p.58

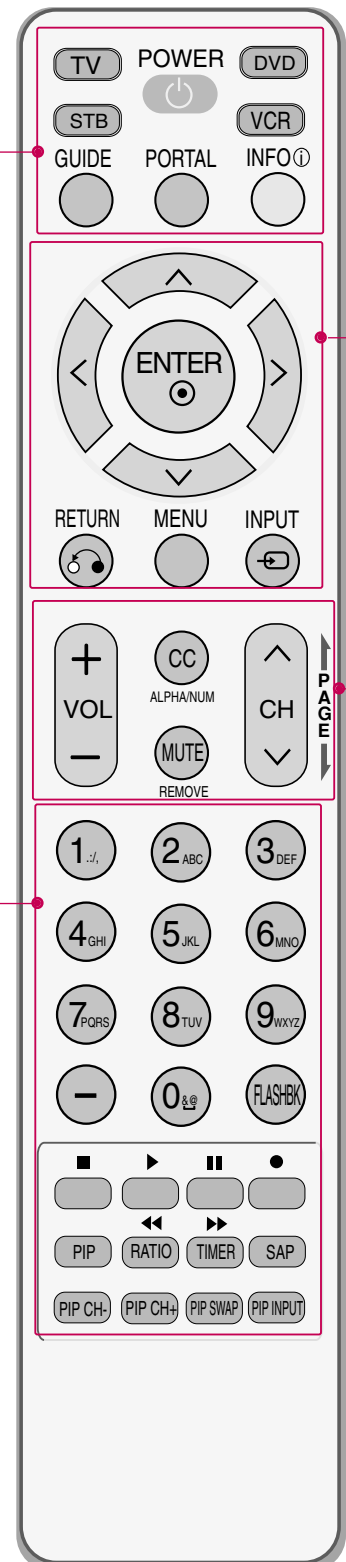
TIMER Turns the TV off in a set amount of time. ► p.84

SAP • Analog mode: Selects MTS sound (Mono, Stereo, or a SAP) ► p.75
• DTV mode: Changes the audio language.

PIP CH +/- Changes the PIP channel.

PIP SWAP Exchanges the main/sub images.

PIP INPUT Selects the connected input source for the sub-picture.



THUMBSTICK (Up/Down/Left Right/ENTER) Navigates the on-screen menus and adjusts the system settings to your preference.

RETURN Clears all on-screen displays and returns to TV viewing from any menu.

MENU Displays the main menu.

INPUT Rotates through inputs.
Also switches the TV on from standby.

VOLUME UP /DOWN Adjusts the volume.

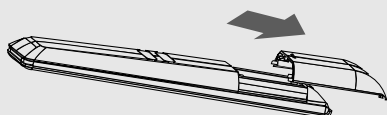
CC Selects a closed caption. ► p.78

MUTE Switches the sound on or off. ► p.40

CHANNEL UP/DOWN Selects available channels.

PAGE UP/DOWN Moves from one full set of screen information to the next one.

Installing Batteries



- Open the battery compartment cover on the back side and install the batteries with the correct polarity (+with +,-with -).
- Install two 1.5V AAA batteries. Don't mix old or used batteries with new ones.
- Close cover.

WATCHING TV / CHANNEL CONTROL

TURNING ON THE TV

- 1 First, connect the power cord correctly.
At this moment, the TV switches to standby mode.
 - In standby mode to turn TV on, press the  button on the TV or press the **POWER** button on the remote control.
- 2 Select the viewing source by using the **INPUT** button on the remote control.
- 3 When finished using the TV, press the **POWER** button on the remote control.
The TV reverts to standby mode.

! NOTE

- If you intend to be away on vacation, disconnect the power plug from the wall power outlet.

CHANNEL SELECTION

- 1 Press the **CH** (^ or v) or **NUMBER** buttons to select a channel number.

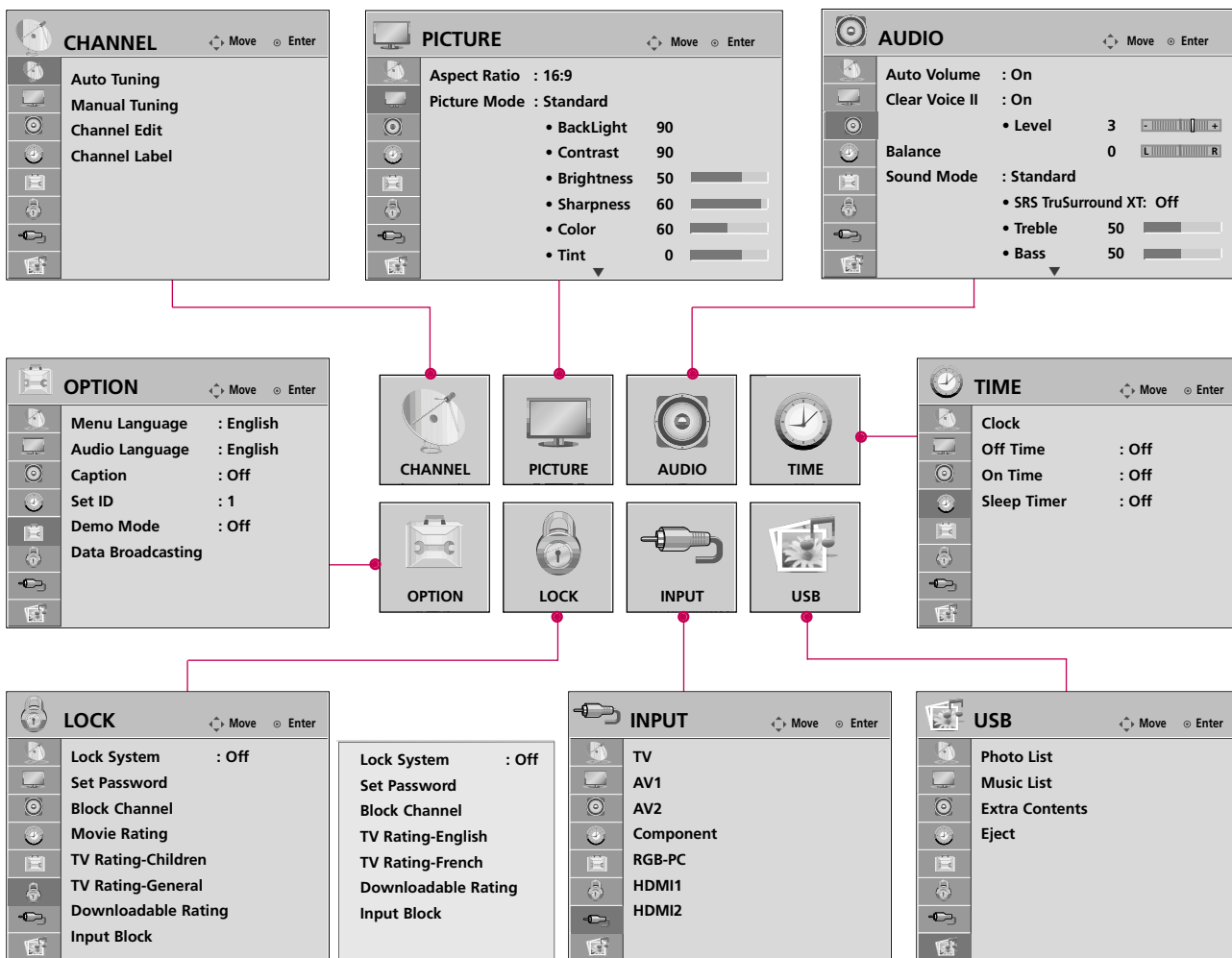
VOLUME ADJUSTMENT

Adjust the volume to suit your personal preference.

- 1 Press the **VOL** (+ or -) button to adjust the volume.
- 2 If you want to switch the sound off, press the **MUTE** button.
- 3 You can cancel the Mute function by pressing the **MUTE** or **VOL** (+ or -) button.

ON-SCREEN MENUS SELECTION

Your TV's OSD (On Screen Display) may differ slightly from that shown in this manual.



For USA

For CANADA

- 1 Display each menu.
- 2 Select a menu item.
- 3 Accept the current selection.
- 4 Return to TV viewing.

! NOTE

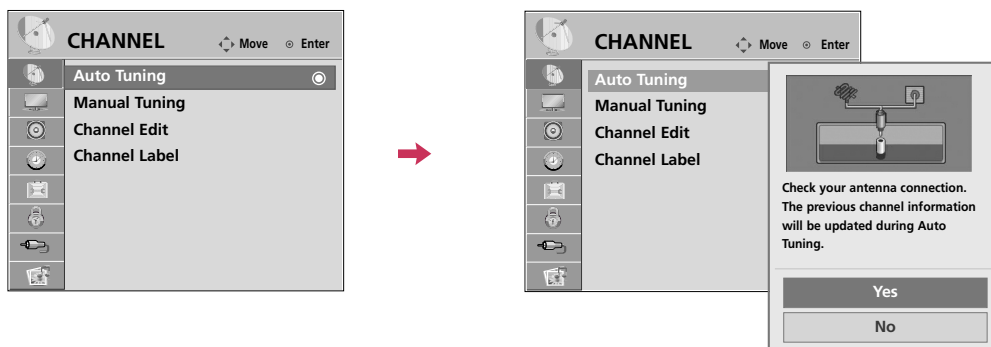
- ▶ **Infinite Sound:** For 32/37/42/47/55LD650H, 32/37/42LD655H

CHANNEL SETUP

Auto Scan (Auto Tuning)

Automatically finds all channels available through antenna or cable inputs and stores them in memory on the channel list.

Run Auto Tuning again after any Antenna/Cable connection changes.

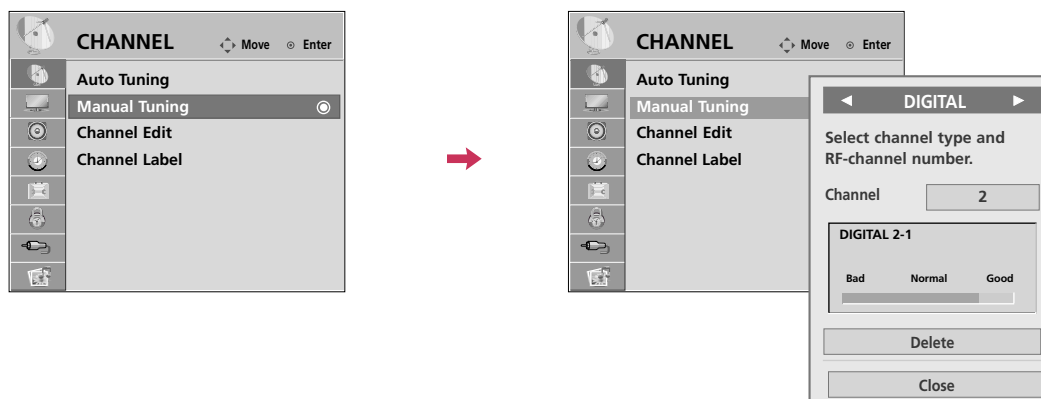


- 1   Select **CHANNEL**.
- 2   Select **Auto Tuning**.
- 3   Select **Yes**.
- 4  Run **Auto tuning**.
- 5  Return to the previous menu.
-  Return to TV viewing.

■ A password is required to gain access to Auto Tuning menu if the Lock System is turned on.

Add/Delete Channel (Manual Tuning)

If selecting DIGITAL input signal, you can view the on-screen signal strength monitor to see the quality of the signal being received.



- 1   Select **CHANNEL**.
- 2   Select **Manual Tuning**.
- 3   Select **DIGITAL** or **ANALOG**.
- 4   Select channel you want to add or delete.
- 5   Select **Add** or **Delete**.
- 6  Return to the previous menu.
-  Return to TV viewing.

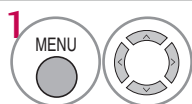
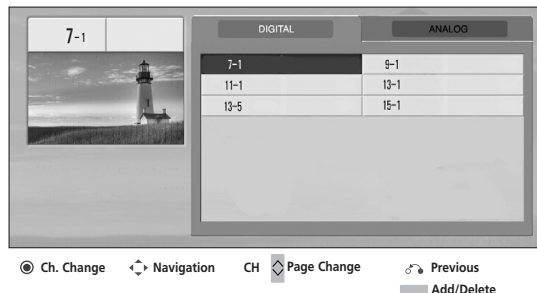
■ A password is required to gain access to Manual Tuning menu if the Lock System is turned on.

WATCHING TV / CHANNEL CONTROL

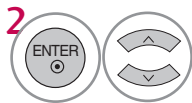
Channel Editing

The channels in the Channel Edit List are displayed in black and the channels deleted from the Channel Edit List are displayed in blue. When a channel number is deleted, it means that you will be unable to select it using **CH** ^ v button during TV viewing.

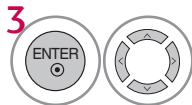
If you wish to select the deleted channel, directly enter the channel number with the **NUMBER** buttons or select it in the **Channel Edit** menu.



Select **CHANNEL**.



Select **Channel Edit**.



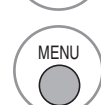
Select a channel.



Select channel you want to add or delete.



Return to the previous menu.

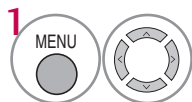
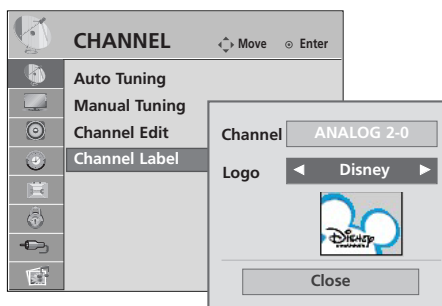
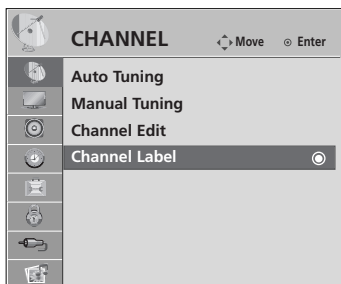


Return to TV viewing.

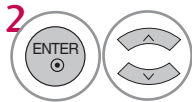
CHANNEL LABEL

Choose preset labels for your channels.

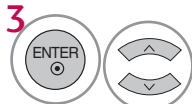
If a channel label is provided on the signal from the broadcasting station, the TV displays a short name for a channel even if you didn't preset a label for the channel.



Select **CHANNEL**.



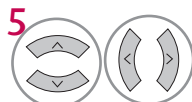
Select **Channel Label**.



Select a Channel.



Select a channel to set logo.



Select the appropriate logo for the channel.

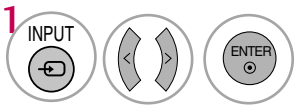
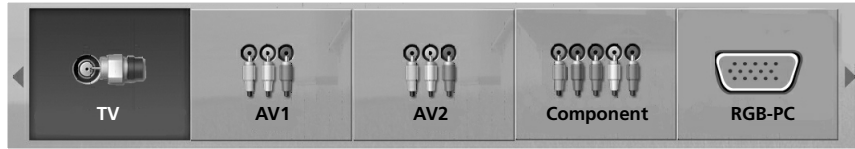


Return to the previous menu.

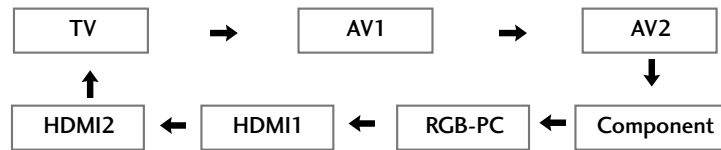


Return to TV viewing.

INPUT LIST



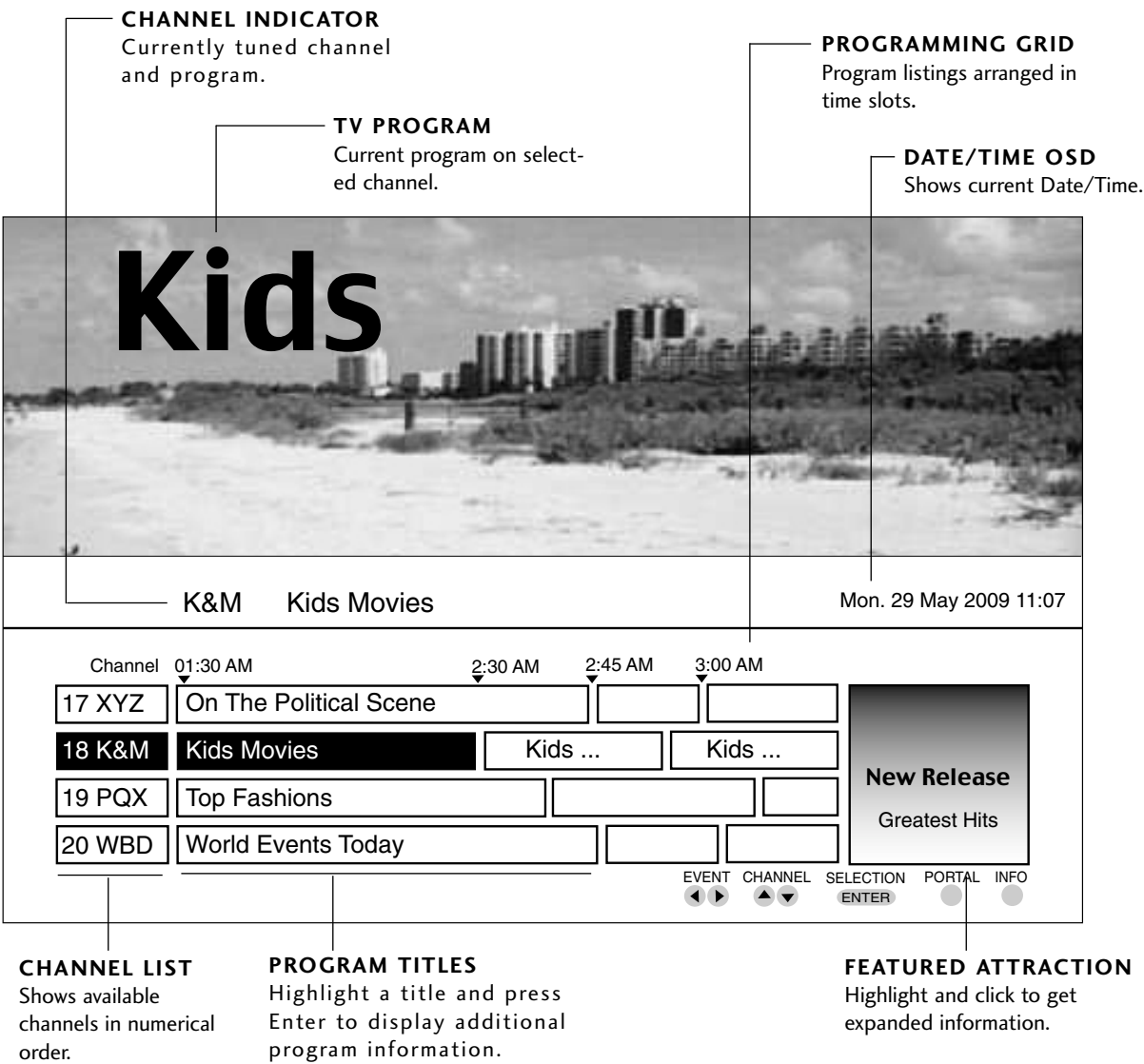
Select the desired input source.

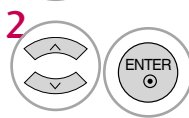


- **TV:** Select it to watch over-the-air, cable and digital cable broadcasts.
- **AV1 -2:** Select them to watch a VCR or other external equipment.
- **Component:** Select them to watch DVD or a Digital set-top box.
- **RGB-PC:** Select it to view PC input.
- **HDMI1 -2:** Select them to watch high definition devices.

EXAMPLE ELECTRONIC PROGRAM GUIDE

This is an example of a typical TV electronic program guide showing available programming.



-  Select **GUIDE** button to shows available TV programs.
-  Select a Channel.

USB

■ Image shown may differ from your TV.

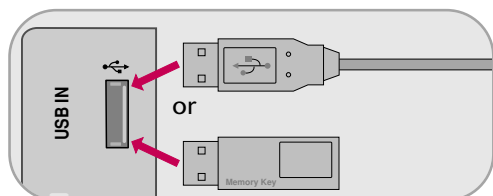
ENTRY MODES

When you connect a USB device, this pop-up menu is displayed automatically.

When the Pop-Up menu does not appear, you can select Photo List or Music List on Extra contents.

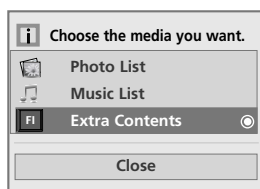
On a USB device, you can not add a new folder or delete an existing folder.

- 1 Connect the USB device to the **USB IN** jack on the side of TV.



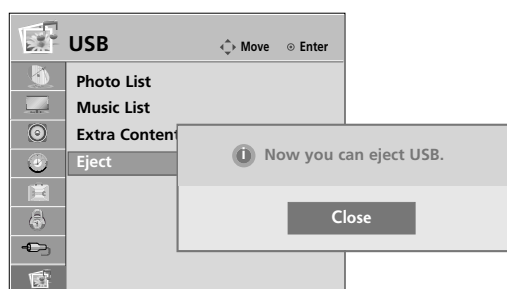
■ This TV supports playback of JPG pictures and MP3 audio.

- 2 Select **PHOTO LIST** or **MUSIC LIST** or **EXTRA CONTENTS**.



- 3

When removing the USB device



- 1 Select **USB**.

- 2 Select **Eject**.

- 3

- 4 Return to the previous menu.

- Return to TV viewing.

Precautions with USB devices.

- ▶ Only a USB storage device is recognizable.
- ▶ If the USB storage device is connected through a USB hub, the device is not recognizable.
- ▶ A USB storage device using an automatic recognition program may not be recognized.
- ▶ A USB storage device which uses its own driver may not be recognized.
- ▶ The recognition speed of a USB storage device may depend on each device.
- ▶ In case of a card reader, up to four memory cards are concurrently recognizable.
- ▶ Please do not turn off the TV or unplug the USB device when the connected USB storage device is working. When such device is suddenly separated or unplugged, the stored files or the USB storage device may be damaged.
- ▶ Only use a USB storage device which has normal music, image or movie files.
- ▶ Please connect power to a USB storage device (over 0.4A) which requires an external power supply. If not, the device may not be recognized.
- ▶ Please connect a USB storage device with cable is offered by USB maker. If connected with cable is not offered by USB maker or an excessively long cable, the device may not be recognized.
- ▶ Some USB storage devices may not be supported or operate properly.
- ▶ File alignment method of USB storage device is similar to Window XP and filename can recognize up to 100 English characters.
- ▶ Please backup important files because data on the USB device may be damaged. Data management is the consumer's responsibility and as a result, the manufacturer does not cover data damage.
- ▶ Please use only a USB storage device which was formatted as a FAT32, NTFS file system provided with the Windows operating system. In case of a storage device formatted as a different utility programme which is not supported by Windows, it may not be recognized.
- ▶ Data in a USB storage device cannot be deleted in the NTFS file system.
- ▶ If your USB memory device has multiple partitions, or if you use a USB multi-card reader, you can use up to 4 partitions or USB memory devices.
- ▶ The recommended capacity is 1TB or less for a USB external hard disk and 32GB or less for USB memory.
- ▶ Any device with more than the recommended capacity may not work properly.
- ▶ When using a USB HDD via the USB extending cable, connect a support electric power source.

PHOTO LIST

This TV only supports picture in JPEG(.jpg) format.
The On-Screen Display on your model may be slightly different.

Supported photo file: *.JPG

- You can view JPG files only.
- Only baseline scan is supported among JPG.
- Supported JPG size: 64 pixel (width) x 64 pixel (height) to 15360 pixel (width) x 8640 pixel (height)

Screen Components

1




Select **USB**.

2





Select **Photo List**.

1

Moves to upper level folder

2

Preview: Displays the thumbnail/folder name of the photo in the selected folder

3

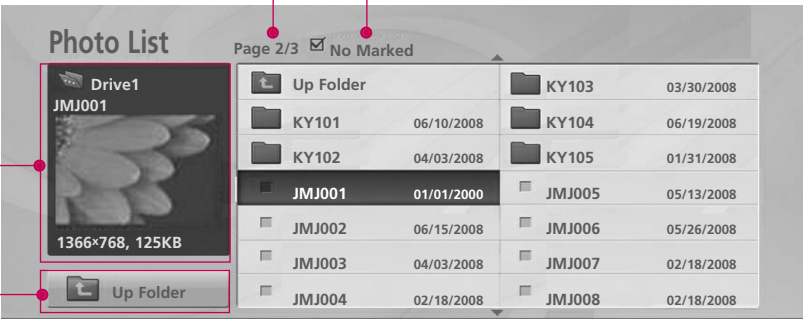
Current page/Total pages

4

Total number of marked photos

5

Corresponding buttons on the remote control



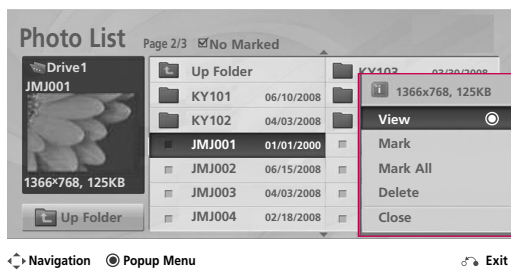
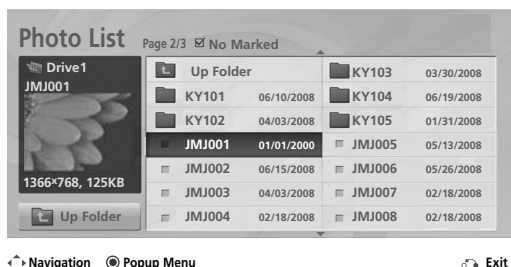
Navigation

5

Popup Menu

Exit

Photo Selection and Pop-up Menu



When you select a file (not folder), this Pop-Up menu is displayed.

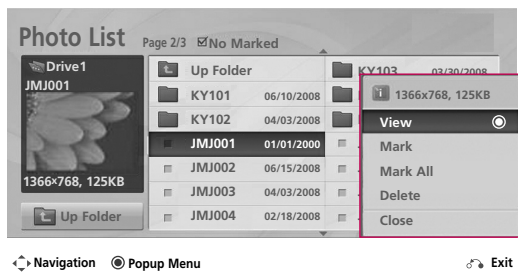
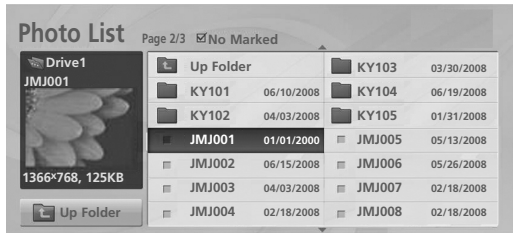
- **View:** Display the selected item.
- **Mark:** Use to mark a photo.
- **Unmark:** Use to unmark a photo.
- **Mark All:** Mark all photos on the screen.
- **Unmark All:** Deselect all marked photos.
- **Delete or Delete Marked:** Delete the selected photo item.
- **Close:** Close the pop-up menu.

- 1 Select the target folder or drive.
- 2 Select the desired photos.
- 3 Show the Pop-up menu.
- 4 Select the desired Popup menu.

- When one or more photos are marked, you can view individual photos or a slide show of the marked photos. If no photos are marked, you can view all photos individually or all photos in the folder in a slide show.

Full Screen Menu

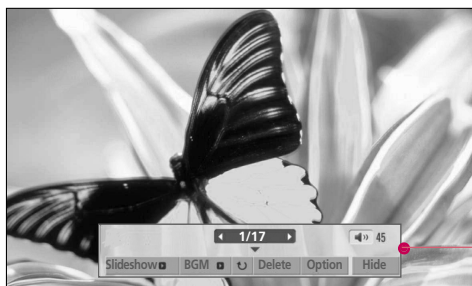
You can change the Photo List view so that it fills the screen. More operations are available in full screen mode.



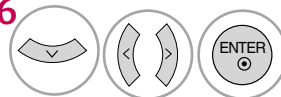
The aspect ratio of a photo may change the size of the photo displayed on the screen in full size.
Press the **RETURN** button to move to the previous menu screen.

- 1  Select the target folder or drive.
- 2   Select the desired photos.
- 3  Show the Pop-up menu.
- 4  Select **View**.
- 5  The selected photo is displayed in full size.

- Use the **CH**   button to navigate in the photo page.



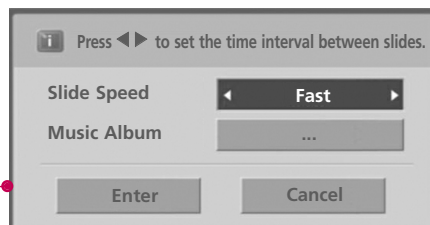
6



Select the **Slideshow**, **BGM**, **⤵** (Rotate), **Delete**, **Option**, or **Hide**.

- Use < > button to select the previous or next photo.
- Use ^ v < > button to select and control the menu on the full-sized screen.

- ▶ **Slideshow:** Selected photos are displayed during the slide show. If no photo is selected, all photos in the current folder are displayed during slide show.
 - Set the time interval of the slide show in **Option**.
- ▶ **BGM:** Listen to music while viewing photos in full size.
 - Set the BGM device and album in **Option**.
- ▶ **⤵ (Rotate):** Rotate photos.
 - Rotates the photo 90°, 180°, 270°, 360° clockwise.
- ▶ **Delete:** Delete photos.
- ▶ **Option:** Set values for **Slide Speed** and **Music Album**.
 - Use ^ v < > button and **ENTER** button to set values. Then go to **Enter** and press **ENTER** to save the settings.
 - You cannot change **Music Album** while BGM is playing.
- ▶ **Hide :** Hide the menu on the full-sized screen.
 - To see the menu again on the full-sized screen, press **ENTER** button to display.



MUSIC LIST

You can use the Music List menu to play MP3 files from a USB storage device.

This TV cannot play back copy-protected files.

The On-Screen Display on your model may be slightly different.

Supported music file: *.MP3

Bit rate range 32 Kbps - 320 Kbps

• Sampling rate (Sampling Frequency)

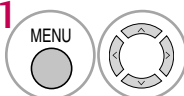
MPEG1 layer 3: 32 kHz, 44.1 kHz, 48 kHz

MPEG2 layer 3: 16 kHz, 22.05 kHz, 24 kHz

MPEG2.5 layer 3: 8 kHz, 11.025 kHz, 12 kHz

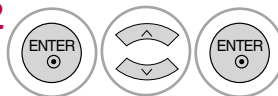
Screen Components

1



Select **USB**.

2



Select **Music List**.

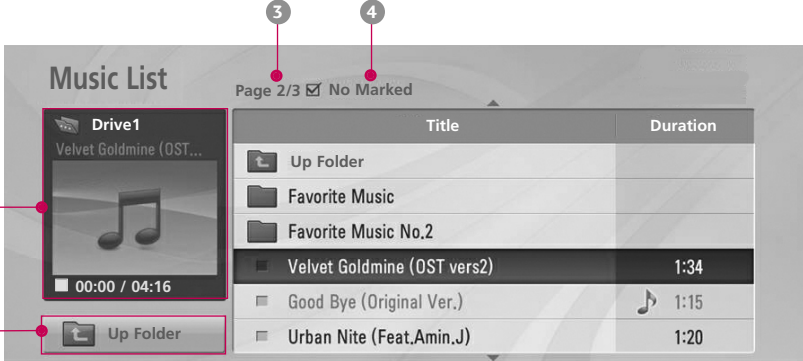
① Moves to upper level folder

② Preview: If a supported picture of the album jacket is in the file, it will be displayed here.

③ Current page/Total pages

④ Total number of marked files

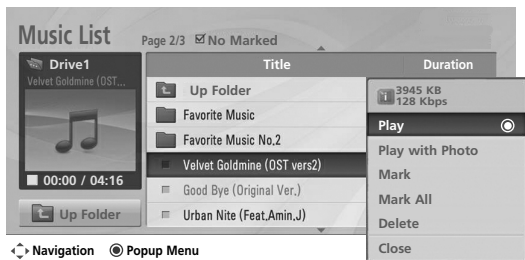
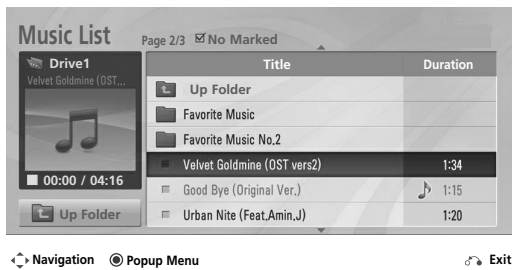
⑤ Corresponding buttons on the remote control



Music List	
Title	Duration
Up Folder	
Favorite Music	
Favorite Music No.2	
Velvet Goldmine (OST vers2)	1:34
Good Bye (Original Ver.)	1:15
Urban Nite (Feat.Amin.J)	1:20

Navigation
Popup Menu
Exit

Music Selection and Pop-up Menu



► **Play** (During stop): Play the selected file.

Once a song finishes playing, the next selected one will be played. When there are no selected files to play, the next one in the current folder will be played. If you go to a different folder and press the **ENTER** button, the current song in playback will stop.

► **Play Marked**: Play the selected files. Once a file finishes playing, the next selected one will be played automatically.

► **Stop Play** (During playback): Stop the playing files.

► **Play with Photo**: Start playing the selected files and then move to the Photo List.

► **Mark**: Use to mark a file.

► **Unmark**: Use to unmark a file.

► **Mark All**: Mark all files in the folder.

► **Unmark All**: Deselect all marked files.

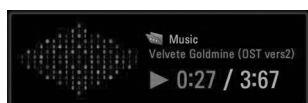
► **Delete** or **Delete Marked**: Delete the selected files.

► **Close**: Close the pop-up menu.

- 1 Select the target folder or drive.
- 2 Select the desired musics.
- 3 Show the Pop-up menu.
- 4 Select the desired Pop-up menu.
- 5 Return to TV viewing.

- Use the **CH** ^ v button to navigate in the music page.
- If no music is marked, all the music in the folder will be played in sequence. When one or more music files are marked, the marked music files will be played in sequence. If you want to listen to only one song repeatedly, just mark that one file and play.

- The play information box (as shown below) will automatically move across the screen when there is no user input to prevent a fixed image remaining on the screen for an extended period of time.

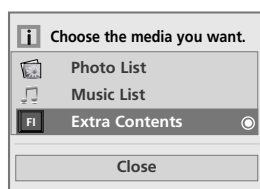


! NOTE

- ▶ When music is playing,  is displayed in front of the music play time.
- ▶ A damaged or corrupted music file that does not play displays 00:00 as the play time.
- ▶ Files downloaded from a paid service with copyright protection are not supported and will not play.
- ▶ Press **ENTER**,  or **RETURN** button to stop the screen saver.

EXTRA CONTENTS

Extra Contents will be activated when Data Channel service is available.



1.   Select **USB**.
2.    Select **Extra Contents**.

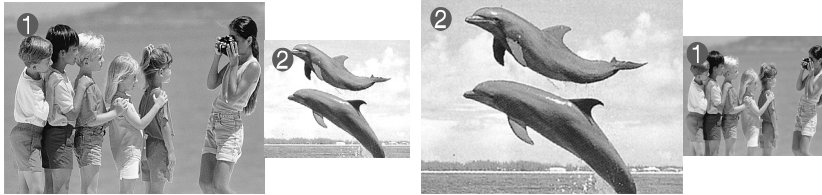
! NOTE

- ▶ Pro:Centric contents in USB memory stick can be played.
- ▶ For more information, contact to Customer Support.(www.lgcommercial.com)

PICTURE CONTROL

PIP (PICTURE-IN-PICTURE)

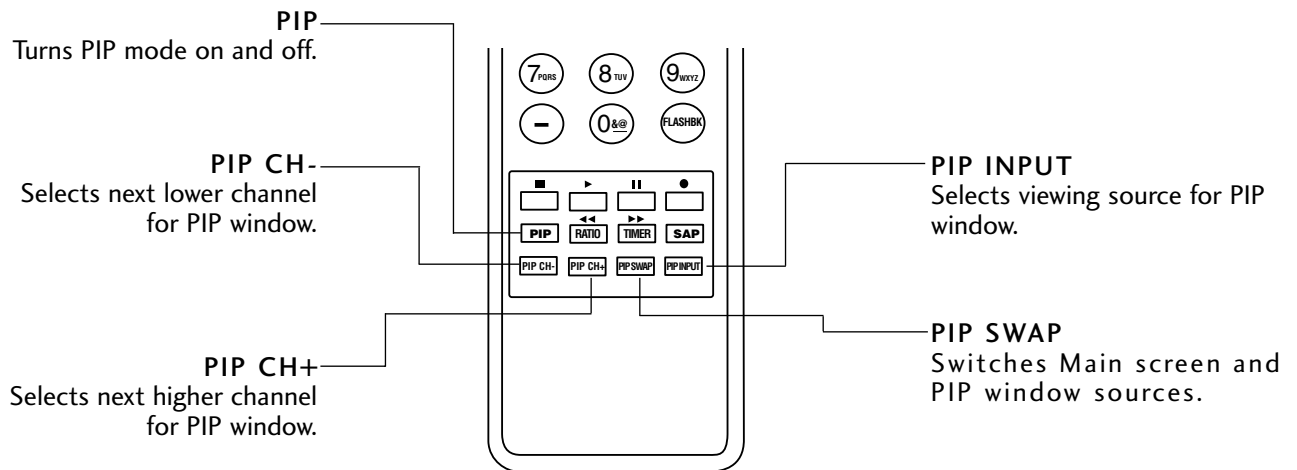
PIP enables the end user to view two sources on the screen at the same time. The end user can switch between the Main and Sub picture sizes.

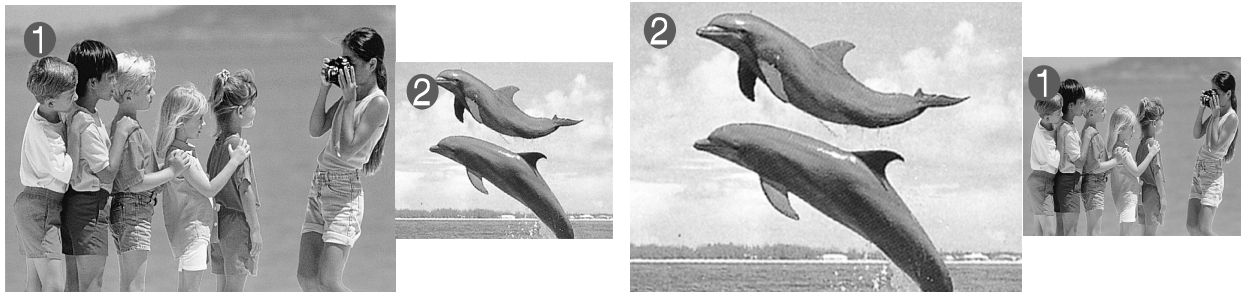


- Note: Actual size of Main screen and PIP inset may be different than shown above.

PIP Operation

1. Connect auxiliary source(s) to TV connections panel.
2. Enter Installer menu to be sure source(s) is enabled.
3. Use the interactive remote provided in the room to operate PIP.
4. Press PIP on remote.
Use the PIP function keys to operate the available PIP features.
5. To exit PIP mode, simply press PIP.





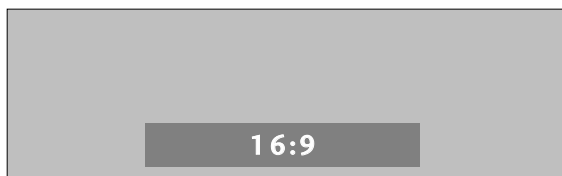
Main Picture Source	Available Sub Picture Sources
TV	AV1, AV2, HDMI1, HDMI2
AV1 or AV2	TV, AV1 or AV2, HDMI1, HDMI2
HDMI1 or HDMI2	TV, AV1, AV2, HDMI1 or HDMI2
Component, RGB-PC	TV, AV1, AV2, HDMI1, HDMI2

PICTURE CONTROL

PICTURE SIZE (ASPECT RATIO) CONTROL

This feature lets you choose the way an analog picture with a 4:3 aspect ratio is displayed on your TV.

- RGB-PC input source can only use 4:3 or 16:9 aspect ratio.



Press the **RATIO** button repeatedly to select the picture options : Set By Program, 4:3, 16:9, Zoom, Just Scan.



Return to TV viewing.

- You can also adjust **Aspect Ratio** in the **PICTURE** menu.

Set by program

Selects the proper picture proportion to match the source's image.

(4:3 → 4:3)



(16:9 → 16:9)



4:3

Choose 4:3 when you want to view a picture with an original 4:3 aspect ratio.



16:9

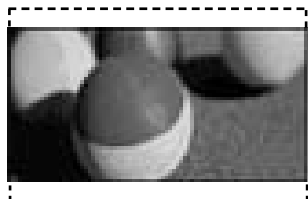
Adjust the picture horizontally, in a linear proportion to fill the entire screen.



PICTURE CONTROL

Zoom

Choose Zoom when you want to view the picture without any alteration. However, the top and bottom portions of the picture will be cropped.



Just Scan

Normally the edges of video signals are cropped 1-2%. Just Scan turns off this cropping and shows the complete video.

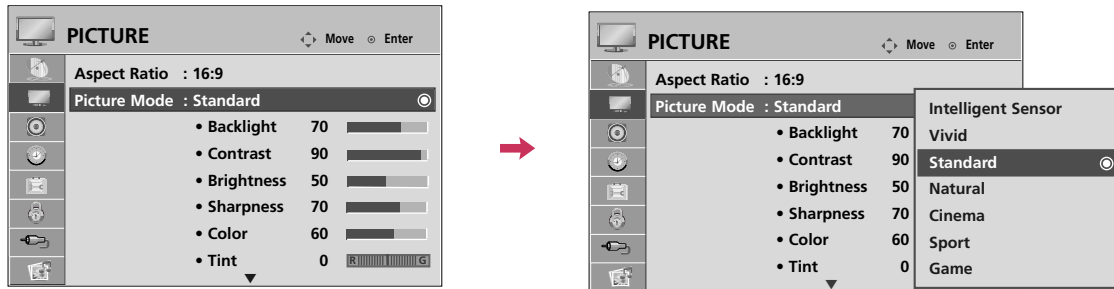
Notes: If there is noise on the edges of the original signal, it will be visible when Just Scan is activated.

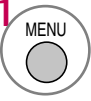
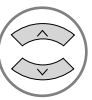
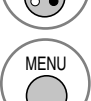
Just Scan operates only with DTV/CADTV/HDMI-DTV/DVI-DTV (720p/1080i), Component(720p/1080i) input sources.



PRESET PICTURE SETTINGS (PICTURE MODE)

There are factory presets for picture settings available in the user menus. You can use a preset, change each setting manually, or use the Intelligent Sensor.



- 1   Select **PICTURE**.
- 2   Select **Picture Mode**.
- 3   Select **Intelligent Sensor, Vivid, Standard, Natural, Cinema, Sport or Game**.
- 4  Return to the previous menu.
-  Return to TV viewing.

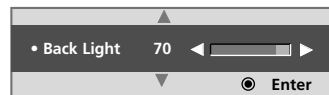
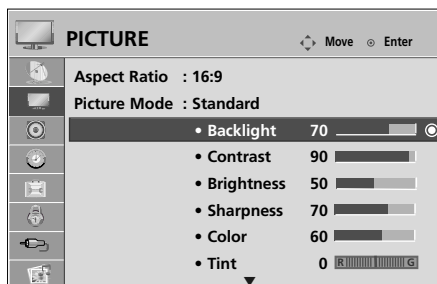
- When selecting **Intelligent Sensor** is changed to **Auto** automatically.
- When selecting **Intelligent Sensor**, it is changed contrast, brightness, sharpness, color and tint automatically.
- **Vivid, Standard, Natural, Cinema, Sport, and Game** Settings are preset for the optimum picture quality at the factory.
- **Intelligent Sensor**: The most suitable picture is automatically adjusted according to the surrounding conditions.
- **Vivid**: This is the mode to maximize the effect of the video in the retail store. Strengthen the contrast, brightness, color and sharpness for vivid picture.
- **Standard**: This is the mode to realize optimum viewing condition for the general user.
- **Natural**: This is the mode to display the most natural screen status.
- **Cinema**: This mode optimizes video for watching movies.
- **Sport**: This is the video mode to emphasize dynamic video and primary color (e.g, white, uniform, grass, sky blue etc.) by realizing the optimal screen for sports.
- **Game**: This is the mode to realize fast response speed in a fast gaming screen.

PICTURE CONTROL

MANUAL PICTURE ADJUSTMENT - USER MODE

Adjust the picture appearance to suit your preference and viewing situations.

This feature is disable in “**Picture Mode-Intelligent Sensor**”.



- 1   Select **PICTURE**.
- 2   Select **Picture Mode**.
- 3   Select **Vivid, Standard, Natural, Cinema, Sport or Game**.
- 4   Select **Backlight, Contrast, Brightness, Sharpness, Color, or Tint**.
- 5   Make appropriate adjustments.
- 6  Return to the previous menu.
-  Return to TV viewing.

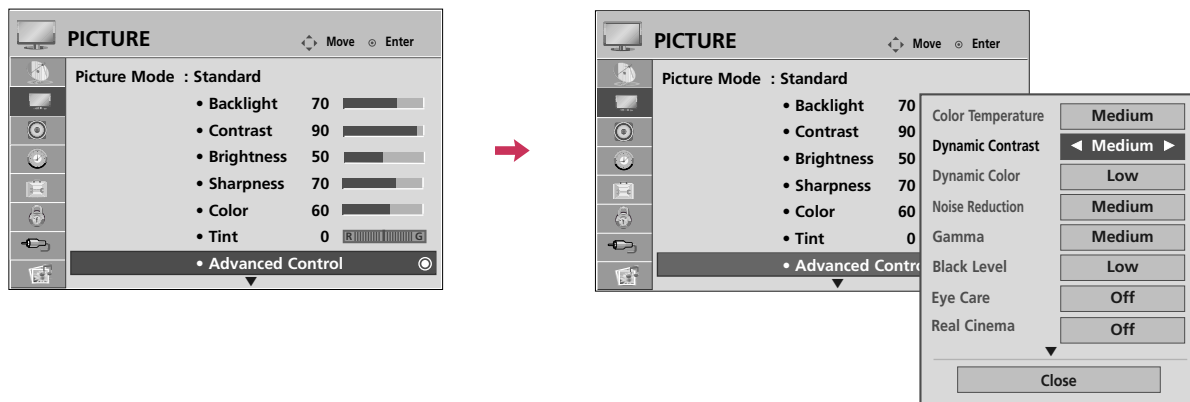
- **Backlight:** This function adjusts the brightness of LCD panel, to control the brightness of the screen. Adjusting the backlight is recommended when setting the brightness of the set. When decreasing the backlight, the brightness of the black becomes darker without any loss in video signal and the power consumption is reduced.
- **Contrast:** Increase or decrease the gradient of the video signal. You may use Contrast when the bright part of picture is saturated.
- **Brightness:** Adjusts the base level of the signal in the picture. You may use Brightness when the dark part of the picture is saturated.
- **Sharpness:** Adjusts the level of crispness in the edges between the light and dark areas of the picture. The lower the level, the softer the image.
- **Color:** Adjusts intensity of all colors.
- **Tint:** Adjusts the balance between red and green levels.

PICTURE IMPROVEMENT TECHNOLOGY

You can calibrate the screen for each Picture Mode or set the video value according to the special video screen.

You can set the video seeing differently for each input.

To reset to the factory default after making adjustments to each input source, execute the **Picture Reset** function for each Picture Mode.



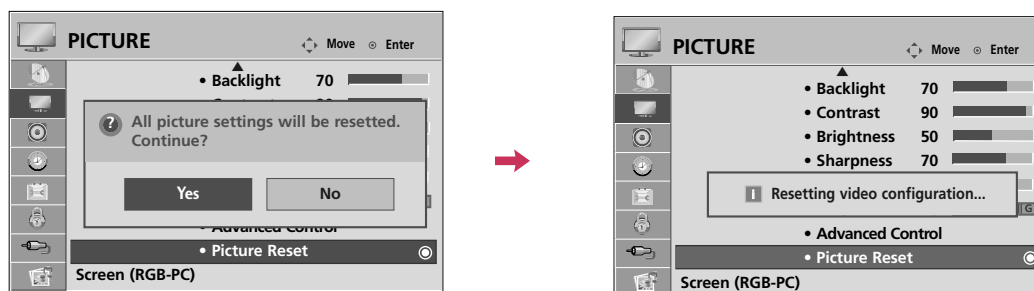
- 1   Select **PICTURE**.
- 2   Select **Advanced Control**.
- 3   Select your desired options.
- 4  Make appropriate adjustments.
- 5  Return to the previous menu.
-  Return to TV viewing.

PICTURE CONTROL

Color Temperature	■ Set to warm to enhance hotter colors such as red, or set to cool to enhance cooler colors such as blue.
Dynamic Contrast	■ Adjusts the contrast to keep it at the best level according to the brightness of the screen. The picture is improved by making bright parts brighter and dark parts darker.
Dynamic Color	■ Adjusts screen colors so that they look livelier, richer and clearer. This feature enhances hue, saturation and luminance so that red, blue, green and white look more vivid.
Noise Reduction	■ Reduces screen noise without compromising video quality.
Gamma	<i>Low : Make dark and middle gray level area of the picture brighter.</i> <i>Medium: Express original picture levels.</i> <i>High: Make dark and middle gray level area of the picture darker.</i> ■ You can adjust brightness of dark area and middle gray level area of the picture.
Black Level	<i>Low: The reflection of the screen gets darker.</i> <i>High: The reflection of the screen gets brighter.</i> ■ Set black level of the screen to proper level. ■ This function enables to select 'Low' or 'High' in the following mode: AV (NTSC-M), HDMI or Component.
Eye Care	■ Adjust the brightness of the screen to prevent the screen from being too bright. Dims extremely bright pictures. ■ This feature is disabled in "Picture Mode-Intelligent Sensor, Vivid, Cinema".
Real Cinema	■ Makes video clips recorded in film look more natural by eliminating judder effect.
Color Gamut	<i>Standard: Displays standard set of colors.</i> <i>Wide: Increase number of colors used.</i> ■ Maximize the utilization of color to increase color quality.

PICTURE RESET

Settings of the selected picture modes return to the default factory settings.

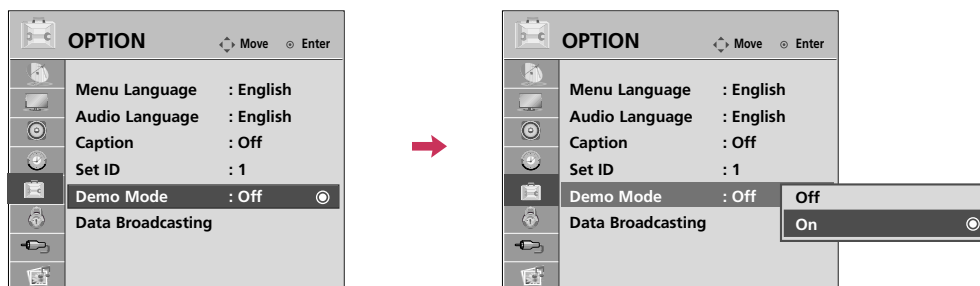


- 1   Select **PICTURE**.
- 2   Select **Picture Reset**.
- 3   Select **Yes**.
- 4  Initialize the adjusted value.
- 5  Return to TV viewing.

PICTURE CONTROL

DEMO MODE

Displays a slide show to explain the various feature of this TV.



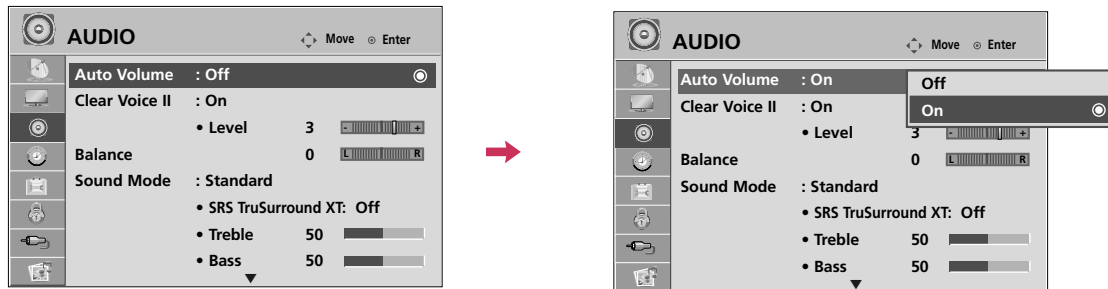
- 1   Select **OPTION**.
- 2   Select **Demo Mode**.
- 3   Select **On** to show the various feature of the TV.
- 4  Return to TV viewing.
After a while, **Demo Mode** starts.
If you want to stop the demo, press any button
(Except VOL +, - and MUTE button).

SOUND & LANGUAGE CONTROL

AUTO VOLUME LEVELER (AUTO VOLUME)

Auto Volume makes sure that the volume level remains consistent whether you are watching a commercial or a regular TV program.

Because each broadcasting station has its own signal conditions, volume adjustment may be needed every time the channel is changed. This feature allows users to enjoy stable volume levels by making automatic adjustments for each program.

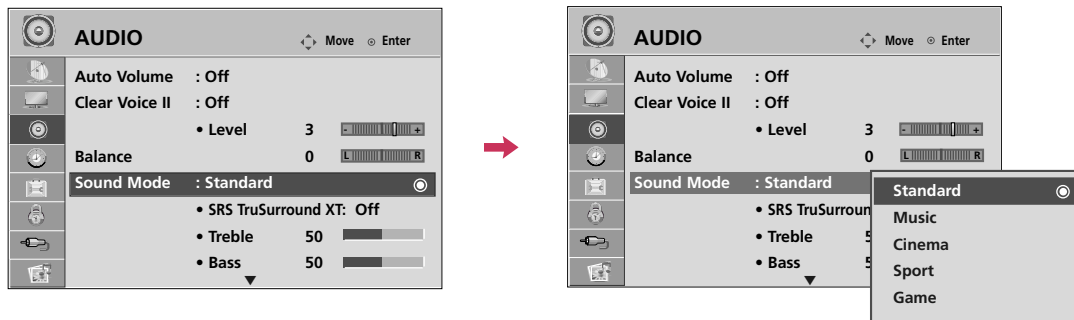


- 1   Select **AUDIO**.
- 2   Select **Auto Volume**.
- 3   Select **On** or **Off**.
- 4  Return to the previous menu.
-  Return to TV viewing.

SOUND & LANGUAGE CONTROL

PRESET SOUND SETTINGS (SOUND MODE)

Sound Mode lets you enjoy the best sound without any special adjustment as the TV sets the appropriate sound options based on the program content.

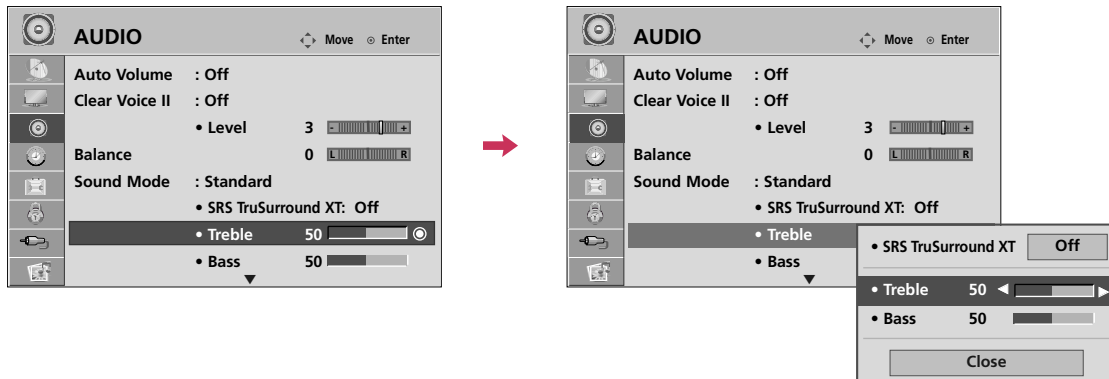


- 1   Select **AUDIO**.
- 2   Select **Sound Mode**.
- 3   Select **Standard, Music, Cinema, Sport, or Game**.
- 4  Return to the previous menu.
-  Return to TV viewing.

- **Standard, Music, Cinema, Sport, and Game** are preset for optimum sound quality at the factory.
- **Standard:** Offers standard-quality sound.
- **Music:** Optimizes sound for listening to music.
- **Cinema:** Optimizes sound for watching movies.
- **Sport:** Optimizes sound for watching sports events.
- **Game:** Optimizes sound for playing games.

SOUND SETTING ADJUSTMENT - USER MODE

Adjust the sound to suit your taste and room situations.



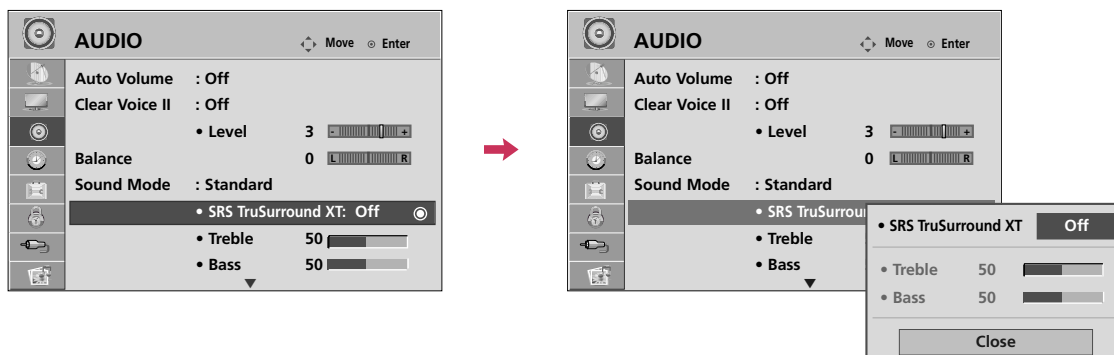
- 1   Select **AUDIO**.
- 2   Select **Sound Mode**.
- 3   Select **Standard, Music, Cinema, Sport, or Game**.
- 4   Select **Treble** or **Bass**.
- 5   Make appropriate adjustments.
- 6  Return to the previous menu.
-  Return to TV viewing.

SOUND & LANGUAGE CONTROL

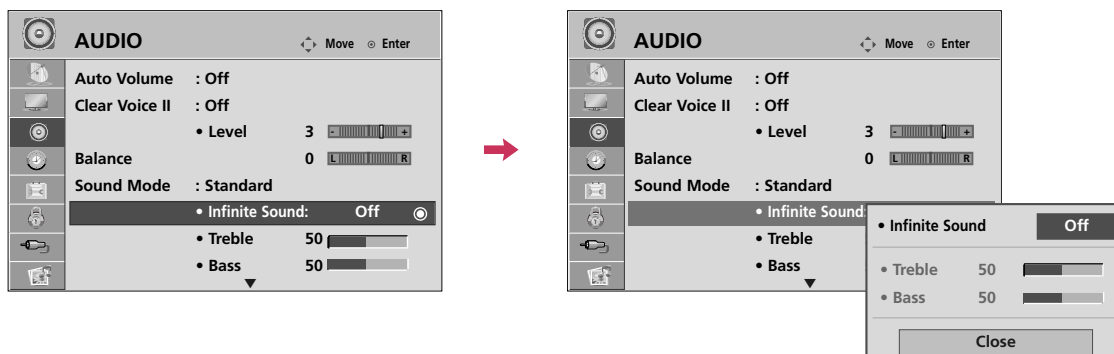
SRS TRUSURROUND XT / INFINITE SOUND

Takes advantage of any multi-channel format without needing to add extra speakers or equipment. Dialog clarity, bass enrichment, and the addition of stereo audio enhancement produces an immersive sound experience from standard stereo material.

32/37/42LG710H



32/37/42/47/55LD650H, 32/37/42LD655H

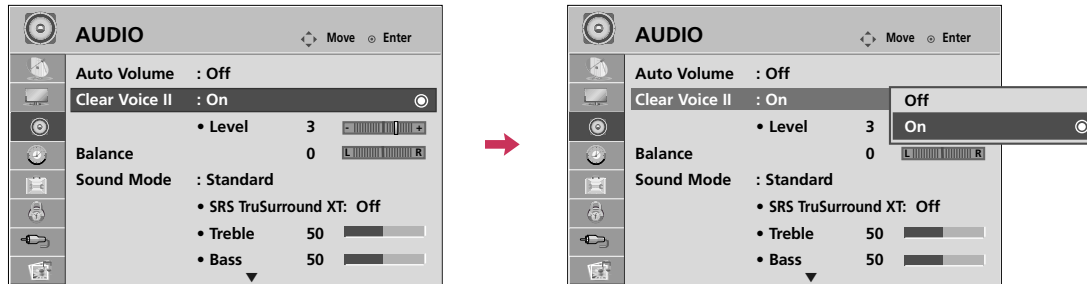


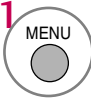
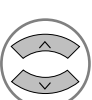
- 1 Select **AUDIO**.
- 2 Select **SRS TruSurround XT** or **Infinite Sound**.
- 3 Select **On** or **Off**.
- 4 Return to the previous menu.
- Return to TV viewing.

- If sound quality or volume is not at the level you want, it is recommended to use a separate home theater system or amp to cope with different user environments.
- If you select “Clear Voice II-On”, SRS TruSurround XT feature will not work.
- **SRS TruSurround XT**: TruSurround XT is a patented SRS technology that solves the problem of playing 5.1 multichannel content over two speakers.
- **Infinite Sound**: Infinite Sound is a patented LG proprietary sound processing technology that strives immersive 5.1 surround sound with just two front speakers. (For 32/37/42/47/55LD650H, 32/37/42LD655H)

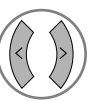
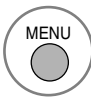
CLEAR VOICE II

By differentiating the human sound range from others, it improves the sound quality of voices.



- 1   Select **AUDIO**.
- 2   Select **Clear Voice II**.
- 3   Select **On** or **Off**.

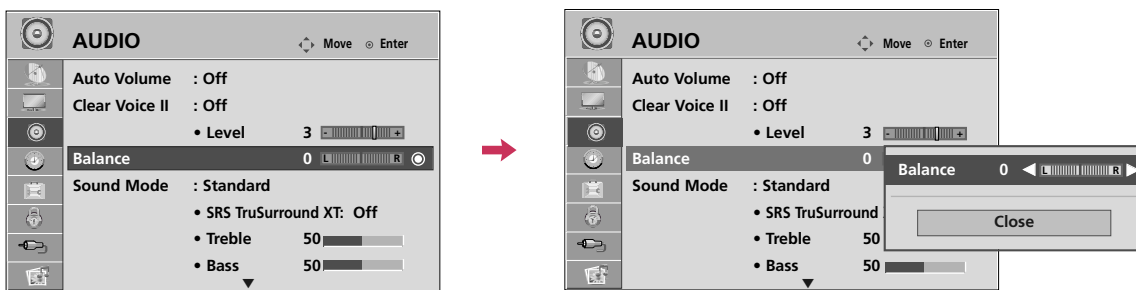
Adjustment for Clear Voice II Level With selecting **On**

- 4   Select **Level**.
- 5   Make appropriate adjustments.
- 6  Return to the previous menu.
-  Return to TV viewing.

SOUND & LANGUAGE CONTROL

BALANCE

Adjust the left/right sound of speaker to suit your taste and room situations.



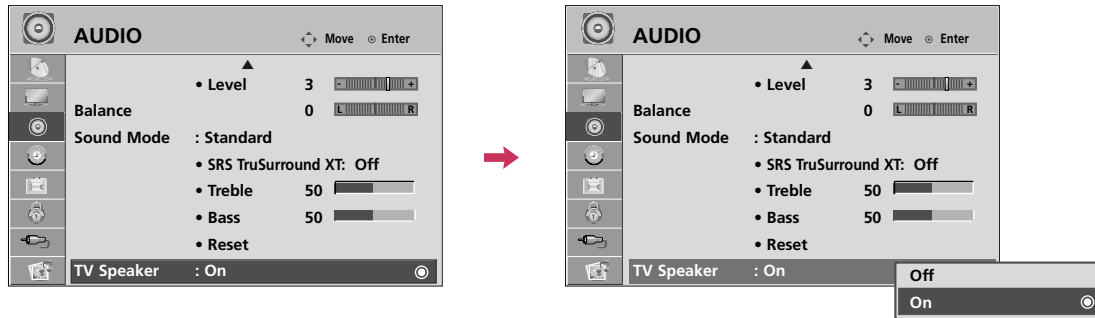
- 1   Select **AUDIO**.
- 2   Select **Balance**.
- 3   Make appropriate adjustments.
- 4  Return to the previous menu.
-  Return to TV viewing.

TV SPEAKERS ON/OFF SETUP

If you wish to use an external Hi-Fi system or a SRS System, turn off the TV's internal speakers.

In **AV**, **Component**, **RGB** and **HDMI** with HDMI to DVI cable, the TV speaker can be operational even when there is no video signal.

Turn the TV speakers off if using external audio equipment.

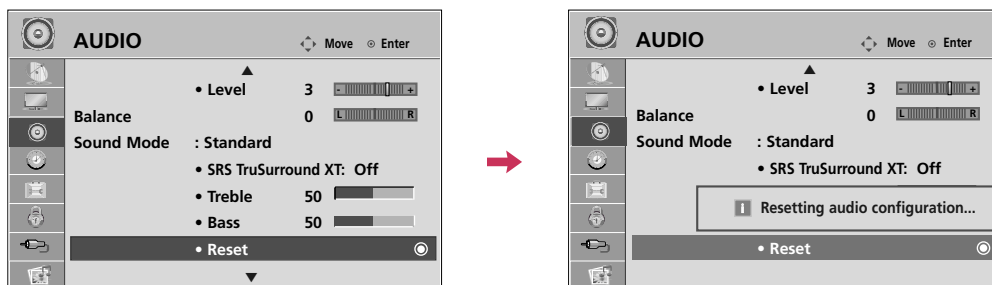


- 1   Select **AUDIO**.
- 2   Select **TV Speaker**.
- 3   Select **On** or **Off**.
- 4  Return to the previous menu.
-  Return to TV viewing.

SOUND & LANGUAGE CONTROL

AUDIO RESET

Settings of the selected Sound Mode return to the default factory settings.

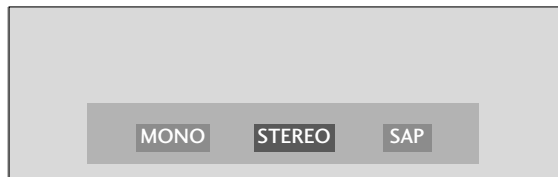


- 1   Select **AUDIO**.
- 2   Select **Reset**.
- 3  Initialize the adjusted value.
- 4  Return to TV viewing.

STEREO/SAP BROADCAST SETUP

For Analog only: This TV can receive MTS stereo programs and any SAP (Secondary Audio Program) that accompanies the stereo program if the station transmits an additional sound signal. Mono sound is automatically used if the broadcast is only in Mono.

If other languages are available on the digital signal, select them with the **SAP** button.



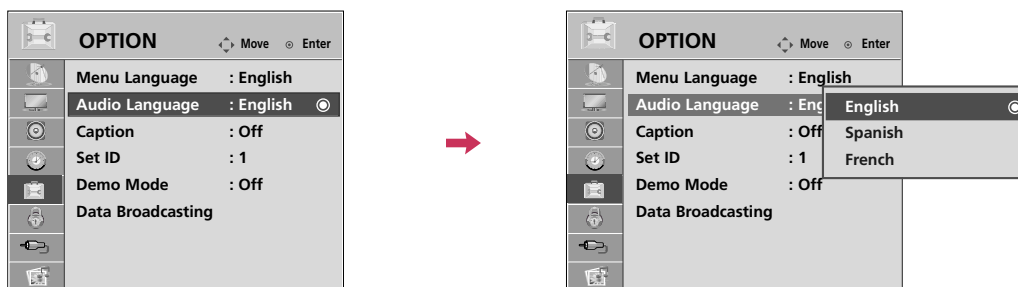
1  Each time you press the **SAP** button, **Mono**, **Stereo**, or **SAP** appear in turn.

2  Return to TV viewing.

SOUND & LANGUAGE CONTROL

AUDIO LANGUAGE

Other languages may be available if a digital signal is provided by the broadcasting station.
This feature operates only in DTV mode.



- 1   Select **OPTION**.
- 2   Select **Audio Language**.
- 3   Select your desired language.
- 4  Return to the previous menu.
-  Return to TV viewing.

ON-SCREEN MENUS LANGUAGE SELECTION

The menus can be shown on the screen in the selected language.



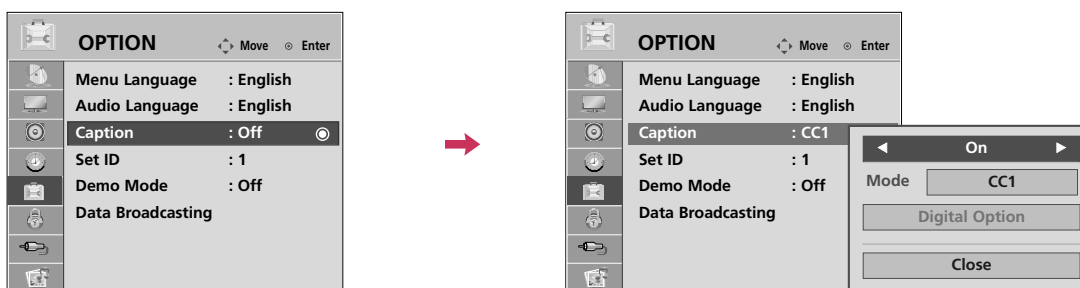
- 1   Select **OPTION**.
- 2   Select **Menu Language**.
- 3   Select your desired language.
From this point on, the on-screen menus will be shown in the selected language.
- 4  Return to the previous menu.
-  Return to TV viewing.

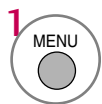
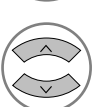
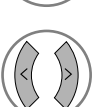
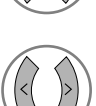
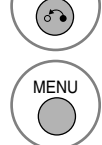
SOUND & LANGUAGE CONTROL

CAPTION MODE

Analog Broadcasting System Captions

Captions are provided to help the hearing impaired watch TV. Select a caption mode for displaying captioning information if provided on a program. Analog caption displays information at any position on the screen and is usually the program's dialog. Caption/Text, if provided by the broadcaster, would be available for both digital and analog channels on the Antenna/Cable. This TV is programmed to memorize the caption/text mode which was last set when you turned the power off. This function is only available when **Caption Mode** is set **On**.



- 1   Select **OPTION**.
- 2   Select **Caption**.
- 3   Select **On**.
- 4   Select **CC1-4** or **Text1-4**.
- 5  Return to the previous menu.
-  Return to TV viewing.

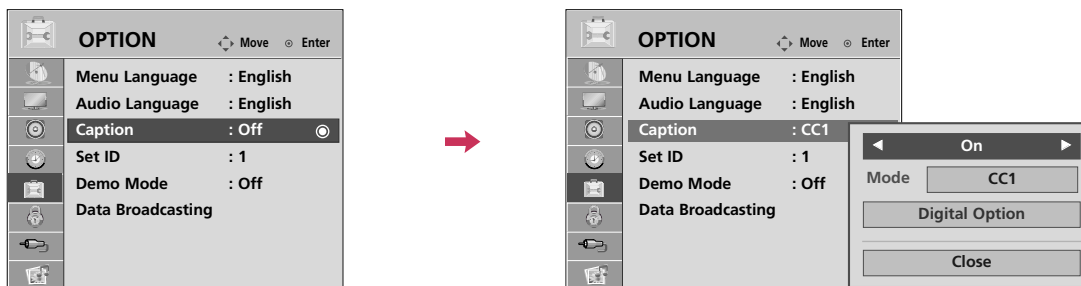
- When selecting **Off**, Sub-menus for Analog, DTV, and Digital Option become disabled.
- **CAPTION**
The term for the words that scroll across the bottom of the TV screen; usually the audio portion of the program provided for the hearing impaired.
- **TEXT**
The term for the words that appear in a large black frame and almost cover the entire screen; usually messages provided by the broadcaster.

Digital Broadcasting System Captions

Choose the language you want the DTV/CADTV Captions to appear in.

Other Languages can be chosen for digital sources only if they are included on the program.

This function is only available when **Caption Mode** is set **On**.



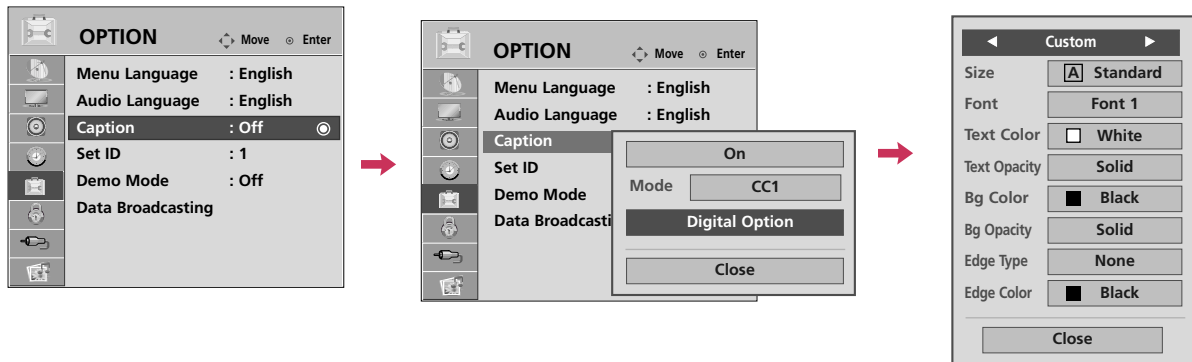
- 1   Select **OPTION**.
- 2   Select **Caption**.
- 3   Select **On**.
- 4   Select **CC1-4, Text1-4, or Service1 - 6**.
- 5  Return to the previous menu.
-  Return to TV viewing.

SOUND & LANGUAGE CONTROL

Caption Option

Customize the DTV captions that appear on your screen.

This function is only available when **Caption Mode** is set **On**.



- 1   Select **OPTION**.
- 2   Select **Caption**.
- 3   Select **On**.
- 4   Select **Digital Option**.
- 5   Select **Custom**.
- 6   Customize the **Size**, **Font**, etc., to your preference. A preview icon is provided at the bottom of the screen, use it to see the caption language.
- 7  Return to the previous menu.
-  Return to TV viewing.

- **Size:** Set the word size.
- **Font:** Select a typeface for the text.
- **Text Color:** Choose a color for the text.
- **Text Opacity:** Specify the opacity for the text color.
- **Bg (Background) Color:** Select a background color.
- **Bg (Background) Opacity:** Select the opacity for the background color.
- **Edge Type:** Select an edge type.
- **Edge Color:** Select a color for the edges.

TIME SETTING

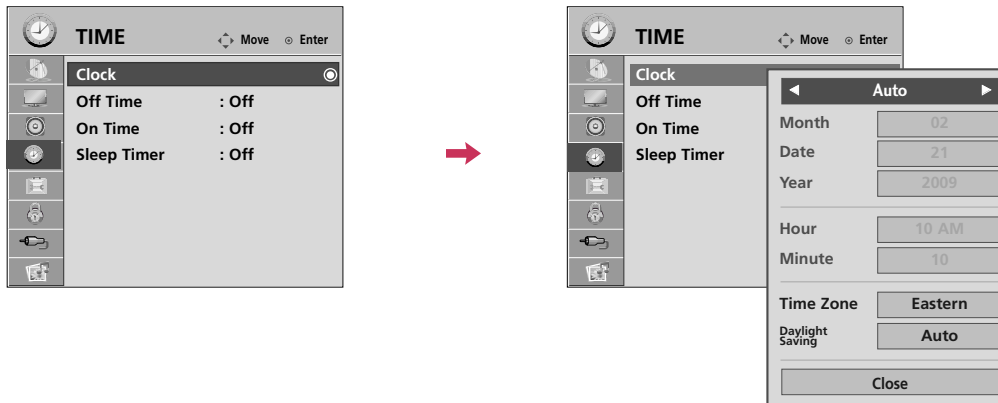
CLOCK SETTING

Auto Clock Setup

The time is set automatically from a digital channel signal.

The digital channel signal includes information for the current time provided by the broadcasting station.

Set the clock manually if the current time is set incorrectly by the auto clock function.



1   Select **TIME**.

2   Select **Clock**.

3   Select **Auto**.

4   Select your viewing area time zone.

- U.S.A: **Eastern, Central, Mountain, Pacific, Alaska, or Hawaii.**
- Canada: **Eastern, Central, Mountain, Pacific, New F.land, or Atlantic.**

5   Select **Auto, Off, or On** (depending on whether or not your viewing area observes Daylight Saving time).

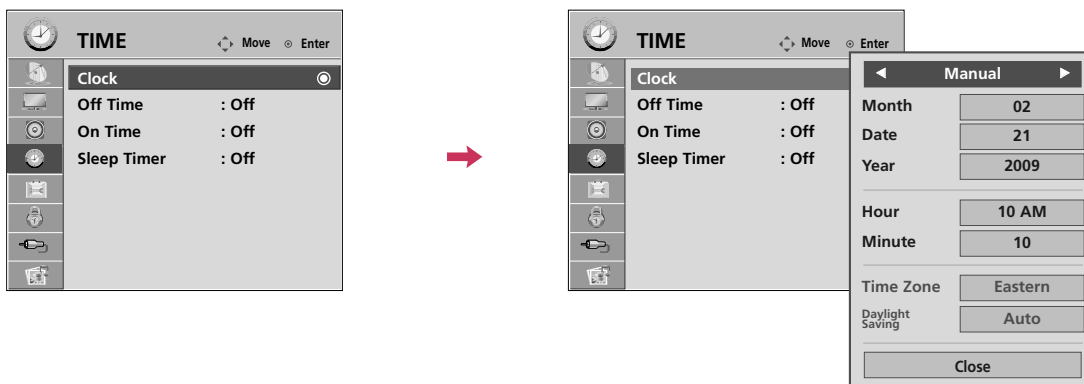
6  Return to the previous menu.

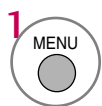
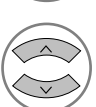
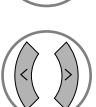
 Return to TV viewing.

TIME SETTING

Manual Clock Setup

If the current time setting is wrong, reset the clock manually.



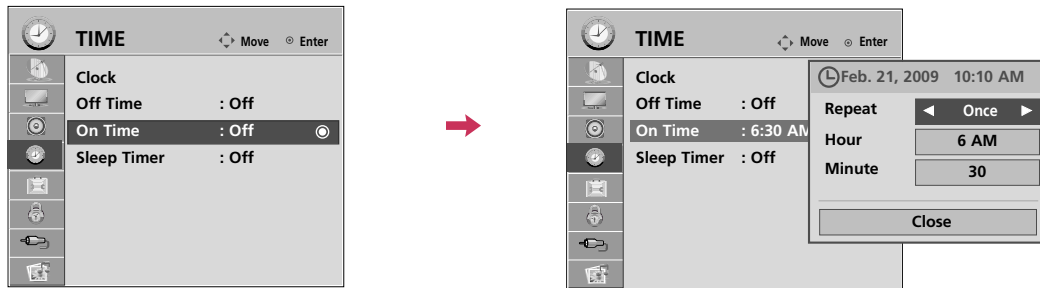
- 1   Select **TIME**.
- 2   Select **Clock**.
- 3   Select **Manual**.
- 4  Select the Year, Month, Date, Hour, or Minutes option.
- 5  Set the Year, Month, Date, Hour, or Minutes option.
- 6  Return to the previous menu.
-  Return to TV viewing.

AUTO ON/OFF TIME SETTING

This function operates only if the current time has been set.

The **Off Time** function overrides the **On Time** function if they are both set to the same time.

The TV must be in standby mode for the **On Time** to work.



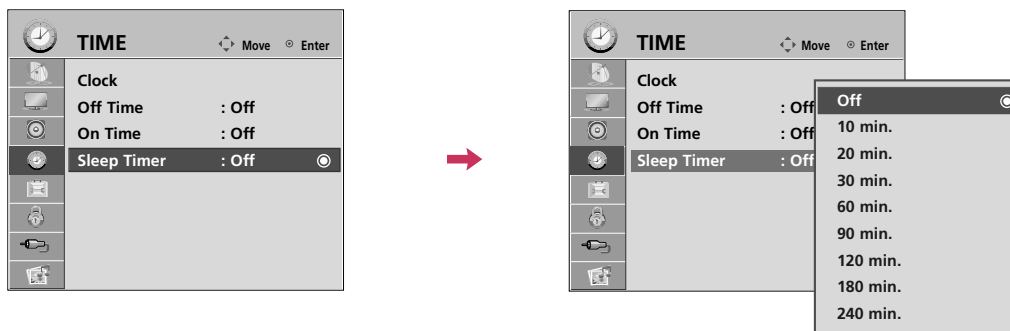
- 1   Select **TIME**.
- 2   Select **Off Time** or **On Time**.
- 3   Select **Repeat**.
- 4  Select **Off**, **Once**, **Daily**, **Mon.~Fri.**, **Mon.~Sat.**, **Sat.~ Sun.**, or **Sun.**.
- 5   Select and set **Hour** or **Minute**.
- 6  Return to the previous menu.
-  Return to TV viewing.

TIME SETTING

SLEEP TIMER SETTING

The Sleep Timer turns the TV off at the preset time.

Note that this setting is cleared when the TV is turned off.



- 1   Select **TIME**.
- 2   Select **Sleep Timer**.
- 3   Make appropriate adjustments.
- 4  Return to the previous menu.
-  Return to TV viewing.

- To cancel the **Sleep Timer**, select **Off**.
- Press the **SLEEP** button repeatedly to select the number of minutes.

PARENTAL CONTROL / RATINGS

Parental Control can be used to block specific channels, ratings and other viewing sources.

The Parental Control Function (V-Chip) is used to block program viewing based on the ratings sent by the broadcasting station. The default setting is to allow all programs to be viewed. Viewing can be blocked by choosing the type of the program and the categories. It is also possible to block all program viewing for a time period. To use this function, the following must be done :

1. Set ratings and categories to be blocked.
2. Specify a password
3. Enable the lock

V-Chip rating and categories

Rating guidelines are provided by broadcasting stations. Most television programs and television movies can be blocked by TV Rating and/or Individual Categories. Movies that have been shown at the theaters or direct-to-video movies use the Movie Rating System (MPAA) only.

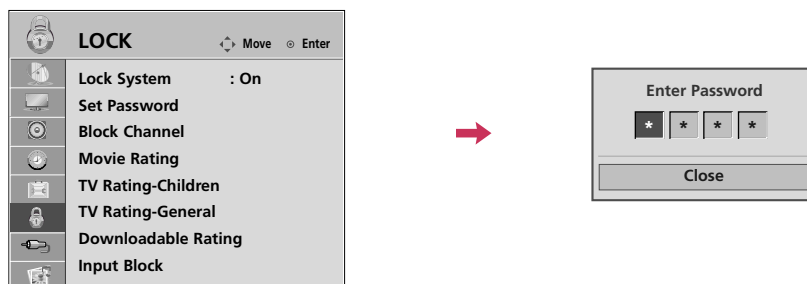
Ratings for Television programs including made-for-TV movies :

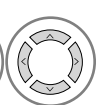
- | | |
|---------------------------------------|----------------------------------|
| ■ TV-G (General audience) | ■ TV-MA (Mature audience only) |
| ■ TV-PG (Parental guidance suggested) | ■ TV-Y (All children) |
| ■ TV-14 (Parents strongly cautioned) | ■ TV-Y7 (Children 7 years older) |

SET PASSWORD & LOCK SYSTEM

Setting up Your Password

Set up blocking schemes to block specific channels, ratings, and external viewing sources.
A password is required to gain access to this menu.



1    Select **LOCK**.

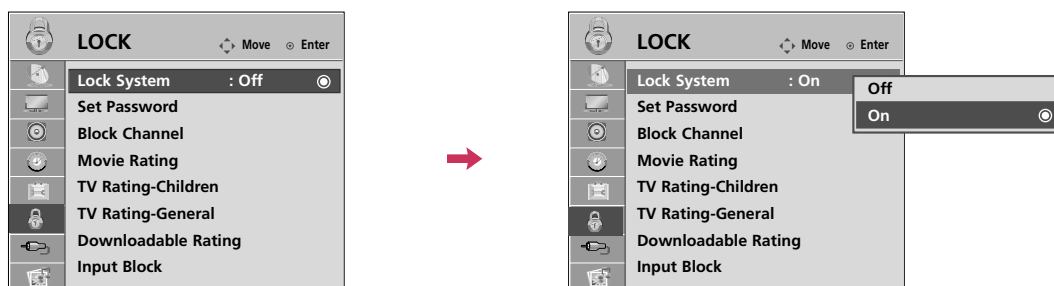
2  Input the password.

- When you select **On**, the Lock System is enable.
- The TV is set up with the initial password "0-0-0-0".

PARENTAL CONTROL /RATINGS

Lock System

Enables or disables the blocking scheme you set up previously.



1 MENU Select **LOCK**.

2 Select **Lock System**.

3 Select **On** or **Off**.

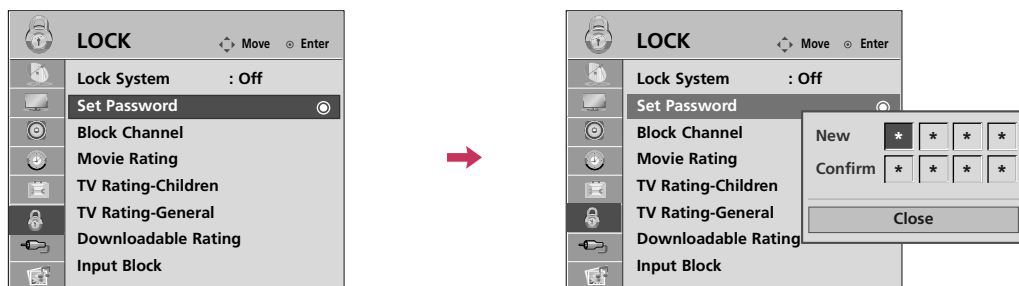
4 RETURN Return to the previous menu.

MENU Return to TV viewing.

■ When you select **On**, the Lock System is enable.

Set Password

Set up blocking schemes to block specific channels, ratings, and external viewing sources.
A password is required to gain access to this menu.

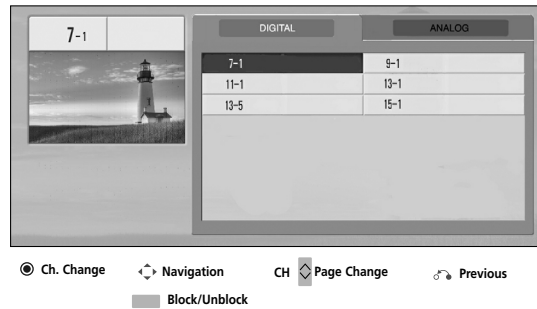


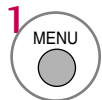
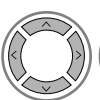
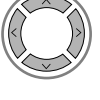
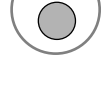
- 1    Select **LOCK**.
- 2  Input the password.
- 3  Select **Set Password**.
- 4   Choose any 4 digits for your new password.
As soon as the 4 digits are entered, re-enter the same 4 digits on the **Confirm**.
- 5  Return to the previous menu.
-  Return to TV viewing.

PARENTAL CONTROL /RATINGS

CHANNEL BLOCKING

Blocks any channels that you do not want to watch or that you do not want your children to watch.

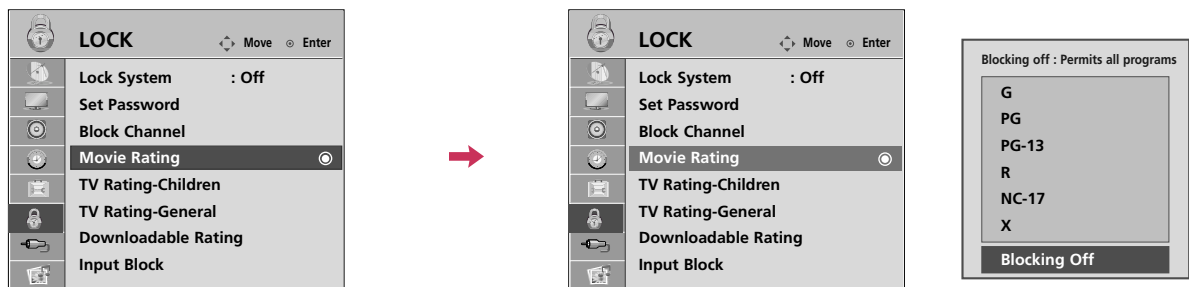


-    Select **LOCK**.
-  Input the password.
-  Select **Block Channel**.
-   Select a channel to block or unblock.
-  Block or unblock a channel.
-  Return to the previous menu.
-  Return to TV viewing.

MOVIE & TV RATING

Movie Rating (MPAA) - For USA

Blocks movies according to the movie ratings limits specified, so children cannot view certain movies. You can set the ratings limit by blocking out all the movies with the ratings above a specified level. Keep in mind that the movie ratings limit only applies to movies shown on TV, not TV programs, such as soap operas.



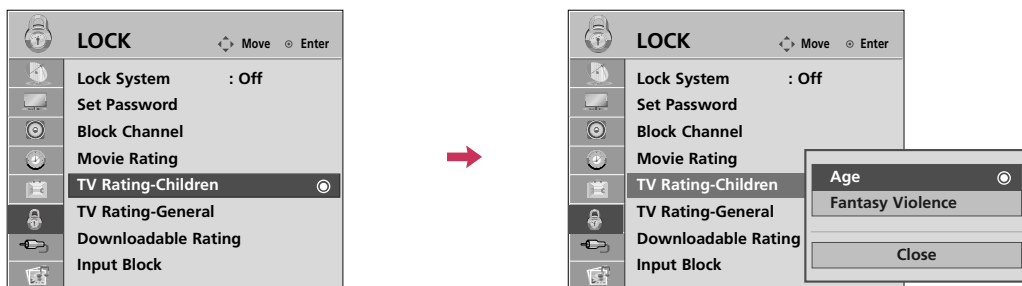
- 1 Select **LOCK**.
- 2 Input the password.
- 3 Select **Movie Rating**.
- 4 Select **G, PG, PG-13, R, NC-17, X, or Blocking Off**.
- 5 Return to the previous menu.
- Return to TV viewing.

- G (General audience)
- PG (Parental guidance suggested)
- PG-13 (Parents strongly cautioned)
- R (Restricted)
- NC-17 (No one 17 and under admitted)
- X (Adult only)
- Blocking Off (Permits all programs)
- If you set PG-13: G and PG movies will be available, PG-13, R, NC-17 and X will be blocked.

PARENTAL CONTROL /RATINGS

TV Rating Children - For USA

Prevents children from watching certain children's TV programs, according to the ratings limit set. The children rating does not apply to other TV programs. Unless you block certain TV programs intended for mature audiences in the TV Rating - sub menu, your children can view those programs.

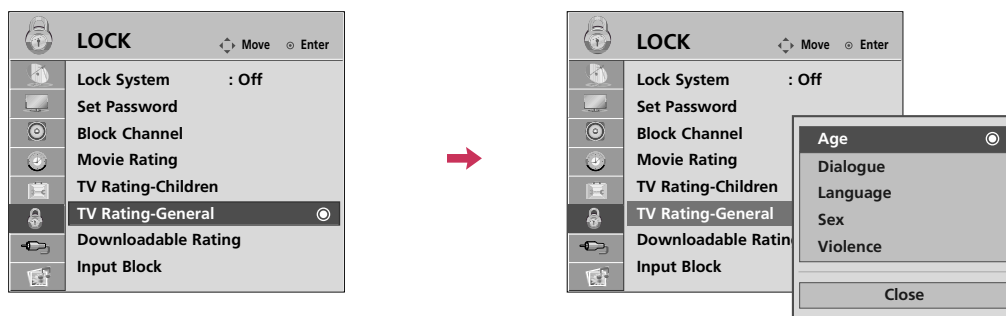


- 1    Select **LOCK**.
- 2  Input the password.
- 3  Select **TV Rating-Children**.
- 4   Select **Age** or **Fantasy Violence**.
- 5   Select block options.
- 6  Return to the previous menu.
-  Return to TV viewing.

- Age (applies to TV-Y, TV-Y7)
- Fantasy Violence (applies to TV-Y7)

TV Rating General - For USA

Based on the ratings, blocks certain TV programs that you and your family do not want to view.



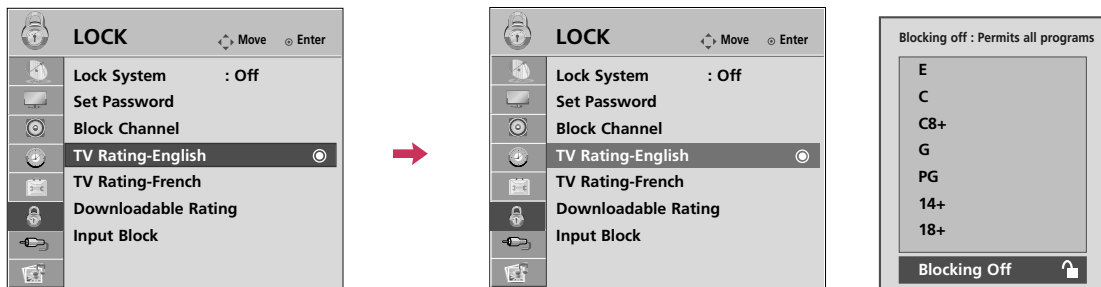
- 1 Select **LOCK**.
- 2 Input the password.
- 3 Select **TV Rating-General**.
- 4 Select **Age, Dialogue, Language, Sex or Violence**.
- 5 Select block options.
- 6 Return to the previous menu.
- Return to TV viewing.

- Age (applies to TV-G,TV-PG,TV-14,TV-MA).
- Dialogue-sexual dialogue (applies to TV-PG,TV-14).
- Language-adult language (applies to TV-PG, TV-14, TV-MA).
- Sex-sexual situations (applies to TV-PG, TV-14, TV-MA).
- Violence (applies to TV-PG, TV-14, TV-MA).

PARENTAL CONTROL / RATINGS

TV Rating English - For CANADA

Selecting Canadian English rating system.



1 MENU Select LOCK.

2 Input the password.

3 Select TV Rating-English.

4 Select E, C, C8+, G, PG, 14+, 18+, or Blocking Off.

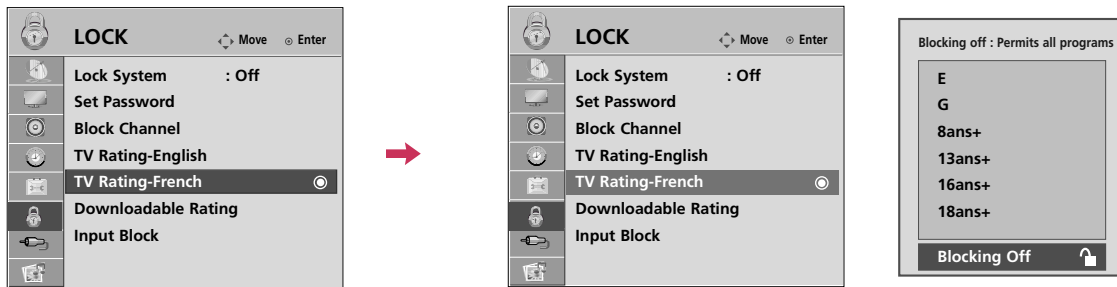
5 RETURN Return to the previous menu.

MENU Return to TV viewing.

- If **TV Rating-English** or **TV Rating-French** is locked, enter the password to unlock it temporarily.
- E (Exempt)
- C (Children)
- C8+ (Children eight years and older)
- G (General programming, suitable for all audiences)
- PG (Parental Guidance)
- 14+ (Viewers 14 years and older)
- 18+ (Adult programming)
- Blocking Off (Permits all programs)

TV Rating French - For CANADA

Selecting Canadian French rating system.



1 Select **LOCK**.

2 Input the password.

3 Select **TV Rating-French**.

4 Select **E, G, 8ans+, 13ans+, 16ans+, 18ans+, or Blocking off**.

5 Return to the previous menu.

Return to TV viewing.

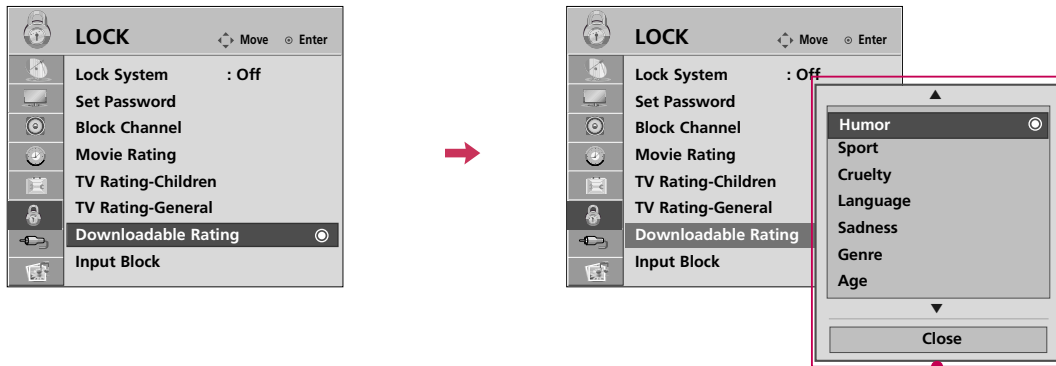
- E (Exempt)
- G (General)
- 8ans+ (General-Not convenient for little children)
- 13ans+ (Not convenient for children of 13 years and younger)
- 16ans+ (Not convenient for children of 16 years and younger)
- 18ans+ (This programs is only for adults)
- Blocking off (Permits all programs)

PARENTAL CONTROL /RATINGS

DOWNLOADABLE RATING

This function is available only for digital channels.

This function operates only when TV has received Region5 Rating data.

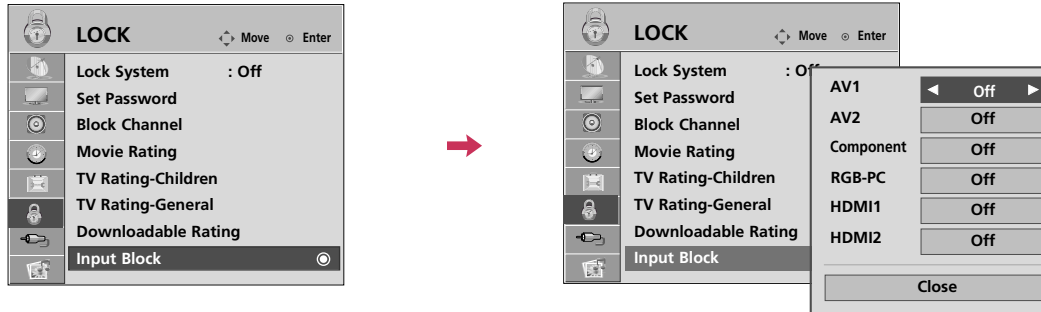


■ Based on rating table, your TV's OSD (On Screen Display) may differ slightly from what is shown in this manual.

- 1    Select **LOCK**.
- 2  Input the password.
- 3  Select **Downloadable Rating**.
- 4   Select desired **Downloadable Rating** option.
- 5   Select desired option and block it.
- 6  Return to the previous menu.
-  Return to TV viewing.

EXTERNAL INPUT BLOCKING

Enables you to block an input.



- 1 Select **LOCK**.
- 2 Input the password.
- 3 Select **Input Block**.
- 4 Select input source.
- 5 Select **On** or **Off**.
- 6 Return to the previous menu.
- Return to TV viewing.

APPENDIX

TROUBLESHOOTING

Abnormal Operation

The remote control doesn't work

- Check to see if there is any object between the product and the remote control causing obstruction. Ensure you are pointing the remote control directly at the TV.
- Ensure that the batteries are installed with correct polarity (+ to +, - to -).
- Ensure that the correct remote operating mode is set: TV, VCR etc.
- Install new batteries.

Power is suddenly turned off

- Is the sleep timer set?
- Check the power control settings. Power interrupted.

Video Problems

No picture & No sound

- Check whether the product is turned on.
- Try another channel. The problem may be with the broadcast.
- Is the power cord inserted into wall power outlet?
- Check your antenna direction and/or location.
- Test the wall power outlet, plug another product's power cord into the outlet where the product's power cord was plugged in.

Picture appears slowly after switching on

- This is normal, the image is muted during the product startup process. Please contact your service center, if the picture has not appeared after five minutes.

No or poor color or poor picture

- Adjust Color in menu option.
- Try unplugging any others electronics that are near by to see if interference is causing the problem.
- Try another channel. The problem may be with the broadcast.
- Are the video cables installed properly?
- Activate any function to restore the brightness of the picture.

Horizontal/vertical bars or picture shaking

- Check for local interference such as an electrical appliance or power tool.

Poor reception on some channels

- Station or cable product experiencing problems, tune to another station.
- Station signal is weak, reorient antenna.
- Check for sources of possible interference.

Lines or streaks in pictures

- Check antenna (Change the direction of the antenna).

No picture when connecting HDMI

- If the HDMI cables don't support High Speed HDMI, it can cause flickers or no screen display. In this case use the latest cables that support High Speed HDMI.

Audio Problems	
Picture OK but No sound	■ Press the VOL or VOLUME button. ■ Sound muted? Press the MUTE button. ■ Try another channel. The problem may be with the broadcast. ■ Are the audio cables installed properly?
No output from one of the speakers	■ Adjust Balance in menu option.
Unusual sound from inside the product	■ A change in ambient humidity or temperature may result in an unusual noise when the product is turned on or off and does not indicate a fault with the product.
No sound when connecting HDMI or USB	■ Check High Speed HDMI cable. ■ Check USB cable over version 2.0. ■ Use normal MP3 file. *This feature is not available for all models.
PC Mode Problems	
The signal is out of range	■ Adjust resolution, horizontal frequency, or vertical frequency. ■ Check the input source.
Vertical bar or stripe on background & Horizontal Noise & Incorrect position	■ Work the Auto configure or adjust clock, phase, or H/V position. (Option)
Screen color is unstable or single color	■ Check the signal cable. ■ Update video card drivers.

MAINTENANCE

Early malfunctions can be prevented. Careful and regular cleaning can extend the amount of time you can enjoy your new TV.

Caution: Be sure to turn the power off and unplug the power cord before you begin any cleaning.

Cleaning the Screen

- 1 Here's a great way to keep the dust off your screen for a while. Wet a soft cloth in a mixture of lukewarm water and a little fabric softener or dish washing detergent. Wring the cloth until it's almost dry, and then use it to wipe the screen.
- 2 Make sure the excess water is off the screen, and then let it air-dry before you turn on your TV.

WARNING

- ▶ Do not use window/glass cleaner or anything with ammonia to clean the screen.

Cleaning the Cabinet

- To remove dirt or dust, wipe the cabinet with a soft, dry, lint-free cloth.
- Please be sure not to use a wet cloth.

Extended Absence

CAUTION

- ▶ If you expect to leave your TV dormant for a long time (such as a vacation), it's a good idea to unplug the power cord to protect against possible damage from lightning or power surges.

PRODUCT SPECIFICATIONS

MODELS		32LG710H (32LG710H-UA)	37LG710H (37LG710H-UA)	42LG710H (42LG710H-UA)
Dimensions (Width x Height x Depth)	With stand	797 x 597 x 232.5 mm 31.3 x 23.5 x 9.15 inch	918.6 x 684.8 x 293.4 mm 36.1 x 26.9 x 11.5 inch	1026.2 x 734.1 x 293.4 mm 40.4 x 28.9 x 11.5 inch
	Without stand	797 x 558.7 x 109.3 mm 31.3 x 21.9 x 4.3 inch	918.6 x 635.8 x 111.7 mm 36.1 x 25.0 x 4.39 inch	1026.2 x 687.9 x 111.8 mm 40.4 x 27.0 x 4.4 inch
Weight	With stand	12.89 kg / 28.41 lbs	17.97 kg / 39.61 lbs	21.10 kg / 46.51 lbs
	Without stand	11.41 kg / 25.15 lbs	15.41 kg / 33.97 lbs	18.48 kg / 40.74 lbs
Cable Card	MPI card (Width x Height x Depth)	3.1 x 0.9 x 6.3 inch 80.0(+0.6/-0.2) x less than 23.0(including pcb thickness) x less than 162.0(excluding cover thickness) mm		
	Card Bracket Cover (Width x Height)	3.7 x 1.1 inch 94.7(±0.5) x 28.3(±0.5) mm		
Power requirement		AC100-240V ~ 50/60Hz		
Television System		NTSC-M, ATSC, 64 & 256 QAM		
Program Coverage		VHF 2-13, UHF 14-69, CATV 1-135, DTV 2-69, CADTV 1-135		
External Antenna Impedance		75 ohm		
Environment condition	Operating Temperature	32 ~ 104°F (0 ~ 40°C)		
	Operating Humidity	Less than 80%		
	Storage Temperature	-4 ~ 140°F (-20 ~ 60°C)		
	Storage Humidity	Less than 85%		

■ The specifications shown above may be changed without prior notice for quality improvement.

APPENDIX

MODELS		32LD650H (32LD650H-UA) 32LD655H (32LD655H-UA)	37LD650H (37LD650H-UA) 37LD655H (37LD655H-UA)
Dimensions (Width x Height x Depth)	With stand	797.0 mm x 557.7 mm x 207.0 mm (31.3 inch x 21.9 inch x 8.1 inch)	916.0 mm x 626.0 mm x 261.0 mm (36.0 inch x 24.6 inch x 10.2 inch)
	Without stand	797.0 x 495.0 x 97.1 mm (31.3 inch x 19.4 inch x 3.8 inch)	916.0 mm x 560.0 mm x 88.9 mm (36.0 inch x 22.0 inch x 3.5 inch)
Weight	With stand	11.1 kg (24.4 lbs)	14.6 kg (32.1 lbs)
	Without stand	9.4 kg (20.7 lbs)	12.0 kg (26.4 lbs)
MODELS		42LD650H (42LD650H-UA) 42LD655H (42LD655H-UA)	47LD650H (47LD650H-UA)
Dimensions (Width x Height x Depth)	With stand	1024.0 mm x 686.6 mm x 261.0 mm (40.3 inch x 27.0 inch x 10.2 inch)	1137.0 mm x 758.0 mm x 270.0 mm (44.7 inch x 29.8 inch x 10.6 inch)
	Without stand	1024.0 mm x 621.0 mm x 87.1 mm (40.3 inch x 24.4 inch x 3.4 inch)	1137.0 mm x 685.0 mm x 76.8 mm (44.7 inch x 26.9 inch x 3.0 inch)
Weight	With stand	17.7 kg (39.0 lbs)	20.3 kg (44.7 lbs)
	Without stand	15.1 kg (33.2 lbs)	18.3 kg (40.3 lbs)
MODELS		55LD650H (55LD650H-UA)	
Dimensions (Width x Height x Depth)	With stand	1329.0 mm x 872.0 mm x 330.0 mm (52.3 inch x 34.3 inch x 12.9 inch)	
	Without stand	1329.0 mm x 796.0 mm x 96.5 mm (52.3 inch x 31.3 inch x 3.7 inch)	
Weight	With stand	33.0 kg (72.7 lbs)	
	Without stand	29.8 kg (65.6 lbs)	
Power requirement Television System Program Coverage External Antenna Impedance		AC100-240V ~ 50/60Hz NTSC-M, ATSC, 64 & 256 QAM VHF 2-13, UHF 14-69, CATV 1-135, DTV 2-69, CADTV 1-135 75 ohm	
Environment condition	Operating Temperature Operating Humidity	32 ~ 104°F (0 ~ 40°C) Less than 80%	
	Storage Temperature Storage Humidity	-4 ~ 140°F (-20 ~ 60°C) Less than 85%	

■ The specifications shown above may be changed without prior notice for quality improvement.

PROGRAMMING THE REMOTE CONTROL

The provided universal remote control can be programmed to operate most remote-controllable devices. Note that the remote may not control all models of other brands.

Programming a code into a remote mode

- 1** Testing your remote control.
To find out whether your remote control can operate other components without programming, turn on a component such as a STB(Set-Top Box) and press the corresponding mode button (such as a **STB**) on the remote control, while pointing at the component. Test the **POWER** and **CH** $\wedge$ $\vee$ buttons to see if the component responds correctly. If the component does not operate correctly, the remote control requires programming to operate the device.
- 2** Turn on the component to be programmed, then press the corresponding mode button (such as **STB**) on the remote control. The remote control button of the desired device is illuminated.
- 3** Press the **MENU** and **MUTE** buttons simultaneously, and the remote control is ready to be programmed with the code.
- 4** Enter a code number using the number buttons on the remote control. Programming code numbers for the corresponding component can be found on the following pages. If the code is correct, the device will turn off.
- 5** Press the **MENU** button to store the code.
- 6** Test the remote control functions to see if the component responds correctly. If not, repeat from step 2.

APPENDIX

Remote Control Code

VCR

Brand	Codes	Brand	Codes	Brand	Codes
AIWA	034	MAGNAVOX	031 033 034 041	SAMSUNG	032 040 102 104
AKAI	016 043 046 124		067 068		105 107 109 112
	125 146	MARANTZ	012 031 033 067		113 115 120 122
AMPRO	072		069		125
ANAM	031 033 103	MARTA	101	SANSUI	022 043 048 135
AUDIO DYNAMICS	012 023 039 043	MATSUI	027 030	SANYO	003 007 010 014
BROKSONIC	035 037 129	MEI	031 033		102 134
CANON	028 031 033	MEMOREX	003 010 014 031	SCOTT	017 037 112 129
CAPEHART	108		033 034 053 072		131
CRAIG	003 040 135		101 102 134 139	SEARS	003 008 009 010
CURTIS MATHES	031 033 041	MGA	045 046 059		013 014 017 020
DAEWOO	005 007 010 064	MINOLTA	013 020		031 042 073 081
	065 108 110 111	MITSUBISHI	013 020 045 046		101
	112 116 117 119		049 051 059 061	SHARP	031 054 149
DAYTRON	108		151	SHINTOM	024
DBX	012 023 039 043	MTC	034 040	SONY	003 009 031 052
DYNATECH	034 053	MULTITECH	024 034		056 057 058 076
ELECTROHOME	059	NEC	012 023 039 043		077 078 149
EMERSON	006 017 025 027		048	SOUNDESIGN	034
	029 031 034 035	NORDMENDE	043	STS	013
	036 037 046 101	OPTONICA	053 054	SYLVANIA	031 033 034 059
	129 131 138 153	PANASONIC	066 070 074 083		067
FISHER	003 008 009 010		133 140 145	SYMPHONIC	034
FUNAI	034	PENTAX	013 020 031 033	TANDY	010 034
GE	031 033 063 072		063	TATUNG	039 043
	107 109 144 147	PHILCO	031 034 067	TEAC	034 039 043
GO VIDEO	132 136	PHILIPS	031 033 034 054	TECHNICS	031 033 070
HARMAN KARDON	012 045		067 071 101	TEKNIKA	019 031 033 034
HITACHI	004 018 026 034	PILOT	101		101
	043 063 137 150	PIONEER	013 021 048	THOMAS	034
INSTANTREPLAY	031 033	PORTLAND	108	TMK	006
JCL	031 033	PULSAR	072	TOSHIBA	008 013 042 047
JCPENNY	012 013 015 033				059 082 112 131
	040 066 101	QUARTZ	011 014	TOTEVISION	040 101
JENSEN	043	QUASAR	033 066 075 145	UNITECH	040
JVC	012 031 033 043	RCA	013 020 033 034	VECTOR RESEARCH	012
	048 050 055 060		040 041 062 063	VICTOR	048
	130 150 152		107 109 140 144	VIDEO CONCEPTS	012 034 046
KENWOOD	014 034 039 043		145 147	VIDEOSONIC	040
	047 048	REALISTIC	003 008 010 014	WARDS	003 013 017 024
LG (GOLDSTAR)	001 012 013 020		031 033 034 040		031 033 034 040
	101 106 114 123		053 054 101		053 054 131
LLOYD	034	RICO	058	YAMAHA	012 034 039 043
LXI	003 009 013 014	RUNCO	148	ZENITH	034 048 056
	017 034 101 106	SALORA	014		058 072 080 101
MAGIN	040				

HDSTB

Brand	Codes	Brand	Codes	Brand	Codes
ALPHASTAR DSR	123	HUGHES	068	SATELLITE SERVICE CO	028 035 047 057
AMPLICA	050	HUMAX(SL)	158		085
ASTRO PHILIPS(ML)	159	JANIEL	060 147	SCIENTIFIC ATLANTA	032 138
ASTRO THOMPSON(ML)	160	JERROLD	061	SKY LIFE	150
ASTRO NOKIA(ML)	161	KATHREIN	108	SONY	103
BIRDVIEW	051 126 129	LEGEND	057	STARCAST	041
CHANNEL MASTER	013 014 015 018	LG	001	SUPER GUIDE	020 124 125
	036 055	LUTRON	132	SAMART(TH)	156
CHAPARRAL	008 009 012 077	LUXOR	062 144	TEECOM	023 026 075 087
CITOH	054	MACOM	010 059 063 064		088 090 107 130
CURTIS MATHES	050 145		065		137
DRAKE	005 006 007 010	MEMOREX	057	TOSHIBA	002 127
	011 052 112 116	NEXTWAVE	028 124 125	TRUE VISION(TH)	155
	141	NORSAT	069 070	UNIDEN	016 025 042 043
DX ANTENNA	024 046 056 076	PACE SKY SATELLITE	143		044 045 048 049
ECHOSTAR	038 040 057 058	PANASONIC	060 142		078 079 080 086
	093 094 095 096	PANSAT	121		101 135 136
	097 098 099 100	PERSONAL CABLE	117	UBC(TH)	153
	122	PHILIPS	071	UBC/SAMART(TH)	154
ELECTRO HOME	089	PICO	105	VIEWSTAR	115
EUROPLUS	114	PRESIDENT	019 102	VTC(VN)	162
FUJITSU	017 021 022 027	PRIMESTAR	030 110 111	WINEGARD	128 146
	133 134	PROSAT	072	ZENITH	081 082 083 084
GENERAL INSTRUMENT	003 004 016 029	PSI(TH)	157		091 120
	031 059 101	RCA	066 106		
HITACHI	139 140	REALISTIC	043 074		
HOUSTON TRACKER	033 037 039 051	SAMSUNG	123		
	057 104				

DVD

Brand	Codes	Brand	Codes	Brand	Codes
APEX DIGITAL	022	MITSUBISHI	002	RCA	005 006
DENON	020 014	NAD	023	SAMSUNG	011 015
GE	005 006	ONKYO	008 017	SONY	007
HARMAN KARDON	027	PANASONIC	003 009	THOMPSON	005 006
JVC	012	PHILIPS	013	TOSHIBA	019 008
LG	001 010 016 025	PIONEER	004 026	YAMAHA	009 018
MAGNAVOX	013	PROCEED	021	ZENITH	010 016 025
MARANTZ	024	PROSCAN	005 006		

IR CODES

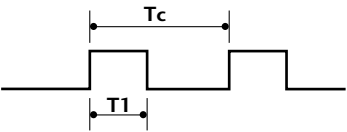
1. How to Connect

- Connect your wired remote control to the Remote Control port on the TV.

2. Remote Control IR Codes

■ Output waveform

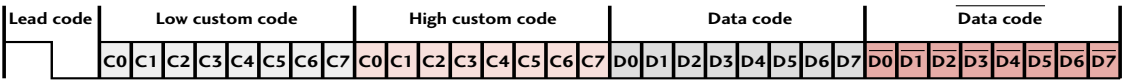
Single pulse, modulated with 37.917KHz signal at 455KHz



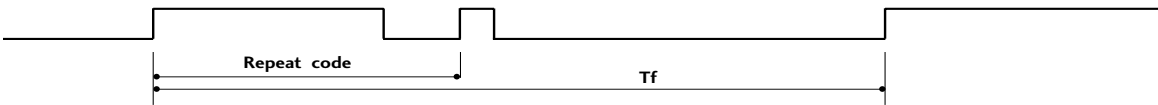
Carrier frequency
 $FCAR = 1/TC = fOSC/12$
Duty ratio = $T1/TC = 1/3$

■ Configuration of frame

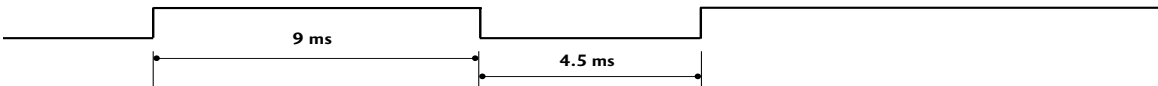
1 st frame



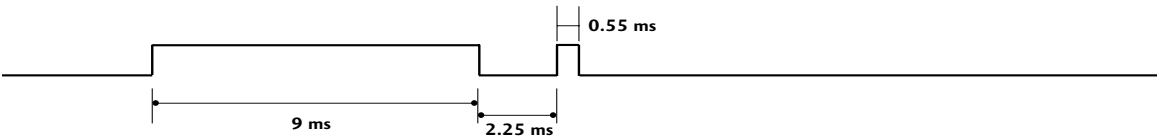
Repeat frame



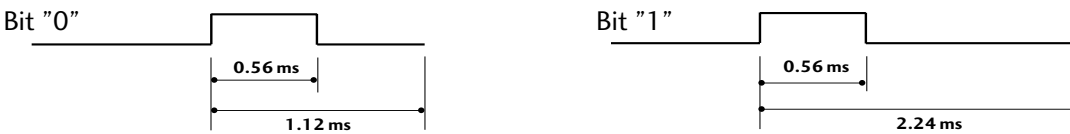
■ Lead code



■ Repeat code

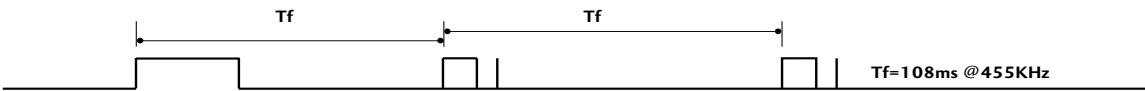


■ Bit description



■ Frame interval: Tf

The waveform is transmitted as long as a key is depressed.



Code (Hexa)	Function	Note	Code (Hexa)	Function	Note
08	POWER	Remote control Button (Power On/Off)	D6	TV	Discrete IR Code (TV Input Selection)
0F	TV	Remote control Button	5A	AV1	Discrete IR Code (AV1 Input Selection)
0B	INPUT	Remote control Button	D0	AV2	Discrete IR Code (AV2 Input Selection)
0A	SAP	Remote control Button	BF	COMPONENT	Discrete IR Code (COMPONENT Input Selection)
79	◀◀ RATIO	Remote control Button	D5	RGB-PC	Discrete IR Code (RGB Input Selection)
AB	GUIDE	Remote control Button	CE	HDMI1	Discrete IR Code (HDMI1 Input Selection)
OC	PORTAL	Remote control Button	CC	HDMI2	Discrete IR Code (HDMI2 Input Selection)
AA	INFO	Remote control Button	76	Ratio 4:3	Discrete IR Code (Only 4:3 Mode)
10-19	Number Key 0-9	Remote control Button	77	Ratio 16:9	Discrete IR Code (Only 16:9 Mode)
4C	- (Dash)	Remote control Button	AF	Ratio Zoom	Discrete IR Code (Only Zoom Mode)
1A	FLASHBK	Remote control Button	C4	POWER ON	Discrete IR Code (Only Power On)
02	VOL +	Remote control Button	C5	POWER OFF	Discrete IR Code (Only Power Off)
03	VOL -	Remote control Button			
00	CH ^	Remote control Button			
01	CH v	Remote control Button			
0E	▶▶ TIMER	Remote control Button			
39	CC	Remote control Button			
09	MUTE	Remote control Button			
43	MENU	Remote control Button			
5B	RETURN	Remote control Button			
40	^	Remote control Button			
41	v	Remote control Button			
07	<	Remote control Button			
06	>	Remote control Button			
44	ENTER	Remote control Button			
60	PIP	Remote control Button			
71	PIP CH +	Remote control Button			
72	PIP CH-	Remote control Button			
63	PIP SWAP	Remote control Button			
61	PIP INPUT	Remote control Button			
C1	■ Stop	Remote control Button			
C0	▶ Play	Remote control Button			
C2	Pause	Remote control Button			
C3	● (Record)	Remote control Button			

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Finally, software patents pose a constant threat to the existence of any free program. We wish to make sure that a company cannot effectively restrict the users of a free program by obtaining a restrictive license from a patent holder. Therefore, we insist that any patent license obtained for a version of the library must be consistent with the full freedom of use specified in this license.

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When a program is linked with a library, whether statically or using a shared library, the combination of the two is legally speaking a combined work, a derivative of the original library. The ordinary General Public License therefore permits such linking only if the entire combination fits its criteria of freedom. The Lesser General Public License permits more lax criteria for linking other code with the library.

We call this license the "Lesser" General Public License because it does Less to protect the user's freedom than the ordinary General Public License. It also provides other free software developers Less of an advantage over competing non-free programs. These disadvantages are the reason we use the ordinary General Public License for many libraries. However, the Lesser license provides advantages in certain special circumstances.

For example, on rare occasions, there may be a special need to encourage the widest possible use of a certain library, so that it becomes a de-facto standard. To achieve this, non-free programs must be allowed to use the library. A more frequent case is that a free library does the same job as widely used non-free libraries. In this case, there is little to gain by limiting the free library to free software only, so we use the Lesser General Public License.

In other cases, permission to use a particular library in non-free programs enables a greater number of people to use a large body of free software. For example, permission to use the GNU C Library in non-free programs enables many more people to use the whole GNU operating system, as well as its variant, the GNU/Linux operating system.

Although the Lesser General Public License is Less protective of the users' freedom, it does ensure that the user of a program that is linked with the Library has the freedom and the wherewithal to run that program using a modified version of the Library.

The precise terms and conditions for copying, distribution and modification follow. Pay close attention to the difference between a "work based on the library" and a "work that uses the library". The former contains code derived from the library, whereas the latter must be combined with the library in order to run.

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A "library" means a collection of software functions and/or data prepared so as to be conveniently linked with application programs (which use some of those functions and data) to form executables.

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"Source code" for a work means the preferred form of the work for making modifications to it. For a library, complete source code means all the source code for all modules it contains, plus any associated interface definition files, plus the scripts used to control compilation and installation of the library.

Activities other than copying, distribution and modification are not covered by this license; they are outside its scope. The act of running a program using the Library is not restricted, and output from such a program is covered only if its contents constitute a work based on the library (independent of the use of the Library in a tool for writing it). Whether that is true depends on what the library does and what the program that uses the library does.

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2. You may modify your copy or copies of the Library or any portion of it, thus forming a work based on the Library, and copy and distribute such modifications or work under the terms of section 1 above, provided that you also meet all of these conditions:
 - a) The modified work must itself be a software library.
 - b) You must cause the files modified to carry prominent notices stating that you changed the files and the date of any change.
 - c) You must cause the whole of the work to be licensed at no charge to all third parties under the terms of this license.
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(For example, a function in a library to compute square roots has a purpose that is entirely well-defined independent of the application. Therefore, Subsection 2d requires that any application-supplied function or table used by this function must be optional: if the application does not supply it, the square root function must still compute square roots.)

These requirements apply to the modified work as a whole. If identifiable sections of that work are not derived from the library, and can be reasonably considered independent and separate works in themselves, then this license, and its terms, do not apply to those sections when you distribute them as separate works. But when you distribute the same sections as part of a whole which is a work based on the library, the distribution of the whole must be on the terms of this license, whose permissions for other licenses extend to the entire whole, and thus to each and every part regardless of who wrote it.

Thus, it is not the intent of this section to claim rights or contest your rights to work written entirely by you; rather, the intent is to exercise the right to control the distribution of derivative or collective works based on the library.

In addition, mere aggregation of another work not based on the library with the library (or with a work based on the library) on a volume of a storage or distribution medium does not bring the other work under the scope of this license.

3. You may opt to apply the terms of the ordinary GNU General Public License instead of this License to a given copy of the Library. To do this, you must alter all the notices that refer to this License, so that they refer to the ordinary GNU General Public License, version 2, instead of to this License. (If a newer version than version 2 of the ordinary GNU General Public License has appeared, then you can specify that version instead if you wish.) Do not make any other change in these notices.

Once this change is made in a given copy, it is irreversible for that copy, so the ordinary GNU General Public License applies to all subsequent copies and derivative works made from that copy.

This option is useful when you wish to copy part of the code of the library into a program that is not a library.

4. You may copy and distribute the library (or a portion or derivative of it, under Section 2) in object code or executable form under the terms of Sections 1 and 2 above provided that you accompany it with the complete corresponding machine-readable source code, which must be distributed under the terms of sections 1 and 2 above on a medium customarily used for software interchange.

If distribution of object code is made by offering access to copy from a designated place, then offering equivalent access to copy the source code from the same place satisfies the requirement to distribute the source code, even though third parties are not compelled to copy the source along with the object code.

5. A program that contains no derivative of any portion of the Library, but is designed to work with the Library by being compiled or linked with it, is called a “work that uses the Library”. Such a work, in isolation, is not a derivative work of the Library, and therefore falls outside the scope of this license.

However, linking a “work that uses the library” with the Library creates an executable that is a derivative of the Library (because it contains portions of the library), rather than a “work that uses the library”. The executable is therefore covered by this license. Section 6 states terms for distribution of such executable.

When a “work that uses the library” uses material from a header file that is part of the library, the object code for the work may be a derivative work of the library even though the source code is not.

Whether this is true is especially significant if the work can be linked without the library, or if the work is itself a library. The threshold for this to be true is not precisely defined by law.

If such an object file uses only numerical parameters, data structure layouts and accessories, and small macros and small inline functions (ten lines or less in length), then the use of

the object file is unrestricted, regardless of whether it is legally a derivative work. (Executable containing this object code plus portions of the library will still fall under Section 6.)

Otherwise, if the work is a derivative of the library, you may distribute the object code for the work under the terms of Section 6. Any executable containing that work also fall under Section 6, whether or not they are linked directly with the library itself.

6. As an exception to the sections above, you may also combine or link a “work that uses the library” with the library to produce a work containing portions of the library, and distribute that work under terms of your choice, provided that the terms permit modification of the work for the customer’s own use and reverse engineering for debugging such modifications.

You must give prominent notice with each copy of the work that the library is used in it and that the Library and its use are covered by this license. You must supply a copy of this license. If the work during execution displays copyright notices, you must include the copyright notice for the library among them, as well as a reference directing the user to the copy of this license. Also, you must do one of these things:

- a) Accompany the work with the complete corresponding machine-readable source code for the library including whatever changes were used in the work (which must be distributed under Sections 1 and 2 above); and, if the work is an executable linked with the Library, with the complete machine-readable “work that uses the Library”, as object code and/or source code, so that the user can modify the library and then relink to produce a modified executable containing the modified library. (It is understood that the user who changes the contents of definitions files in the library will not necessarily be able to recompile the application to use the modified definitions.)
- b) Use a suitable shared library mechanism for linking with the library. A suitable mechanism is one that (1) uses at run time a copy of the library already present on the user’s computer system, rather than copying library functions into the executable, and (2) will operate properly with a modified version of the library, if the user installs one, as long as the modified version is interface-compatible with the version that the work was made with.
- c) Accompany the work with a written offer, valid for at least three years, to give the same user the materials specified in Subsection 6, above, for a charge no more than the cost of performing this distribution.
- d) If distribution of the work is made by offering access to copy from a designated place, offer equivalent access to copy the above specified materials from the same place.
- e) Verify that the user has already received a copy of these materials or that you have already sent this user a copy.

For an executable, the required form of the “work that uses the library” must include any data and utility programs needed for reproducing the executable from it. However, as a special exception, the materials to be distributed need not include anything that is normally distributed (in either source or binary form) with the major components (compiler, kernel, and so on) of the operating system on which the executable runs, unless that component itself accompanies the executable.

It may happen that this requirement contradicts the license restrictions of other proprietary libraries that do not normally accompany the operating system. Such a contradiction means you cannot use both them and the library together in an executable that you distribute.

7. You may place library facilities that are a work based on the library side-by-side in a single library together with other library facilities not covered by this license, and distribute such a combined library, provided that the separate distribution of the work based on the Library and of the other library facilities is otherwise permitted, and provided that you do these two things:
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Version 1.1

1. Definitions.

1.0.1. "Commercial use" means distribution or otherwise making the covered code available to a third party.

1.1. "Contributor" means each entity that creates or contributes to the creation of modifications.

1.2. "Contributor version" means the combination of the original code, prior modifications used by a contributor, and the modifications made by that particular contributor.

1.3. "Covered code" means the original code or modifications or the combination of the original code and modifications, in each case including portions thereof.

1.4. "Electronic distribution mechanism" means a mechanism generally accepted in the software development community for the electronic transfer of data.

1.5. "Executable" means covered code in any form other than source code.

1.6. "Initial developer" means the individual or entity identified as the initial Developer in the Source Code notice required by exhibit A.

1.7. "Larger work" means a work which combines covered code or portions thereof with code not governed by the terms of this License.

1.8. "License" means this document.

1.8.1. "Licensable" means having the right to grant, to the maximum extent possible, whether at the time of the initial grant or subsequently acquired, any and all of the rights conveyed herein.

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A. Any addition to or deletion from the contents of a file containing original code or previous modifications.

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1.10. "Original code" means source code of computer software

code which is described in the source code notice required by exhibit as original code, and which, at the time of its release under this license is not already covered code governed by this license.

1.10.1. "Patent claims" means any patent claim(s), now owned or hereafter acquired, including without limitation, method, process, and apparatus claims, in any patent licensable by grantor.

1.11. "Source code" means the preferred form of the covered code for making modifications to it, including all modules it contains, plus any associated interface definition files, scripts used to control compilation and installation of an executable, or source code differential comparisons against either the original code or another well known, available covered code of the contributor's choice. The source code can be in a compressed or archival form, provided the appropriate decompression or de-archiving software is widely available for no charge.

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You must cause all covered code to which you contribute to contain a file documenting the changes You made to create that covered code and the date of any change. You must include a prominent statement that the modification is derived, directly or indirectly, from original code provided by the initial developer and including the name of the initial developer in (a) the source code, and (b) in any notice in an executable version or related documentation in which you describe the origin or ownership of the covered code.

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(b) Contributor APIs.

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contributor represents that, except as disclosed pursuant to section 3.4(a) above, contributor believes that contributor's modifications are contributor's original creation(s) and/or contributor has sufficient rights to grant the rights conveyed by this license.

3.5. Required notices.

You must duplicate the notice in exhibit A in each file of the source code. If it is not possible to put such notice in a particular source code file due to its structure, then You must include such notice in a location (such as a relevant directory) where a user would be likely to look for such a notice. If You created one or more modification(s), you may add your name as a contributor to the notice described in exhibit A. you must also duplicate this license in any documentation for the source code where You describe recipients' rights or ownership rights relating to covered code. You may choose to offer, and to charge a fee for, warranty, support, indemnity or liability obligations to one or more recipients of covered code. However, you may do so only on your own behalf, and not on behalf of the Initial developer or any contributor. You must make it absolutely clear than any such warranty, support, indemnity or liability obligation is offered by you alone, and You hereby agree to indemnify the Initial developer and every contributor for any liability incurred by the Initial developer or such contributor as a result of warranty, support, indemnity or liability terms you offer.

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You may create a larger work by combining covered code with other code not governed by the terms of this license and distribute the larger work as a single product. In such a case, you must make sure the requirements of this license are fulfilled for the covered code.

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NOTE: The text of this exhibit A may differ slightly from the text of the notices in the source code files of the original code. You should use the text of this exhibit A rather than the text found in the original code/source code for Your modifications.

COMMERCIAL MODE SETUP GUIDE

Note: All features shown within this guide may not be available on all models.

EXPERIENCED INSTALLER

Commercial Mode Setup
pages 13 – 14

Cloning Information
pages 28 – 33

b-LAN™ Setup & Overview
page 40

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MODEL and SERIAL NUMBER

The model and serial numbers of this TV are located on the back of the cabinet. For future reference, LG suggests that you record those numbers here:

Model No. _____ Serial No. _____



WARNING
RISK OF ELECTRIC SHOCK
DO NOT OPEN



WARNING:

TO REDUCE THE RISK OF ELECTRIC SHOCK DO NOT REMOVE COVER (OR BACK). NO USER-SERVICEABLE PARTS INSIDE. REFER TO QUALIFIED SERVICE PERSONNEL.



The lightning flash with arrowhead symbol, within an equilateral triangle, is intended to alert the user to the presence of uninsulated “dangerous voltage” within the product’s enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.



The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

WARNING:

TO PREVENT FIRE OR SHOCK HAZARDS, DO NOT EXPOSE THIS PRODUCT TO RAIN OR MOISTURE.

Power Cord Polarization:

This product is equipped with a 3-wire grounding-type alternating current power plug. This plug will fit into the power outlet only one way. This is a safety feature. If you are unable to insert the plug fully into the outlet, contact your electrician to replace your obsolete outlet. Do not defeat the safety purpose of the 3-wire grounding-type plug.

NOTE TO CABLE/TV INSTALLER:

This reminder is provided to call the cable TV system installer’s attention to Article 820-40 of the National Electric Code (U.S.A.). The code provides guidelines for proper grounding and, in particular, specifies that the cable ground shall be connected to the grounding system of the building, as close to the point of the cable entry as practical.

REGULATORY INFORMATION:

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, 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 to 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.

CAUTION:

Do not attempt to modify this product in any way without written authorization from LG Electronics U.S.A., Inc. Unauthorized modification could void the user’s authority to operate this product.

COMPLIANCE:

The responsible party for this product’s compliance is: LG Electronics U.S.A., Inc.
1000 Sylvan Avenue, Englewood Cliffs, NJ 07632, USA • Phone: 1-201-816-2000

Marketed and Distributed in the United States by LG Electronics U.S.A., Inc.
1000 Sylvan Avenue, Englewood Cliffs, NJ 07632

IMPORTANT SAFETY INSTRUCTIONS

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 it exits from the apparatus.
11. Only use attachments/accessories specified by the manufacturer.
12. Use only with the 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 in order to avoid injury from tip-over.



13. Unplug this apparatus during lighting 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. Never touch this apparatus or antenna during a thunder or lighting storm.
16. When mounting a TV on the wall, make sure not to install the TV by the hanging power and signal cables on the back of the TV.
17. Do not allow an impact shock or any objects to fall into the product, and do not drop objects onto the screen.

18. Power Cord

Caution: It is recommended that appliances be placed upon a dedicated circuit; that is, a single outlet circuit which powers only that appliance and has no additional outlets or branch circuits. Check the specification page of the Owner's Manual to be certain.

Periodically examine the cord of your appliance, and if its appearance indicates damage or deterioration, unplug it, discontinue use of the appliance, and have the cord replaced with an exact replacement part by an authorized servicer. Protect the power cord from physical or mechanical abuse, such as twisting, kinking, or pinching or being closed in a door or walked upon. Pay particular attention to plugs, wall outlets, and the point where the cord exits the appliance.

Do not use a damaged or loose power cord. Be sure to grasp the plug when unplugging the power cord. Do not pull on the power cord to unplug the TV.

19. Overloading

Do not connect too many appliances to the same AC power outlet as this could result in fire or electric shock. Do not overload wall outlets. Overloaded wall outlets, loose or damaged wall outlets, extension cords, frayed power cords, or damaged or cracked wire insulation are dangerous. Any of these conditions could result in fire or electric shock.

20. Outdoor Use/Wet Location



Warning: To reduce the risk of fire or electrical shock, do not expose this product to rain, moisture or other liquids.

Do not touch the TV with wet hands. Do not install this product near flammable objects such as gasoline or candles or expose the TV to direct air conditioning.

Do not expose to dripping or splashing and do not place objects filled with liquids, such as vases, cups, etc., on or over the apparatus (e.g., on shelves above the unit).

(Continued on next page)

IMPORTANT SAFETY INSTRUCTIONS

(Continued from previous page)

21. Grounding

Ensure that you connect the earth ground wire to prevent possible electric shock (i.e., a TV with a three-prong grounded AC plug must be connected to a three-prong grounded AC outlet). If grounding methods are not possible, have a qualified electrician install a separate circuit breaker. Do not try to ground the unit by connecting it to telephone wires, lightening rods, or gas pipes.

22. Disconnect Device

The mains plug is the disconnecting device. The plug must remain readily operable.

As long as this unit is connected to the AC wall outlet, it is not disconnected from the AC power source even if you turn off this unit by SWITCH.

23. Outdoor Antenna Grounding

If an outside antenna or cable system is connected to the product, follow the precautions below.

An outdoor antenna system should not be located in the vicinity of overhead power lines or other electric light or power circuits or where it can come into contact with such power lines or circuits as death or serious injury can occur.

Be sure the antenna system is grounded so as to provide some protection against voltage surges and built-up static charges.

Article 810 of the National Electrical Code (NEC) in the U.S.A. provides information with respect to proper grounding of the mast and supporting structure, grounding of the lead-in wire to an antenna-discharge unit, size of grounding conductors, location of antenna-discharge unit, connection to grounding electrodes, and requirements for the grounding electrode.

24. Cleaning

When cleaning, unplug the power cord and rub gently with a soft cloth to prevent scratching. Do not spray water or other liquids directly on the TV as electric shock may occur. Do not clean with chemicals such as alcohol, thinners or benzene.

25. Transporting Product

Make sure the product is turned Off and unplugged and that all cables have been removed. It may take two or more people to carry larger TVs. Do not press against or put stress on the front panel of the TV.

26. Ventilation

Install the TV where there is proper ventilation. Do not install in a confined space such as a bookcase. Do not cover the product with cloth or other materials (e.g., plastic) while it is plugged in. Do not install in excessively dusty places.

27. Do not touch the ventilation openings, as they may become hot while the TV is operating.

28. If you smell smoke or other odors coming from the TV or hear strange sounds, unplug the power cord, and contact an authorized service center.

29. Do not press strongly on the panel with a hand or sharp object (e.g., a nail, pencil, or pen) or make a scratch on it.

30. Keep the product away from direct sunlight.

Antenna Grounding According to NEC, ANSI/NFPA 70

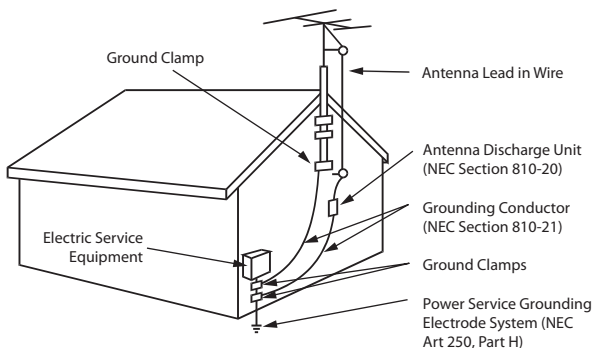


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Note: Design and specifications subject to change without prior notice.

Setup Checklist / Overview

Setup Checklist

Installation and Setup Checklist

- ___ Unpack TV and all accessories.
- ___ Install batteries in remote control.
- ___ Install TV on VESA mount or stand.
- ___ **Note:** It may be advisable to make all cable connections before installing on VESA mount or stand, as appropriate.

Hardware Connections

- ___ Install any additional hardware as appropriate to your institution, LAN, etc.

Cable Connections

- ___ Make all connections to rear jack panel and RF antenna on MPI/PPV card.
- ___ Make all connections to signal, interactive resources, and Aux sources, as appropriate.

Commercial Mode Setup

- ___ Complete Commercial Mode Setup (configure all relevant Installer Menu items as required of your institution and configure display features for the end user).

Software Installation

- ___ Install or configure any software, as applicable, for example, PPV, etc.

Commercial Mode Setup Overview

This document describes how to set up LD650H/LD655H/LG710H Pro:Centric™ TVs for Commercial Mode either while in the Embedded *b*-LAN™ (EBL) module's Pass-through Mode or its Free-To-Guest (FTG) Mode.

Note: The *b*-LAN module is internal to the TV and allows the hotel/institution head end equipment to communicate with the TV for configuration and control. See Reference section, "*b*-LAN Setup & Overview," for further information. The *b*-LAN module also comprises the data tuner required for Pro:Centric operation (see next page).

Pass-through Mode

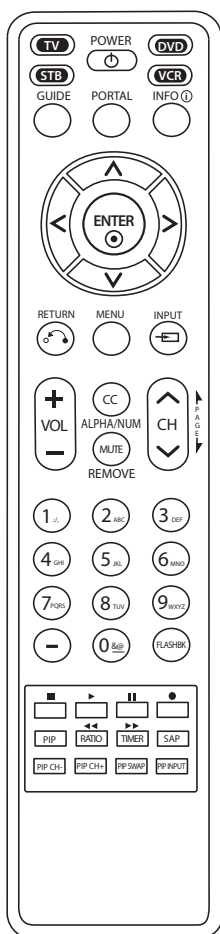
This mode allows you to configure a Master TV Setup for cloning purposes as well as external VOD/PPV control. Use the Installer Remote to configure Installer Menu items as required for TV operation and set up TV features (Channel, Picture, Audio, etc.). See pages 13 to 14 for detailed information.

FTG Mode

This mode enables Pro:Idiom® decryption and also allows logical channel mapping of physical channels to remove the need for dash tuning. FTG Configuration Application software is used to configure and/or edit Channel Map and Installer Menu settings. See pages 24 to 27 for further information on FTG Mode and local configuration using a PC with the FTG Configuration Application. Since these TV models are equipped with the EBL Module, they can also be broadcast configured in FTG Mode by a Free-To-Guest Management Appliance (FMA) head end device. Refer to the **Free-To-Guest (FTG) Configuration Application** manual and/or the Installation & Setup manual for the FMA device.

Pro:Centric TV Interactive Menu Features

Channel Guide
Information
Remote Help
Watch TV



Important: Pro:Centric operation requires that Installer Menu item 119 DATA CHANNEL be set appropriately and that the TV be in PPV or FTG Mode.

The interactive Pro:Centric TV enables guests—from the comfort of their hotel rooms—to view and select from a complete listing of hotel services and amenities. The Pro:Centric TV is connected to the hotel's billing computer, and service/amenities charges are billed at the time of order.

Interactive amenities may include:

- Hotel information, news, and events
- Directory services (tourist attractions, restaurants, etc.)
- Reservation services (business meetings, fitness, spa, etc.)
- Weather and traffic information
- Shopping services (delivery to guest room)
- Room service (menu ordering, memo service, morning wake up call, laundry, etc.)
- Ticketing services
- Check-out service (in the guest room)
- Gaming services
- E-mail resources/account access

Use the Installer Remote to operate both interactive menus and regular TV features. Press **PORTAL** on the Installer Remote to access the interactive menus.

Channel Guide

Shows available TV programs. Indicates the channel and the program start and finish times and also identifies the TV network.

Information

Typically displays hotel information, for example, photos of guest rooms, dining rooms, business centers, fitness and pool facilities, etc. Information may also include resources, such as local school programs, run in cooperation with the hotel.

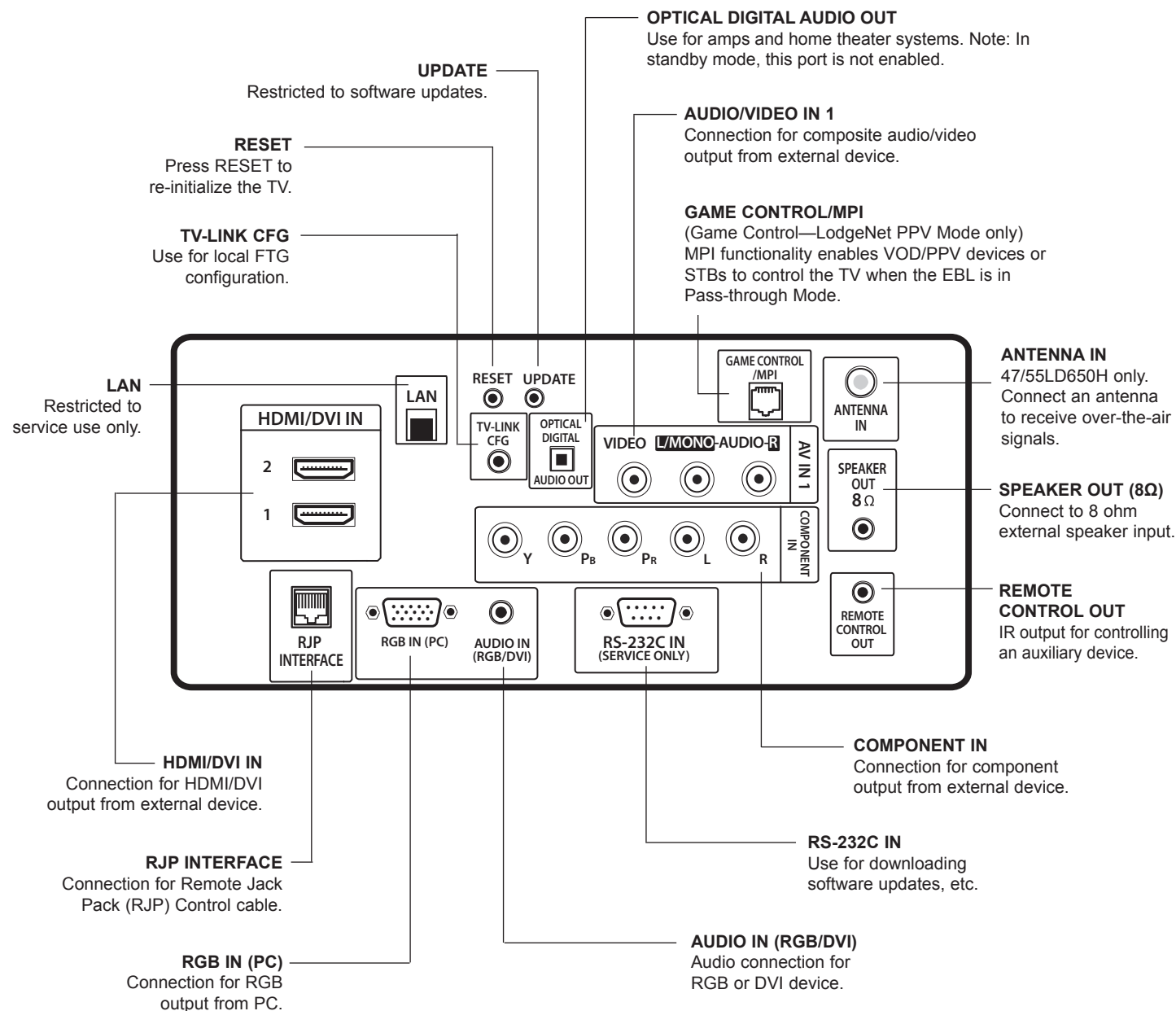
Remote Help

Provides help for navigating the interactive menus.

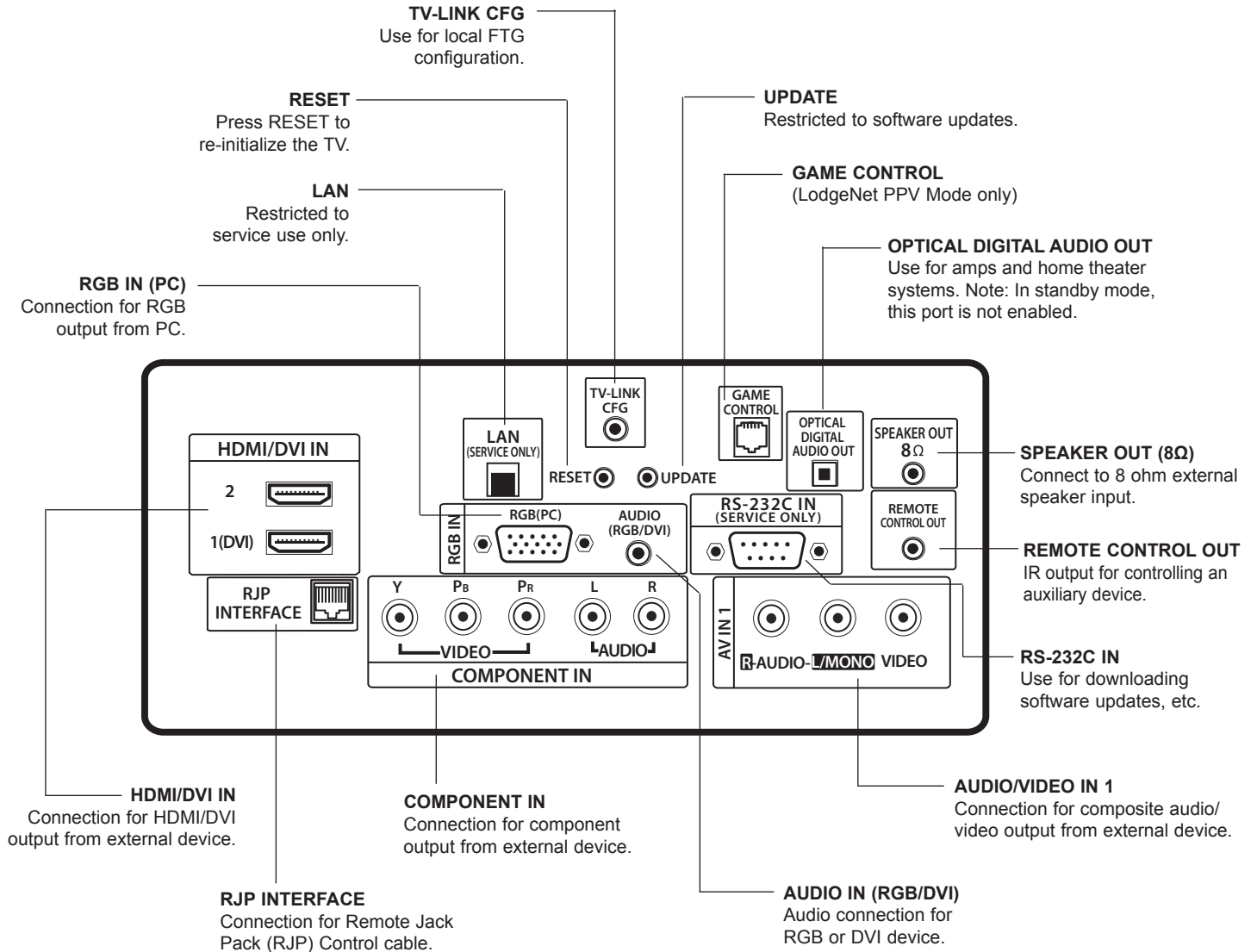
Watch TV

Removes the interactive menu from the screen and returns to the previously tuned TV channel.

LD650H/LD655H Rear Jack Panel



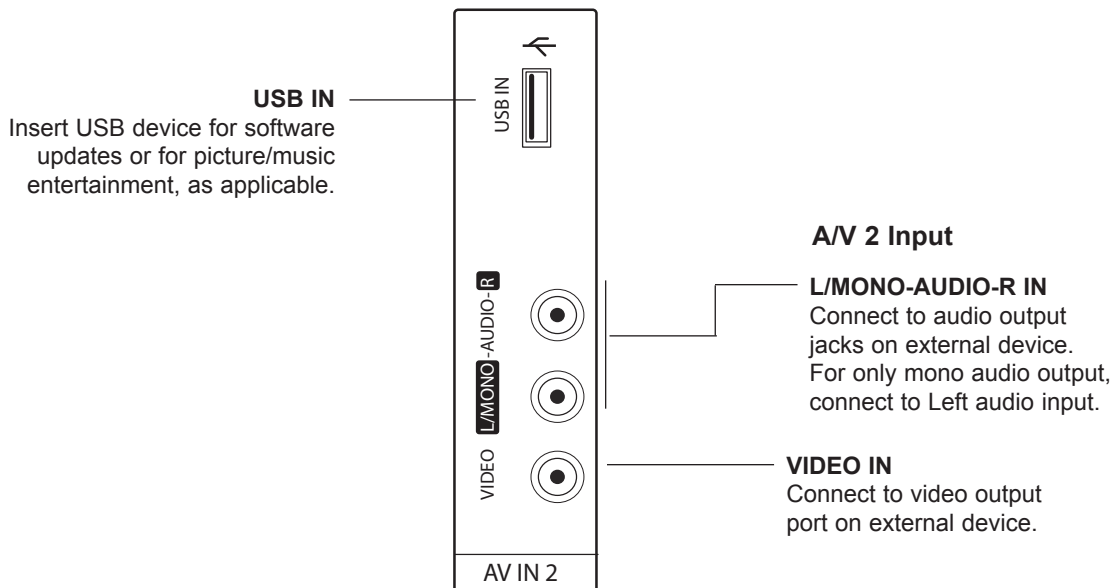
LG710H Rear Jack Panel



Side Connections Panel / RF Antenna Connection

Side Connections Panel

(All LD650H/LD655H/LG710H TVs)

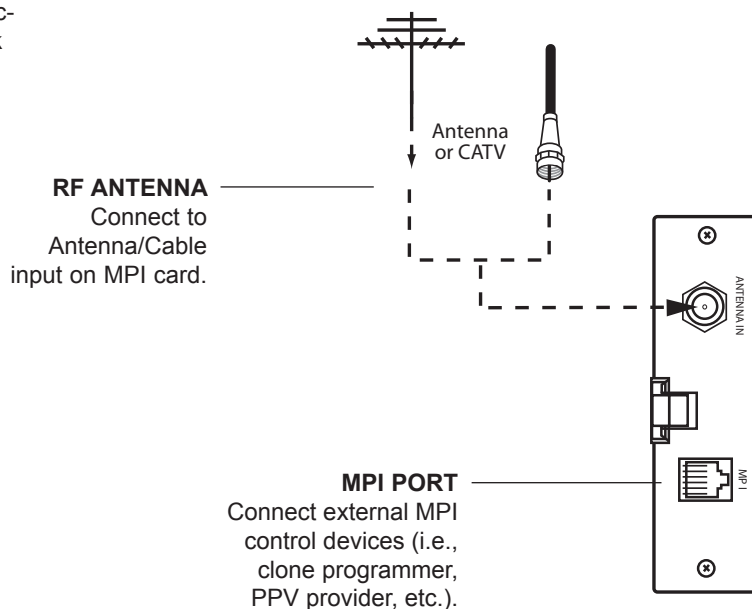


RF Antenna Connection

(32/37/42LD650H/LD655H/LG710H TVs)

Note: 47/55LD650H

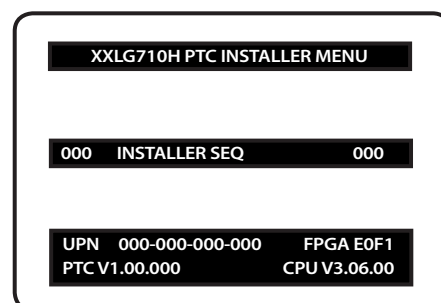
Antenna and MPI connections are on the rear jack panel (see page 8).



This is the Commercial Mode Setup Guide only.

Installer Menu / Commercial Mode Setup

To set up a Master TV, you will need to know how to enter the TV Installer Menu and make changes to the default values as required. Similarly, to configure a single TV's Installer Menu settings in FTG Mode, you will need to know how to access and use the FTG Configuration Application utilities. If necessary, familiarize yourself with the Installer Menu and how to make and save changes. Refer to page 15 for information on accessing the Installer Menu in Pass-through Mode. Refer to page 24 for information on accessing the FTG Installer Menu Configuration Utility in the FTG Configuration Application. Pages 16 to 20 describe Installer Menu items in detail.



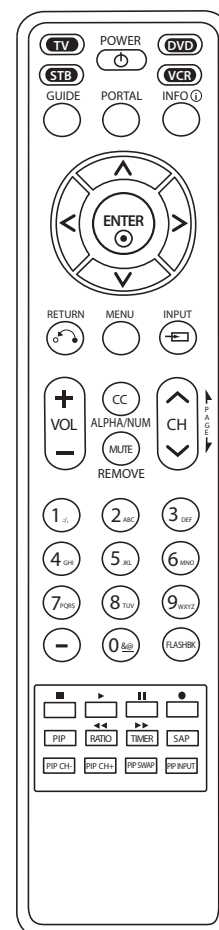
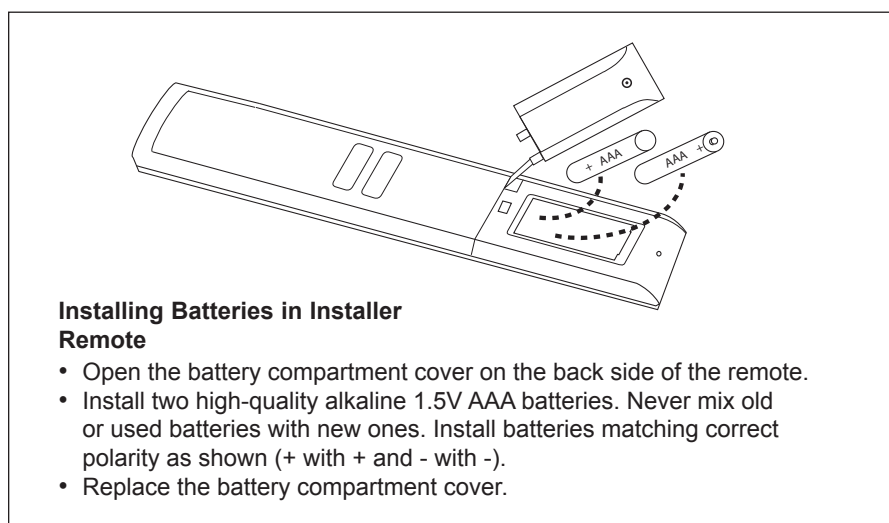
Typical Installer Menu

Installer Remote

The LG Installer Remote is supplied with and dedicated to operate the TV. See next page for typical key functions in TV operating mode. Some DVD and VCR controls may be available for selected LG DVD/VCR products.

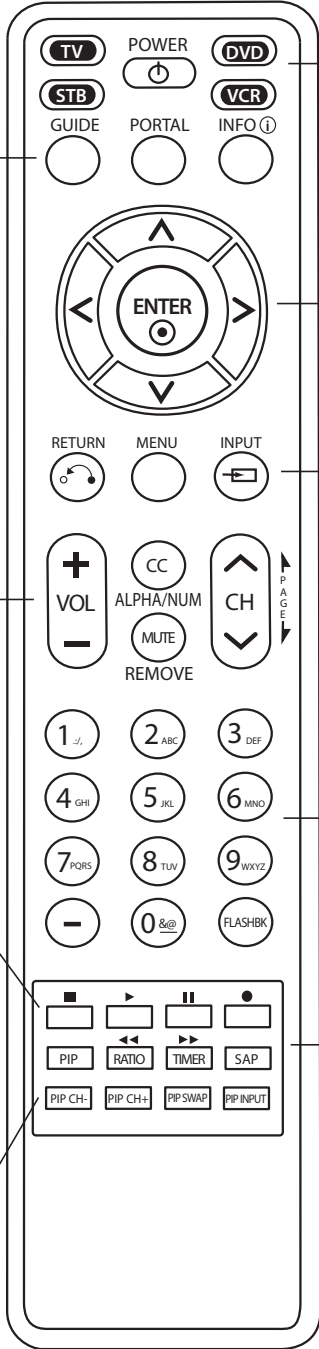
Cloning

Cloning refers to the process of capturing a Master TV Setup and transferring it to a Target TV. The Master TV's clonable features need to be configured as part of the Commercial Mode Setup. This is a critical step. If the Master TV's clonable features—channel icons or labels, digital font options, etc.—are not set up correctly, the cloned TVs will all have problems. Pages 28 to 33 provide detailed information on cloning requirements and procedures.



Installer Remote Control Typical Key Functions

The LG Installer Remote illustrated below and throughout this document shows typical remote control functions and is provided for reference only. This Installer Remote may vary from the Installer Remote supplied with the TV.



GUIDE
Use to view program information. Press INFO for additional information.

PORTAL
Displays and removes an interactive menu.

INFO
Use to view current program information, including program start and end times and, if available, the program rating.

VOLUME UP/DOWN
Increases/decreases sound level.

CC
Press to activate English subtitles.

MUTE
Switches sound ON or OFF.

CHANNEL UP/DOWN
Selects available channels found with Auto Tuning. Moves to next available page in electronic program guide.

VCR/DVD BUTTONS
Controls some video cassette recorders or DVD players. (RECORD button not functional in DVD mode.) Set up for VCR recording: Once, Regularly, Weekly, Off. (RECORD button only.)

PIP
Toggles through PIP options.

PIP CH +/-
Changes the PIP channel.

PIP SWAP
Exchange the main/sub images.

PIP INPUT
Select the connected input source for the sub-picture.

TV
Select the remote's operating mode: TV, STB, DVD, or VCR.

POWER
Turns TV or any other programmed equipment On or Off, depending on mode.

THUMBSTICK
Up/Down/Left/Right/ENTER
Use to navigate on-screen menus and adjust TV settings to your requirements.

RETURN
Returns one level to the previous menu/display.

MENU
Provides access to the TV setup menus on the screen. Also, enters or exits the on-screen menu system.

INPUT
Selects RGB, HDMI/DVI1, HDMI2, Component Input, AV1, and AV2 sources.

NUMBER Buttons (0 - 9) DASH
Use to enter a program number or channel. Dash is used for sub-channel numbers such as 2-1, 2-2, 9-1, 9-2, 100-3, 100-4, etc.

FLASHBK (FLASHBACK)
Returns to the previously tuned channel.

RATIO
Adjusts the picture aspect ratio.

TIMER
Sets the amount of time before the TV automatically turns itself OFF.

SAP
Selects MTS sound: Mono, Stereo, and SAP in analog mode. Changes the audio language in DTV mode, if additional languages are available.

SAP Notes:

- If SAP is selected and no SAP is provided, sound may not be heard on channel.
- Each analog channel may have its own SAP setting.
- Digital channels will reset to default audio language with a power off/on.

Commercial Mode Setup for Master TV

This section describes how to set up a Master TV when the EBL is in Pass-through Mode.

Note: Disconnect all Aux inputs. Under certain conditions, Auto Tuning (Channel Search) is disabled if there is an Aux input active.

Note: Refer to “FTG Mode of Operation” on pages 24 to 27 for information on configuring/editing Channel Map and Installer Menu settings for an individual TV in FTG Mode.

1. Set Installer Menu items.

- a) Use the Installer Remote to enter the TV Installer Menu: Press **MENU** repeatedly until the on-screen menu locks up, and then press **9-8-7-6 + ENTER**. Refer to pages 15 to 20 for detailed information on Installer Menu items.

- b) Set Installer Menu item **117 FACT DEFAULT** to **001** and press **ENTER** on the Installer Remote.

This clears all Installer Menu custom settings, channel labels/icons, etc. and reloads the factory default settings. The value will change back to 0 after the internal TV controller (Protocol Translator Card [PTC]) has been restored to factory default condition. This step ensures that the TV Channel Memory will be the active Channel List.

- c) Set Installer Menu item **003 BAND/AFC**, as appropriate.

- Broadcast: Set to 000.
- CATV: Set to 001 (default).
- HRC: Set to 002.
- IRC: Set to 003.

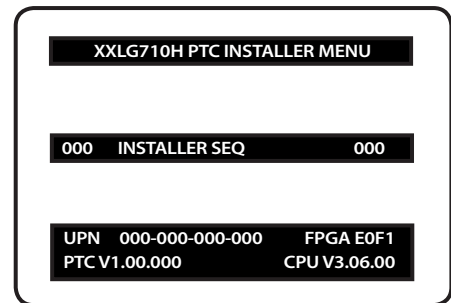
- d) Set any other Installer Menu items that affect your TV programming network to the required configuration. For example, enable/disable Aux sources, set a Start Channel, etc.

- e) After you have adjusted all required Installer Menu item settings, press **ENTER** on the Installer Remote to exit the menu and save your changes.

2. Set up TV features.

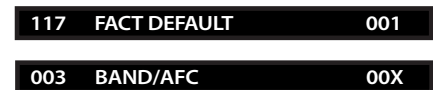
On-screen setup menus control the features of the TV (see page 22). Press **MENU** on the Installer Remote to access the setup menus, and then set Channel, Picture, Audio, Lock, Time, etc. options to the desired configurations. See also the Clonable Menu Features list on page 28.

Note: If desired, you can run Auto Tuning (see step 3) prior to completing this step.

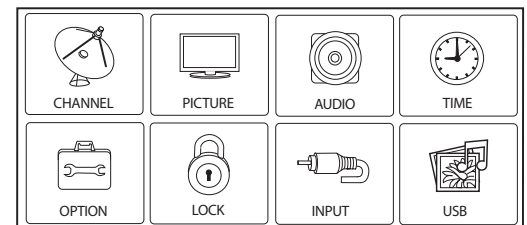


Typical TV Installer Menu

Note: The Installer Menu header will vary depending on the TV you are setting up.



Adjust the settings for these Installer Menu items.



Set the TV features to the desired configuration for the end user.

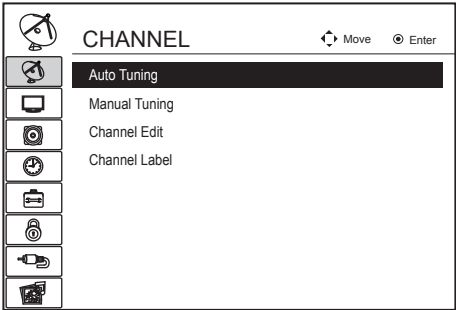
(Continued on next page)

Commercial Mode Setup for Master TV (Cont.)

(Continued from previous page)

3. Run Auto Tuning (Channel Search).

- a) Search for all available analog and digital channels: Go to the Channel Menu, select the **Auto Tuning** option, and follow the on-screen instructions.
- b) Use the **Channel Edit** option in the Channel Menu to edit the channel lineup, as necessary, to include free to guest channels only.
 - Add/delete channels per your system requirements. Note that physical channel numbers are used to identify virtual channels.
 - Use the **Channel Label** option in the Channel Menu to add familiar channel trademarks/logos such as ABC, CBS, NBC, etc. to the Channel-Time on-screen display. Identifiable labels (logos) should enable the end user to readily know what common networks are available. (You can add the channel labels in this step, or you can add channel logos or labels for channels without icons in step 5.)

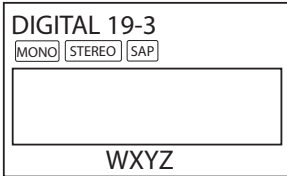


Run Auto Tuning, edit channels, and select familiar channel trademarks/logos using Channel Menu options.

4. Transfer the TV Setup to the internal TV Controller (PTC): 2-5-5 + MENU Mode

After the TV channel lineup has been edited and channel label icons added, enter the Installer Menu. Once in the Installer Menu, press **2-5-5 + MENU** on the Installer Remote to initiate the transfer of the Master TV Setup to the PTC. Once the transfer is complete, the TV will exit the Installer Menu.

Note: The maximum number of active channels that can be transferred is 141. Total channels numbering more than 141 will result in erratic TV operation.



Custom Text Label “WXYZ” created in 2-5-4 + MENU (Add Channel Label) Mode.

5. Add Custom Channel and Aux Source Labels for Analog Channels: 2-5-4 + MENU Mode

Enter the Installer Menu, and press **2-5-4 + MENU** on the Installer Remote. Add/edit custom text labels to channel on-screen displays. Note that digital channels often have a broadcaster generated label (see 2-5-4 + MENU procedural information on page 23). When you are finished, press **MENU** to exit 2-5-4 + MENU Mode.

6. Verify the TV setup.

At this point, verify that the channel lineup, channel icons, and custom labels are correct. Make sure the TV features are set per your requirements.

7. Lock the channel lineup.

Enter the Installer Menu, and set item **028 CH. OVERRIDE** to **000** to lock the channel lineup and restrict access to the TV setup menus.* Press **ENTER** to exit the Installer Menu and save your changes.

The Master TV Setup is now ready to be copied to a clone programmer (see cloning information in this document).



After verifying the TV Setup, set Installer Menu item 028 CH. OVERRIDE to 000.*

* This step prevents end users from accessing channel settings. In addition, selected picture, audio, and time settings will be inaccessible (i.e., grayed out).

Use the Installer Menu to set up or change operational settings. Refer to the table starting on the next page for brief descriptions of Installer Menu items. More detailed descriptions follow the table listing.

Accessing the Installer Menu

Make sure the TV is ON. Using an Installer Remote, press **MENU** repeatedly until the on-screen menu locks up, and then press **9-8-7-6** + **ENTER** to access the Installer Menu.

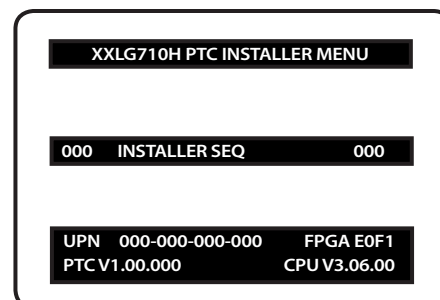
The Installer Menu opens with item 000 INSTALLER SEQ 000. Use the Up/Down arrow keys to sequence through the available menu items, or access an item directly by keying in the line number and then pressing **MENU**. For example, to access the SLEEP TIMER option, which is item 015, press 0-1-5 + **MENU**. To change a setting, use the Left/Right arrow keys, or enter a value directly.

Using the Installer Menu

Items 000 ~ 119 are immediately accessible only upon entering the Installer Menu. Refer to the table on pages 16 and 17 for an overview of Installer Menu items, including item numbers, functions, ranges, and default values. Installer Menu items not relevant to these TV series are not present on the Installer Menu; therefore, some numbers are missing. For example, item 006 will not appear.

Exiting the Installer Menu and Activating Updates

To exit the Installer Menu, press **ENTER** again. Any changes you make will be stored in non-volatile memory. Turn the TV OFF and then back ON to activate changes.



Typical TV Installer Menu

Installer Menu (Cont.)

Installer Menu Items 000 through 071

Menu Item	Function	Value Range	Default Value	Brief Description of Function and Comments
000	INSTALLER SEQ	0 ~ 3	0	Leave default set to 0.
001	POWER MANAGE	0 ~ 7	0	Sets number of hours of no activity before automatic shutoff.
002	AC ON	0 / 1	0	Set to 1 to enable Auto Turn ON when AC power is applied.
003	BAND/AFC	0 ~ 3	1	Selects Tuning Band: 0=Broadcast, 1=CATV, 2=HRC, 3=IRC
004	STRT CHANNEL	0 ~ 127, 255	255	Channel tuned when TV is turned ON. (Set to 255 to tune to channel tuned before TV turned OFF.)
005	CHAN LOCK	0 / 1	0	If set to 1, cannot tune from current channel.
007	STRT VOLUME	0 ~ 63, 255	255	Volume level when TV is turned ON. (Set to 255 to use volume level before TV turned OFF.)
008	MIN VOLUME	0 ~ 63	0	Sets minimum allowable volume setting.
009	MAX VOLUME	0 ~ 63	63	Sets maximum allowable volume setting.
010	MUTE DISABLE	0 / 1	0	Set to 1 to disable Mute Function.
011	KEY DEFEAT	0 / 1	0	Set to 1 to disable menu navigation keys on display panel.
015	SLEEP TIMER	0 / 1	1	Set to 1 to enable Sleep Timer.
016	EN TIMER	0 / 1	0	Set to 1 to enable On/Off Timers.
017	ALARM	0 / 1	1	Set to 1 to enable Alarm.
021	V-CHIP	0 / 1	1	Set to 1 to enable V-Chip (Parental Control) functions.
022	MAX BLK HRS	0 ~ 99	12	Sets number of V-Chip blocking hours.
023	CAPTION LOCK	0 / 1	0	Set to 1 to retain caption setting set before TV turned OFF.
028	CH. OVERRIDE	0 / 1	1	If set to 0, limits direct access to favorite channels.
029	OLD OCV	0 / 1	0	Set to 1 to change MPI operation to OCV.
030	ACK MASK	0 / 1	0	If set to 1, changes MPI for some OCV boxes.
031	POLL RATE	20 ~ 169	94	Selects poll rate for MPI.
032	TIMING PULSE	186 ~ 227	207	Sets baud rate for MPI.
034	CAMPORT EN	0 / 1	1	Set to 1 to enable Video 2 input.
035	COMPPORT EN.	0 / 1	1	Set to 0 to disable HDMI 1. Set to 1 enable HDMI 1.
038	YPrPb EN.	0 / 1	1	Set to 1 to enable display panel Component Video 1 input jacks.
039	REAR AUX EN	0 / 1	1	Set to 1 to enable display panel Video 1 input jack.
040	AUTO CAMPORT	0 / 1	1	Set to 1 to automatically switch to Camport. If set to 1, STRT AUX SRCE cannot be set to 2.
046	STRT AUX SRCE	1 ~ 6, 255	6	Sets the starting Aux source (if item 004 STRT CHANNEL is set to 0).
047	AUX STATUS	0 / 1	0	Set to 1 for MPI Aux source to be reported as a channel number instead of Channel 0.
053	DIS. CH-TIME	0 / 1	0	Set to 1 to disable Channel-Time display.
069	EN. CH-T COL.	0 / 1	1	Set to 1 to enable custom color for the Channel-Time display.
070	FOR. CH-TIME	0 ~ 7	2	Chooses custom foreground color for the Channel-Time display.
071	BCK. CH-TIME	0 ~ 7	2	Chooses custom background color for the Channel-Time display.

Installer Menu Items 073 through 119

Menu Item	Function	Value Range	Default Value	Brief Description of Function and Comments
073	CH NOT AVBLE	0 / 1	0	If set to 1 and Channel Override is 0, "NOT AVAILABLE" message is displayed when directly accessing a channel not in the favorite Channel List.
075	REVERT CH	0 / 1	0	If set to 1 and loss of MPI communication occurs, TV tunes to Start Channel.
078	UPN MSB	0 ~ 255	0	User programmable number, most significant byte.
079	UPN MSB-1	0 ~ 255	0	User programmable number, most significant byte - 1.
080	UPN MSB-2	0 ~ 255	0	User programmable number, most significant byte - 2.
081	UPN LSB	0 ~ 255	0	User programmable number, least significant byte.
082	CHKSM ERROR	0 / 1	1	Enforces rigid MPI checksum.
083	HANDSHK TIME	0 ~ 5	5	Relaxes MPI timing to be compatible with PC-based Windows-controlled systems.
084	PERMANENT BLK	0 / 1	0	Removes block hours setting for Parental Control and makes block permanent.
087	REAR RGB EN.	0 / 1 / 17 (LD65xH) 0 / 2 / 18 (LG710H)	1 (LD65xH) 2 (LG710H)	Dependent on item 093 RJP AVAILABLE setting. Set to 0 to disable RGB1. Set to 1 (LD65xH) / 2 (LG710H) to enable for RGB PC. Set to 17 (LD65xH) / 18 (LG710H) for Auto Configure.
088	EN NOISE MUTE	0 / 1	1	If set to 1, audio is muted if no signal is present.
090	KEY LOCK	0 / 1	0	If set to 1, keyboard is locked out, IR is still functional.
091	YPrPb2 EN	0 / 1	1	Set to 1 to enable HDMI 2 input.
093	RJP AVAILABLE	0, 1, 2, 5, 6	0	Set to 0 to disable. Set to 1, 2, 5, or 6 for HDMI or DVI Mode. (See detailed descriptions.)
094	SAP MENU EN	0 / 1	1	Set to 0 to disable feature on Function Menu. Set to 1 to enable feature on Function Menu.
096	DEF. ASP. RATIO	0 ~ 4	2	Sets default aspect ratio at power up. See detailed descriptions and item 106.
099	BACK LIGHTING	1 ~ 100, 101 ~ 200, 201, 202, 255	202	Sets the level of the TV picture back lighting. (See detailed descriptions.)
102	ATSC BAND	0 ~ 4	4	Selects ATSC band.
103	ATSC TUNE MODE	0 / 1	1	Set to 1 (default) for Physical Channel scan. Set to 0 for Virtual Channel scan.
104	START MINOR CH	0 ~ 255	0	Selects Minor Start Channel. Set to 0 for NTSC.
106	ASP RATIO LOCK	0 / 1	0	To retain set aspect ratio on power cycle, set to 1. Set to 0 for default ratio on power cycle.
116	VIDEO MUTE EN	0 / 1	0	Set to 0 for Normal. Set to 1 for Blank.
117	FACT DEFAULT	0 / 1	0	Set to 0 for Normal. Set to 1 to load presets for all Installer Menu settings.
118	POWER SAVINGS	1 / 3 / 7	3	If set to 1, the <i>b</i> -LAN module is always powered. If set to 3, the <i>b</i> -LAN module is only powered when TV is turned ON. If set to 7, the <i>b</i> -LAN module is never powered. For LD65xH TVs: If an MPI card is installed, POWER SAVINGS must be set to 1. (See detailed descriptions.)
119	DATA CHANNEL	0 ~ 135	0	Set to 0 to disable. Set to the RF channel number of the Data Channel for Pro:Centric operation.

Installer Menu (Cont.)

Detailed Descriptions of Installer Menu Items

000 - INSTALLER SEQUENCE

Specifies entry sequence to the Installer Menu.

0 = 9876	1 = 4321
2 = 1478	3 = 3698

001 - POWER MANAGE (Power Management)

Determines hours of no activity before automatic shutoff. The Power Management function is for saving energy. If set to 0, Power Manage is Off. Settings range from 0 ~ 7, with 1 ~ 7 representing the hours that the unit will remain ON, unless there has been activity from either the control panel or remote control.

002 - AC ON (AC Power Switchable)

If set to 1, this allows the TV to turn ON when AC power is applied. Pressing the ON button is not necessary. This is desirable if the TV is plugged into a cable box or a power outlet controlled by a wall switch. Use the Left/Right arrow keys to choose 0 or 1, where 0 is the default (OFF), and 1 is ON.

Note: If set to 1 (ON), the TV does not respond to On/Off commands from either the remote or the display control panel, and the SLEEP TIMER is also nonfunctional.

003 - BAND/AFC (Band/Automatic Frequency Control)

There are four possible settings for this option:

0 = Broadcast	1 = CATV (default)
2 = HRC	3 = IRC

If some channels were not found by Auto Tuning (Channel Search), select the appropriate Band setting here, and add the channels using the Channel Edit option in the Channel Menu.

004 - STRT CHANNEL (Start Channel)

If active, this function allows you to determine the initial channel number when the TV is turned ON. This feature is useful for an in-house information channel, since the TV would always select that channel when it is turned ON. Setting this to 255 causes the last channel viewed when the TV was turned OFF, to be the tuned to channel when the TV is turned ON again.

Note: For a digital Start Channel, always remember to set item 104 to the Minor Start Channel number.

255 = Last channel	1 ~ 125 = Ch X	0 = Aux
126 Map to Channel 3.	127 Map to Channel 4.	

005 - CHAN LOCK (Channel Lock)

Channel Lock is ideal if the system must always be on the same channel. Changing channels with the Channel Up/Down or keypad numbers is impossible. Channel Lock is inactive if set to 0 (default).

Generally, this feature is used in connection with STRT CHANNEL (Installer Menu item 004) where the Start Channel may, for example, be set to 3 or 4. If the Start Channel is 3, then the TV will remain locked on channel 3.

NOTE: For items 007, 008, and 009

For legacy reasons, the scale used is 0–63. The PTC software will translate this to the 0–100 scale used by the TV.

To translate a TV volume level to the Installer Menu value, use the following formula:

$$\text{Installer Value} = \frac{\text{TV Value} \times 63}{100}$$

Enter only the whole number (disregard fractions).

007 - STRT VOLUME (Start Volume)

This function allows the Installer to determine the initial volume level setting when the TV is turned ON. This feature is useful for an in-house information channel, since the TV would always select that volume level when it is turned ON. The range of values are 0–63, 255. If 255 is selected, the current volume level will be retained in memory when the TV is turned OFF; at turn ON, the volume level will be automatically set at the previous or last level.

008 - MIN VOLUME (Minimum Volume)

This function determines the minimum volume level allowable with the Volume (VOL) Up/Down control. In this way, for example, someone cannot set the volume too low to hear. The value range is from 0 to 63. Use the Left/Right arrow keys to change values. The factory default is 0, which provides the full range of volume control, if item 009 MAX VOLUME is also set to 63. It may be best to set the same value on every TV.

Note: The minimum volume level cannot have a value setting higher than the maximum volume level (described below).

009 - MAX VOLUME (Maximum Volume)

This function determines the maximum volume level allowable with the Volume (VOL) Up/Down control. In this way, for example, someone can not set the volume level high enough to disturb others. The value range is 0 to 63, with 63 as the default, which gives the user the full range of volume control, if item 008 MIN VOLUME is also set at 0. Use the Left/Right arrow keys to change values. It may be best to set the same value on every TV.

Note: The maximum volume level cannot have a value setting lower than the minimum volume level (described above).

010 - MUTE DISABLE

Enables or disables sound mute function. If set to 1, sound cannot be muted. If set to 0, sound can be muted.

011 - KEY DEFEAT (Keyboard Defeat)

If set to 1, KEY DEFEAT prevents the end user from accessing the on-screen menus from the display panel—MENU, ENTER, and menu navigation keys do not function. If set to 0, those keys do function.

Note: Users can always access the menus by pressing MENU on the remote.

015 - SLEEP TIMER

If set to 1, the Sleep Timer feature may be used. If set to 0, the Sleep Timer is not available.

016 - EN TIMER (Enable On/Off Timers) *

If set to 1, the Timer function is available to the end user and enabled continuously. Set to 0 to disable On/Off Timers.

Note: Clock must be set in order to use timers.

017 - ALARM *



Gives the installer the option of making the Alarm function available to the end user. If set to 1, the Alarm function is available to the end user. Set to 0 to disable the Alarm function.

Note: Clock must be set before the Alarm function will work.

021 - V-CHIP (Parental Control) *

Set to 1 to activate V-Chip (Parental Control) and have it available to the end user to filter and control or otherwise restrict programming content that can appear. Set to 0 to turn the V-Chip feature Off (not available to user); no programming restrictions can be set.

022 - MAX BLK HRS (Maximum Block Hours) *

Sets hours from 0 to 99 for the maximum V-Chip (Parental Control) block hours. Default setting is for 12 blocking hours.

023 - CAPTION LOCK

If set to 0, captions are OFF when the TV is turned ON. Set to 1 to use the caption setting configured before the TV was turned OFF when the TV is turned ON.

028 - CH. OVERRIDE (Channel Override)

If set to 1, the user can select channels with either Channel Up/Down or by direct keypad entry. If set to 0, only those channels that are active in the TV's memory can be selected.

029 - OLD OCV (On Command Video™)

Set to 1 for operation with systems from On Command Corporation.

030 - ACK MASK

MPI Communication Parameter. Leave at default setting unless changed by Pay-Per-View provider. When set to 1, changes MPI for some OCV boxes.

031 - POLL RATE

MPI Communication Parameter. Selects Poll Rate for MPI. Leave at default setting unless changed by Pay-Per-View provider. Step size of 16 ms.

032 - TIMING PULSE

MPI Communication Parameter. Leave at default setting unless changed by Pay-Per-View provider. Sets baud rate. Step size of 4.3 uS.

* Only affects Function Menu if enabled by some PPV providers.

034 - CAMPORT EN. (Camera Port Enable)

Set to 1 to enable Video 2 input on display panel. If set to 0, Video 2 input on display panel is not functional.

Note: S-Video overrides Video.

035 - COMPPORT EN. (Computer Port Enable)

Enable/disable TV display panel HDMI 1 input jack. Set to 0 to disable HDMI1. Set to 1 to enable HDMI1.

Note: This setting is ignored if item 093 RJP AVAILABLE is set to 1.

038 - YPrPb EN. (Rear Component Video Enable)

Set to 1 to enable display panel rear Component Video input jacks. Set to 0 to disable display panel rear Component Video input jacks.

039 - REAR AUX EN. (Rear Aux Enable)

Set to 1 to enable display panel rear Aux (Video 1) input. Set to 0 to disable display panel rear Aux (Video 1) input.

Note: S-Video overrides Video.

040 - AUTO CAMPORT

Set to 1 to automatically switch to Camport when equipment is connected to front Video input. Set to 0 to disable front Video automatic source selection.

Note: If set to 1, item 093 RJP AVAILABLE is automatically set to 0.

046 - STRT AUX SRCE (Start Aux Source)

Sets the starting Aux source. When turned ON, the TV will tune to starting Aux source if item 004 STRT CHANNEL is set to 0.

If item 093 RJP AVAILABLE is set to 0 and item 040 AUTO CAMPORT is set to 0:

1 = Video 1	4 = RGB	255 = Last Aux
2 = Video 2	5 = HDMI 2	
3 = HDMI 1	6 = Component	

If item 093 RJP AVAILABLE is set to 1:

2 = Video 2	5 = HDMI 2	6 = Component
-------------	------------	---------------

If item 040 AUTO CAMPORT is set to 1:

1 = Video 1	5 = HDMI 2
3 = HDMI 1	6 = Component
4 = RGB	

047 - AUX STATUS

Set to 1 for MPI Aux source to be reported as a channel number instead of channel 0. Set to 0 to disable Aux identification change. Controls MPI status channel response for Aux inputs.

053 - DIS. CH-TIME (Disable Channel-Time)

Set to 1 to disable the Channel-Time display; Channel-Time display will not appear. Set to 0 to enable the Channel-Time display.

069 - EN. CH-T COL. (Enable Channel-Time Custom Color)

Set to 1 to enable custom color for the Channel-Time display. Set to 0 to disable custom color for the Channel-Time display.

Installer Menu (Cont.)

070 - FOR. CH-TIME (Channel-Time Display Foreground Color)

Set according to Color Chart:

0 = Black	3 = Cyan	6 = Yellow
1 = Blue	4 = Red	7 = White
2 = Green	5 = Violet	

Note: If foreground color and background color are the same, the menu background will be transparent.

071 - BCK. CH-TIME (Channel-Time Display Background Color)

Set according to Color Chart:

0 = Black	3 = Cyan	6 = Yellow
1 = Blue	4 = Red	7 = White
2 = Green	5 = Violet	

Note: If foreground color and background color are the same, the menu background will be transparent.

073 - CH NOT AVBLE (Channel Not Available)

If set to 1 and item 028 CH. OVERRIDE is set to 0, a "NOT AVAILABLE" message is displayed when directly accessing a channel not in the channel scan list available in memory.

075 - REVERT CH (Revert to Start Channel)

If set to 1 and loss of MPI communication occurs, TV automatically tunes to the specified Start Channel.

078 - UPN MSB (UPN Most Significant Byte)

User programmable number, most significant byte readable by MPI command. Not linked to serial number.

079 - UPN MSB-1 (UPN Most Significant Byte-1)

User programmable number, most significant byte-1 readable by MPI command. Not linked to serial number.

080 - UPN MSB-2 (UPN Most Significant Byte-2)

User programmable number, most significant byte-2 readable by MPI command. Note: Not linked to serial number.

081 - UPN LSB (UPN Least Significant Byte)

User programmable number, least significant byte readable by MPI command. Note: Not linked to serial number.

082 - CHKSM ERROR (Checksum Error)

Enforces rigid MPI checksum validation. Set to 1 for validation. Set to 0 to disable (does not check checksum on MPI async port). SPI is always checked.

083 - HANDSHK TIME (Handshake Time)

Adds an additional delay to the handshake time which is 64 msec, thus relaxing MPI timing requirements to be compatible with PC-based Windows controlled systems. Range is 0 - 5. (Timeout = 25.5MS + [25.5 MS* Handshake time].)

084 - PERMANENT BLK (Permanent Block)

Allows Lock (Parental Control) blocking schemes to be permanent by disabling the blocking hours function. Set to 1 to install Parental Control restrictions permanently. Set to 0 for user-specified hours control of blocking schemes.

087 - REAR RGB EN. (Rear RGB Enable)

Controls access to rear RGB input on TV. Set to 0 to disable RGB input. Set to 1 (LD65xH) / 2 (LG710H) to enable for PC RGB input. Set to 17 (LD65xH) / 18 (LG710H) to initiate a one-time automatic configuration after an AC power cycle; otherwise, automatic adjustment will be performed each time the RGB input is accessed.

088 - EN NOISE MUTE (Enable Noise Mute)

If set to 1, audio mutes if no signal is present.

090 - KEY LOCK

If set to 1, front keyboard buttons Channel, Volume, and Captions are disabled, Power button remains enabled. If set to 0, front keyboard Channel, Volume, Captions and Power buttons are all enabled.

091 - YPrPb2 EN. (HDMI2 Enable)

Set to 0 to disable display panel HDMI2 input. Set to 1 to enable DTV mode. Set to 2 to enable PC mode.

093 - RJP AVAILABLE (Remote Jack Pack Available)

- 0 = Remote jack pack is not available or disabled.
- 1 = Legacy Model RJPs: HDMI Mode
Enables RJP feature for use with full cable bundle models. In this mode, when an HDMI source is connected to the RJP, both digital video and audio are expected via the HDMI cable. If no digital audio is present, no audio will be heard.
- 2 = Legacy Model RJPs: DVI Mode
Enables RJP feature for use with full cable bundle models. In this mode, when an HDMI/DVI source is connected to the RJP, only digital video is expected via the HDMI cable. Analog audio is provided via a separate cable, from the source, connected to an RJP AUDIO IN. If no analog audio cable is connected, tuner audio will be heard.
- 5 = Scaler Model RJPs: HDMI Mode
Enables RJP feature for use with reduced cable bundle models. In this mode, when an HDMI source is connected to the RJP, both digital video and audio are expected via the HDMI cable. If no digital audio is present, no audio will be heard.

- **6 = Scaler Model RJP: DVI Mode**
Enables RJP feature for use with reduced cable bundle models. In this mode, when an HDMI/DVI source is connected to the RJP, only digital video is expected via the HDMI cable. Analog audio is provided via separate cable, from the source, connected to an RJP AUDIO IN. If no analog audio cable is connected, tuner audio will be heard.

Notes:

See Reference section, "RJP Model List and Input Auto-sensing Hierarchy." If RJP AVAILABLE is set to 1, 2, 5, or 6, item 040 AUTO CAMPORT is automatically set to 0. Settings 1, 2, 5, and 6 allow the lodge staff to customize each TV's RJP setup based on customer requirements.

094 - SAP MENU EN (2nd Audio Program)

Set to 1 to enable SAP feature on Function menu, if Function menu is available. Set to 0 to disable SAP feature on Function menu, if Function Menu is available.

096 - DEF. ASP. RATIO (Default Aspect Ratio)

Selects default aspect ratio at power up.

- Set to 0 for Set By System.
- Set to 1 for 4:3.
- Set to 2 for 16:9 (Factory Default).
- Set to 3 for Just Scan.
- Set to 4 for Zoom.

Note: Only applies if item 106 ASP RATIO LOCK is disabled, set to 0.

099 - BACK LIGHTING

Sets the TV screen brightness at power up. Default setting is 202.

- 1 - 100 Static Back Lighting
(1 = Dimmest picture, 100 = Brightest picture)
- 101 - 200 Dynamic Back Lighting
(101 = Dimmest picture, 200 = Brightest picture)
- 201 Automatic Static Back Lighting
- 202 Automatic Dynamic Back Lighting
- If set between 101 and 200, the TV automatically controls back lighting depending upon the picture level of the current program.
- If set to 201, the TV automatically controls back lighting depending upon external spectral sensitivity.
- If set to 202, the TV automatically controls back lighting depending upon external spectral sensitivity and the picture level of the current program.
- If set to 255, back lighting is controlled via the Picture settings in the TV's setup menus.

102 - ATSC BAND

Sets up TV to receive different types of incoming signals: 0=Broadcast, 1=CATV, 2=HRC, 3=IRC, 4=Same as NTSC.

103 - ATSC TUNE MODE

Sets ATSC tuning mode: Default set to 1 for Physical Channel scan. Set to 0 for Virtual Channel scan.

104 - START MINOR CHANNEL

Sets XXX-XXX digital Minor Start Channel at power up. 0=NTSC. If not 0, number selected is the digital Minor Start Channel number.

106 - ASP RATIO LOCK (Aspect Ratio Lock)

Set to 1 to retain previous aspect ratio with power off. Set to 0 to retain default aspect ratio with power off. See item 096 DEF. ASP. RATIO above.

116 - VIDEO MUTE EN (Video Mute Enable)

Set to 0 for Normal. Set to 1 for Blank.

117 - FACT DEFAULT (Factory Default)

Set to 0 for normal. Set to 1 to load presets of all Installer Menu item settings.



Warning: If set to 1, this will reload the factory defaults and clear the Channel List, including any assigned channel icons and custom channel labels.

118 - POWER SAVINGS

Default is set to 3. When the TV is in Standby mode, the MPI card slot is powered by the Standby power supply and embedded *b*-LAN is not powered. When the TV is in Power On mode, the MPI card slot is powered by the main 12V power supply and embedded *b*-LAN is powered. Note that the TV must be turned ON in order to communicate with the Embedded *b*-LAN module for configuration and control when POWER SAVINGS is set to 3.

Note: MPI cards with *b*-LAN technology—LMT7Z5, LMT7Z7, LMT7Z9—are NOT supported on TVs in which the *b*-LAN module is embedded.



Warning for LD65xH TVs: If an MPI card is installed, POWER SAVINGS must be set to 1. The default setting does not support this feature.

- 1 = MPI card slot Standby Mode power provided from Standby power supply, and Embedded *b*-LAN is always powered.
- 3 = MPI card slot Standby Mode power provided from Standby power supply, and Embedded *b*-LAN is only powered when the TV is turned ON.
- 7 = MPI card slot Standby Mode power provided from Standby power supply, and Embedded *b*-LAN (including the Pro:Centric data tuner) is never powered.

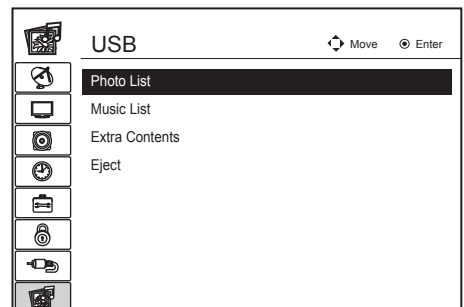
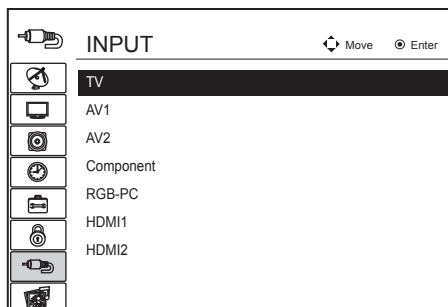
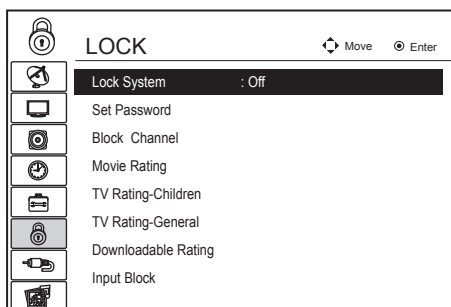
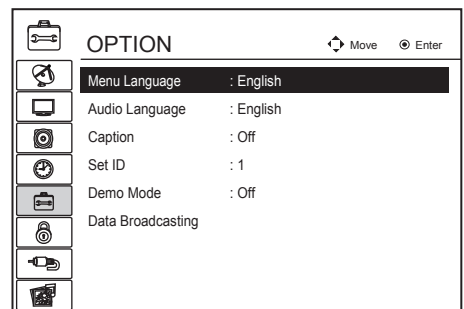
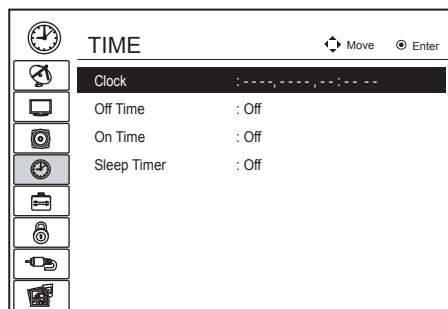
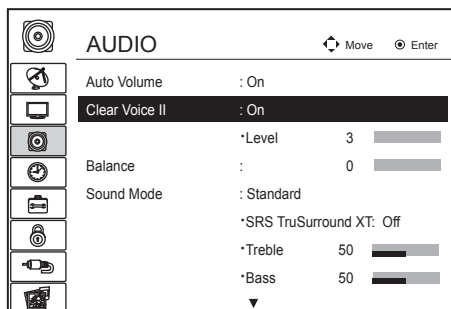
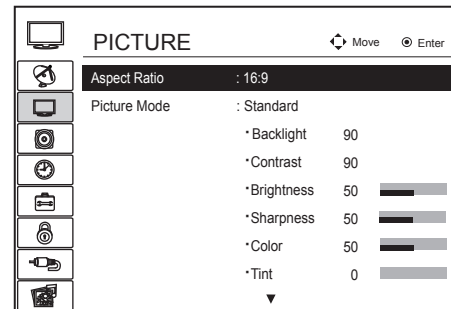
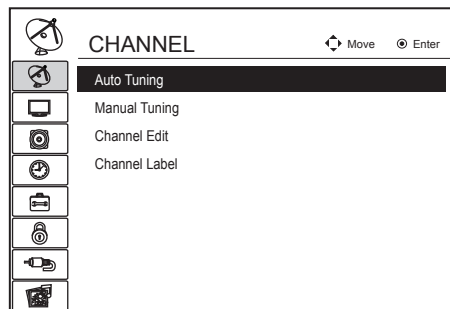
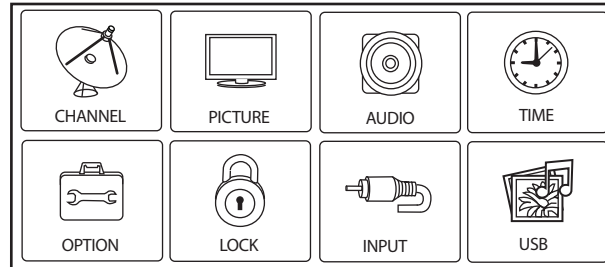
Note: See Reference section, "*b*-LAN Setup & Overview," for further information.

119 - DATA CHANNEL

Set to 0 (default) to disable. Set to the RF channel number of the Data Channel for Pro:Centric operation. The TV may take several minutes to load EPG data after AC power is initially applied.

TV Setup Menus Overview

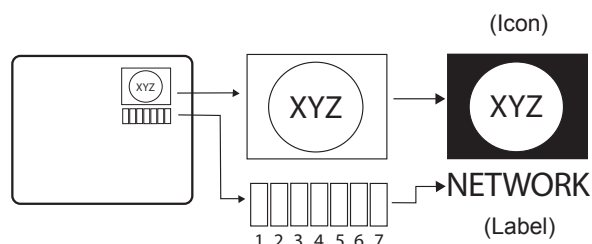
On-screen setup menus control the features of the TV. Press **MENU** on the Installer Remote to access the TV setup menus, and set the TV features to the desired configuration for the end user.



Adding Channel Label Icons / Custom Channel Labels (2-5-4 + MENU Mode)

Editing/Adding Channel Icons and/or Labels

If there is no pre-assigned icon, you can make a custom channel label of up to seven (7) characters to help identify a channel or network. If desired, channel labels can also be added in addition to a pre-assigned icon. You may also add labels for the Aux input sources to clearly identify the devices that are connected to the Aux inputs.



Editing and adding the labels can only be done if there are channels entered into the TV's Channel Map either during Commercial Mode Setup (see pages 13 to 14), by cloning, or by using some PPV provider's master remote controls.

Note: A blank letter space is available between "Z" and "I".

To perform channel editing/labeling:

1. Enter the TV Installer Menu.
2. Press **2-5-4 + MENU** on the Installer Remote to enter the Channel Label Editing Mode.
3. Add channel icons and channel labels as described in the procedures below. (You can do this more than once.)
4. To exit the menu when you are done, press **MENU**.

Changing a Channel's Icon on the Master TV

1. Use Channel Up/Down to select the channel for which to change the icon.
2. Use the Left/Right arrow keys to select the thin letter "I" on the Channel ID display.
3. Use the Up/Down arrow keys to select the icon with which you want to identify the channel. (If you know the icon number, enter the number, and press **ENTER**.)
4. Proceed to change/add channel labels, or go to the next channel.

Changing/Adding Channel Labels on the Master TV

1. Use Channel Up/Down to select the desired channel.
2. Press the Left/Right arrow repeatedly until the numbers 1 to 7 appear on the display. The number shows the position of the character that can be changed. Number 1 is the first character, number 2 the second character, etc.
3. Use the Up/Down arrow keys to select the desired character.
4. Proceed to the next number position, or use Channel Up/Down to go to the next channel.

Changing Source Labels on the Master TV

1. Press **INPUT** to select the desired Aux input source: A/V 1, A/V 2, HDMI Component, RGB, etc.
2. Press the Left/Right arrow repeatedly until the numbers 0 to 9 appear on the display. The number shows the position of the character that can be changed.
3. Use the Up/Down arrow keys to select the desired character.
4. Press **INPUT** for the next Aux source, or proceed to change an icon or change/add labels. Use Channel Up/Down to return to channels.

Installer Remote Control Key Functions for Master TV Channel Editing/Labeling Menu

- **Channel Up/Down:** Tunes in the next channel in scan.
- **Left/Right Arrows:** Select the item to change. If "I" is shown, the icon can be changed. If a number is shown, it indicates the position of the character that can be changed.
- **Up/Down Arrows:** Select the icon or the character to be displayed. Tip: Arrows can be held down for fast scrolling.
- **0 – 9:** Use to enter the index number of the icon, if known.
- **ENTER:** Changes the icon after the number has been entered.
- **INPUT:** Changes the Aux input label.
- **MENU:** Exits the editing process.

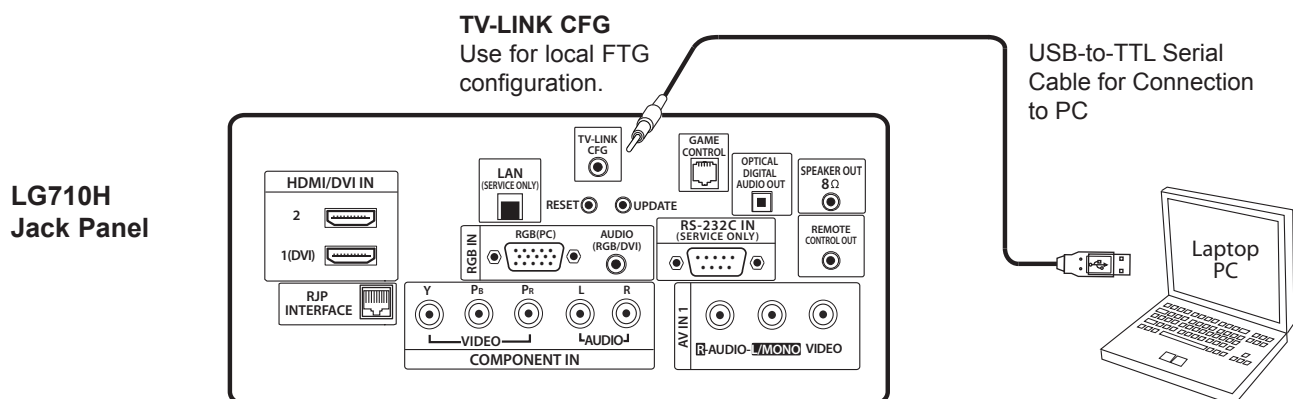
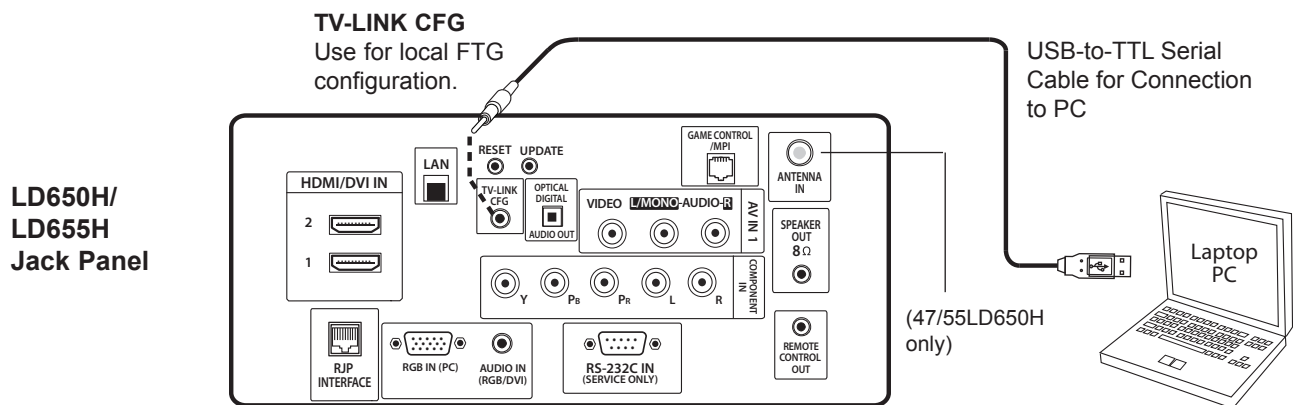
FTG Mode of Operation

FTG Configuration Overview

The following steps outline local FTG configuration of individual TVs. Since these models are equipped with the EBL module, they can also be broadcast configured in FTG Mode by a Free-To-Guest Management Appliance (FMA) head end device. Refer to the **Free-To-Guest (FTG) Configuration Application** manual and/or the Installation & Setup manual for the FMA device for further information.

Note: FTG Configuration Application software is available online at: www.LGcommercial.com/FTGsoftware.

1. Install (if necessary) and launch the FTG Configuration Application (v5.0.0 or higher) on the PC that will be used to configure the EBL.
2. Build a Channel Map using the FTG Channel Map Editor in the FTG Channel Map Configuration Utility (or, if applicable, open an existing FTG Configuration (.rml) file).
3. If not already done, connect the PC to the TV-LINK CFG jack on the rear connections panel using a USB-to-TTL serial cable (TTL-232R-5V-AJ).
4. "Write" the FTG Channel Map to the EBL (converts EBL from Pass-through Mode to FTG Mode).
5. "Read" the current FTG Installer Menu settings from the EBL using the FTG Installer Menu Configuration Utility. If necessary to make changes to Installer Menu items, "Write" them back to the EBL in FTG Mode.
6. Save the FTG Channel Map and FTG Installer Menu settings to an FTG Configuration (.rml) file for future use.
7. Tune the TV to a Logical Channel in the FTG Channel Map.

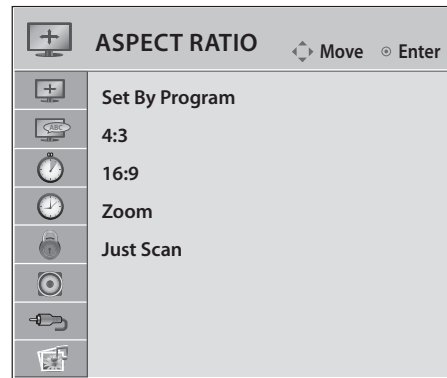


FTG Mode of Operation (Cont.)

Determining the TV Operating Mode / FTG Channel Map Configuration Utility Overview

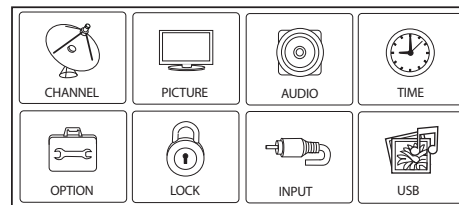
To determine the operating mode of the TV, press **MENU** on the Installer Remote. If the end user Function Menu (showing aspect ratio options—see below) appears, the TV/EBL is in FTG Mode. If the TV setup menus appear, the EBL is in Pass-through Mode.

The following pages provide overviews of the FTG Channel Map and FTG Installer Menu Configuration Utilities that comprise the FTG Configuration Application. Refer to the **Free-To-Guest (FTG) Configuration Application** manual for further information.



Function Menu

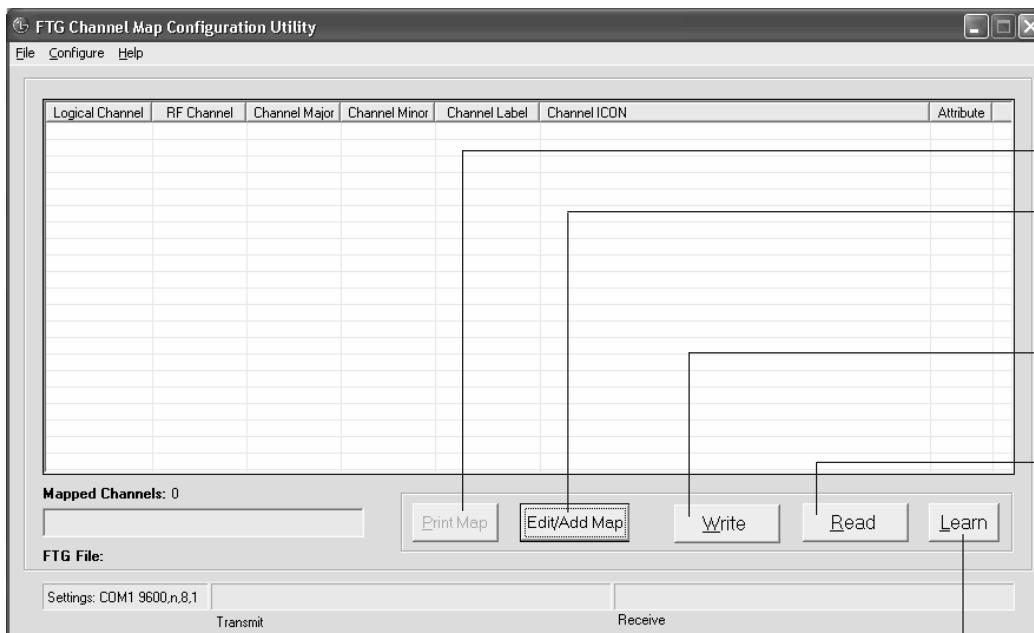
Shows that the EBL is in FTG Mode. While this menu is present on-screen, Installer Menu settings can ONLY be accessed/changed using the FTG Configuration Application.



TV Setup Menus

Shows that the EBL is in Pass-through Mode.

Writing an FTG Channel Map into the EBL will switch the EBL from Pass-through Mode to FTG Mode.



PRINT MAP

Click to display a printable FTG Channel Map Report. The report can also be exported as an HTML or Text file.

EDIT/ADD MAP

Click to open the FTG Channel Map Editor to create or edit an FTG Channel Map (see next page).

WRITE

Click to transfer the FTG Channel Map to the EBL.

READ

Click to transfer the FTG Channel Map from the EBL to the FTG Configuration Application.

FTG CHANNEL MAP CONFIGURATION UTILITY

LEARN

Click to transfer the TV Channel Map from the PTC to the EBL and the FTG Configuration Application. (Requires that 2-5-5 + MENU was performed to transfer TV Channel Map to PTC.) *

* Logical Channel numbers will automatically be assigned in ascending order, starting with 0 (zero), to the Physical Channels from the TV Channel Map.

FTG Mode of Operation (Cont.)

FTG Channel Map Configuration Utility / FTG Channel Map Editor Overview

The FTG Channel Map Editor shows a single Logical Channel's Data and the FTG Channel Map.

LOGICAL CHANNEL MAPPING

Select a Logical Channel number, then assign it the RF, Major, and Minor channel numbers to complete the mapping.

CUSTOM CHANNEL LABELS/ICONS

Enter custom labels and select icons by name on menu or by number.

SET CHANNEL ATTRIBUTES

Check/select Encrypted, OSD, or Blank Video.

Logical Channel	RF Channel	Channel Major	Channel Minor	Channel Label	Channel ICON	Attribute
2	2	2	0	WBBM-TV	14 - CBS	0
5	5	5	0	WMAQ-TV	15 - NBC	0
7	7	7	0	WLS-TV	13 - ABC	0
9	9	9	0	WGN-TV	89 - WGN	0
11	11	11	0	WTTW	17 - PBS	0
14	31	31	3	FOX	16 - FOX	0
15	19	19	3	WGN	89 - WGN	0
16	47	47	4	KIDS	133 - PBS Kids	0
17	27	27	3	THE U	174 - UPN	0
40	65	65	1	HBO-HD	12 - HBO	EO
41	66	66	1	ESPN-HD	2 - ESPN	EO
42	67	67	1	ESPN2HD	21 - ESPN2	EO
43	68	68	1	TNT-HD	4 - TNT	EO
44	69	69	1	HDNET	161 - HDNet	EO
52	74	74	1	STARZHD	33 - Starz	EO
53	75	75	1	HISTHD	58 - History	EO
54	76	76	1	M&M-HD	47 - Cinemax	EO

UPDATE

After editing an existing Logical Channel's data, click to commit the changes in the FTG Channel Map.

ADD

After defining a new Logical Channel, click to add channel to the FTG Channel Map.

DELETE

Click to remove highlighted channel from FTG Channel Map.

EXIT

Click to exit editor and return to FTG Channel Map Configuration Utility.

FTG Mode of Operation (Cont.)

FTG Installer Menu Configuration Utility Overview

CONFIGURATION SETTINGS

Select tabs for categories of Installer Menu items to set up TV.

HOSPITAL-GRADE TV ONLY

Set Hospital items on Installer Menu for hospital-grade TVs.

INSTALLER DEFAULTS

Click to reset FTG Installer Menu items shown in the FTG Configuration Application to defaults.

IR REMOTE ACCESS

Toggle IR Remote Access to ON to obtain access to TV setup menus and Installer Menu.

WRITE

Click to transfer the FTG Installer Menu settings to the EBL.

LEARN

Click to transfer Installer Menu settings from the PTC to the EBL and FTG Configuration Application. *

READ

Click to transfer the Installer Menu settings in the EBL to the FTG Configuration Application.

* Logical Channel numbers will automatically be assigned in ascending order, starting with 0 (zero), to the Physical Channels from the TV Channel Map.

Cloning Overview / Clonable Menu Features

IMPORTANT CLONING INFORMATION

There are three options for cloning a Master TV Setup:

- Using a USB memory device
- Using a TLL-1100A clone programmer
- Using a LT2002 clone programmer

Each option is described in further detail on the pages that follow. As you perform cloning procedures, be sure to complete each task as indicated. If a procedure or step is omitted or not performed completely, cloning may not work. At each step, pay attention to ensure the TV screen shows the proper message when cloning. If the message indicated does not appear, there is a problem with that step, and cloning may not be successful.



Warning: Copying a blank or incorrect memory into a TV, STB, or other device will cause the TV, STB, or other device to operate erratically or become inoperable.



Warning: Do not connect a clone programmer to any PPV card installed in the Master TV or any MPI port while the TV is in PPV Mode, or the clone programmer and the PPV card will be damaged.

Before you begin cloning:

- Complete the Commercial Mode Setup procedure on pages 13 to 14.
- The Master TV EBL must be in Pass-through Mode.
- Ensure the Master TV is connected to a good, stable signal source, the TV source selected is Antenna (RF) In, and the signal is from an Aux source or analog (not a digital) channel.
- All equipment should be connected to power and turned ON.
- Learning and Teaching is only possible between identical model TV/STBs.
- Make sure the batteries in the clone programmer, if applicable, are fresh. If batteries are removed, the Clone Clock Time will be lost.
- If using a USB memory device, ensure the memory device has been formatted with FAT format.
- If using a clone programmer, decide if you want to set the time from the clone programmer or copy the time to the clone programmer from a compatible TV which has the clock set to the current time.

Clonable Menu Features

Installer Menu

Installer Menu item settings

Channel

Auto Tuning (Channel Lineup)
Channel Edit
Channel Label

Picture

Aspect Ratio
Picture Mode
Advanced Control

Audio

Auto Volume
Clear Voice
Sound Mode
Balance
TV Speaker

Option

Menu Language
Audio Language
Caption
Caption Mode
Digital Caption Options

Lock

Movie Rating
TV Rating – Children
TV Rating – General
Input Block

Time

Auto Clock
Manual Clock
Off Time
On Time
Auto Off (Sleep Timer)

Note: Menu options vary between analog and digital channels and Aux sources.

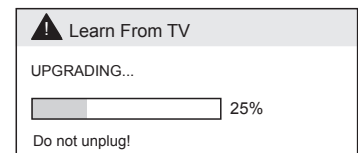
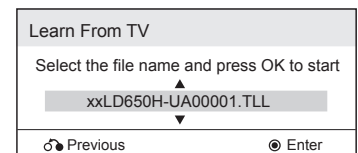
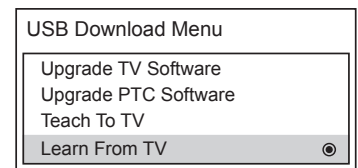
Learning / Teaching a Master TV Setup using a USB Memory Device

USB Cloning Notes

- Read the IMPORTANT CLONING INFORMATION on page 28 before beginning any cloning procedures.
- Do not remove the TV power cord or the USB memory device while Learning or Teaching, as doing so may harm the USB memory device.
- You may edit a filename as part of the Learning procedure; however, a file with edited contents will not be recognized.
- Since clock data is copied into the USB memory device as numeric data, the time difference between Teaching and Learning is not automatically adjusted. Either set the clock manually, or use the Auto Clock setting in the TV setup menus.

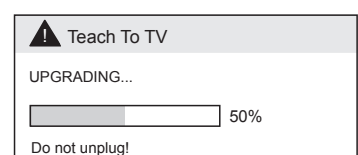
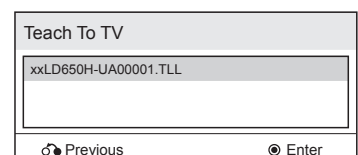
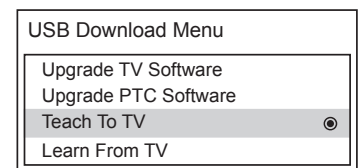
Learn Setup from Master TV

1. Ensure the Master TV is set up completely and the EBL is in Pass-through Mode.
2. Plug the USB memory device into the USB IN port on the Master TV.
3. Press **MENU** to display the TV setup menus.
4. Use the arrow navigation keys to select/highlight the **Option** menu icon; then, press the number “7” key a total of seven times to display the USB Download Menu.
5. To gain access to the Learn From TV option in the USB Download Menu, key in the password used to enter the Installer Menu (Example: Press **9-8-7-6**).
6. Use the Up/Down arrow keys to select **Learn From TV** and press **ENTER**.
7. To identify the profile from others, you can use the Up/Down arrow keys to change the last five digits of the filename. Press **ENTER** when you are ready to initiate Learning.
Learning status will be shown on the progress bar. When the Learning process is complete, the USB Download menu will reappear on screen.
8. Remove the USB memory device.



Teach Master TV Setup to Target TV

1. Plug the USB memory device with the Master TV Setup file into the Target TV USB IN port.
2. Press **MENU** to display the TV setup menus.
3. Use the arrow navigation keys to select/highlight the **Option** menu icon; then, press the number “7” key a total of seven times to display the USB Download Menu.
4. Use the Up/Down arrow keys to select **Teach To TV** and press **ENTER**.
5. Use the Up/Down arrow keys to select/highlight the Master TV Setup you want to install and press **ENTER**. Note: Filenames identify the TV and the TLL version (see figure at right).
Teaching status will be shown on the progress bar. When the Teaching process is complete, the USB Download menu will reappear on screen.
6. When Teaching is done, remove the USB memory device, turn OFF the TV, and unplug the TV power cord for 15 seconds.
7. Reconnect the TV power cord, and turn ON the TV. The Master TV Setup should be resident on the Target TV.



Cloning Procedures (Cont.)

Learning / Teaching a Master TV Setup using a TLL-1100A Clone Programmer

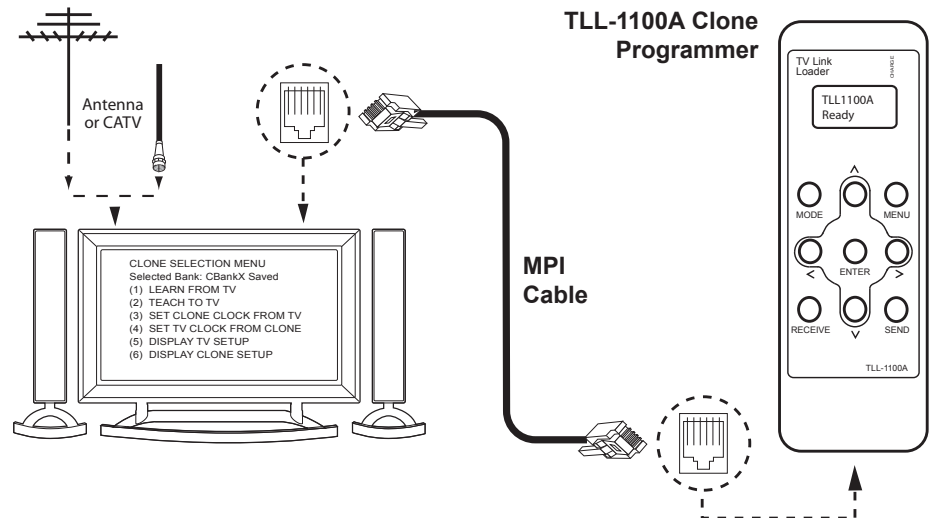


Warning: Do not connect a clone programmer to any PPV card installed in the Master TV or any MPI port while the TV is in PPV Mode, or the clone programmer and the PPV card will be damaged.

Cloning is accomplished using the TV/clone programmer MPI ports for communication (see figure).

TLL-1100A Cloning Notes

- Read the IMPORTANT CLONING INFORMATION on page 28 before beginning any cloning procedures.
- Ensure the TLL-1100A is either fully charged or connected to AC power.
- Teaching and Learning is only possible between identical model TVs/STBs; however, the TLL-1100A clone programmer can store up to eight different Master TV Setups.



Learn Setup from Master TV

1. Ensure the Master TV is set up completely and the EBL is in Pass-through Mode.
2. If an analog channel is not available, tune the TV to an Aux source, such as AV-1. Then, plug one end of the MPI cable into the TV MPI port.
3. Turn ON the TLL-1100A.
4. Use the **MODE** button on the TLL-1100A to select **Clone Mode**.
5. Use the Left/Right arrows on the TLL-1100A to select the Memory CBank (1 to 8) in which to store the Master TV Setup.
6. Plug the other end of the MPI cable into the MPI port on the bottom of the TLL-1100A. The Clone Selection Menu will display on the TV screen.
7. Press **1** on the Installer Remote to select **LEARN FROM TV** from the Clone Selection Menu. Then, press **ENTER** to transfer the Master TV Setup into CBankX on the TLL-1100A.

Learning usually takes about 90 seconds. "LEARNING IN PROGRESS" will be displayed on the screen while the TLL-1100A copies the Master Setup. When the Learning process is complete, a "LEARNING COMPLETE" message will be displayed.

CLONE SELECTION MENU
Selected Bank: CBankX Saved
(1) LEARN FROM TV
(2) TEACH TO TV
(3) SET CLONE CLOCK FROM TV
(4) SET TV CLOCK FROM CLONE
(5) DISPLAY TV SETUP
(6) DISPLAY CLONE SETUP

CLONE CLOCK = XX:XX
TV CLOCK = XX:XX
THE CLONE IS VERSION VX.X.X
- To change menu items, press channel keys or digits.
- To execute item, press Enter.

Learning / Teaching a Master TV Setup using a TLL-1100A Clone Programmer (Cont.)

(Optional) Set the Clock

Set the time on a Master TV's clock. (If the time has already been copied from a TV into the TLL-1100A clone programmer, you can set the Master TV's clock by copying the time from the clone programmer.) The TLL-1100A can copy the current time to both a Master TV and to the clone's internal clock—accurate to within one minute.

Since the TLL-1100A's time cannot be set directly, the current time needs to be copied from an LG TV equipped with MPI input capability.

After the time is copied to the TLL-1100A clone programmer, the current time can then be transferred to another TV. (This can be a Master TV or another TV which has already had the features set up.)

CLONE SELECTION MENU
Selected Bank: CBankX Saved
(1) LEARN FROM TV
(2) TEACH TO TV
→ (3) SET CLONE CLOCK FROM TV
→ (4) SET TV CLOCK FROM CLONE
(5) DISPLAY TV SETUP
(6) DISPLAY CLONE SETUP

CLONE CLOCK = XX:XX
TV CLOCK = XX:XX
THE CLONE IS VERSION VX.X.X
- To change menu items, press channel keys or digits.
- To execute item, press Enter.

Teach Master TV Setup to Target TV

1. When Learning is complete, disconnect the MPI cable from the Master TV, and connect it to the MPI port on the Target TV. The Clone Selection Menu will display on the TV screen.

2. Ensure the correct Memory CBank(X) is selected on the TLL-1100A.

3. Press **2** on the Installer Remote to select **TEACH TO TV** from the Clone Selection Menu. Then, press **ENTER** to transfer the Master TV Setup to the Target TV.

Teaching usually takes 3 to 4 minutes. "TEACHING IN PROGRESS" will be displayed on the screen during Teaching. When the Teaching process is complete, a "TEACHING COMPLETE" message will be displayed.

4. When Teaching is done, disconnect the MPI cable from the Target TV, turn OFF the TV, and unplug the TV power cord for 15 seconds.

5. Reconnect the TV power cord, and turn ON the TV. The Master TV Setup should be resident on the Target TV.

CLONE SELECTION MENU
Selected Bank: CBankX Saved
(1) LEARN FROM TV
(2) TEACH TO TV
(3) SET CLONE CLOCK FROM TV
(4) SET TV CLOCK FROM CLONE
(5) DISPLAY TV SETUP
(6) DISPLAY CLONE SETUP

CLONE CLOCK = XX:XX
TV CLOCK = XX:XX
THE CLONE IS VERSION VX.X.X
- To change menu items, press channel keys or digits.
- To execute item, press Enter.

Cloning Procedures (Cont.)

Learning / Teaching a Master TV Setup using an LT2002 Clone Programmer

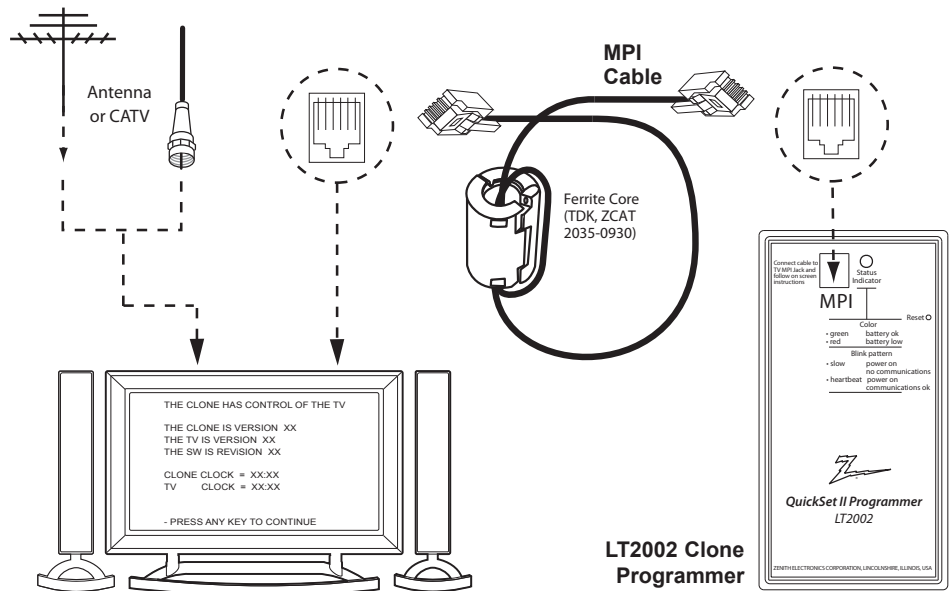


Warning: Do not connect a clone programmer to any PPV card installed in the Master TV or any MPI port while the TV is in PPV Mode, or the clone programmer and the PPV card will be damaged.

Cloning is accomplished using the TV/clone programmer MPI ports for communication (see figure).

LT2002 Cloning Notes

- Read the IMPORTANT CLONING INFORMATION on page 28 before beginning any cloning procedures.
- A slow flashing green light indicates that there are communication problems between the TV and the LT2002 clone programmer. If this is the case, check for a damaged cable, poor contacts, or other connection troubles.
- If the status indicator is red, the LT2002 batteries are low and should be replaced. Install four (4) high-quality alkaline AA batteries.
- Teaching and Learning is only possible between identical model TVs/STBs; however, the LT2002 clone programmer can store up to three different Master TV Setups.



Learn Setup from Master TV

1. Ensure the Master TV is set up completely and the EBL is in Pass-through Mode.
2. If an analog channel is not available, tune the TV to an Aux source, such as AV-1. Then, plug one end of the MPI cable into the TV MPI port.
3. If there is a good connection after the LT2002 is connected to the TV MPI port, "THE CLONE HAS CONTROL OF THE TV" message will appear on the TV screen. Press any key on the Installer Remote to access the LT2002 Clone Selection Menu.
4. Press **1** on the Installer Remote to select **LEARN FROM TV** from the Clone Selection Menu; then press **ENTER** to proceed to the Memory Bank Selection Menu (see sample screen on next page).
5. Select the clone Memory Bank in which to store the Master Setup by pressing either Channel key repeatedly to choose Memory Bank 1, 2, or 3. Note: If you choose a Memory Bank that already has a Master device's setup programmed into it, that setup will be overwritten by the new Master TV Setup.

THE CLONE HAS CONTROL OF THE TV

THE CLONE IS VERSION XX
THE TV IS VERSION XX
THE SW IS REVISION XX

CLONE CLOCK = XX:XX
TV CLOCK = XX:XX

- PRESS ANY KEY TO CONTINUE.

- DISCONNECT CLONE WHEN DONE.

CLONE SELECTION MENU

- (1) LEARN FROM TV
- (2) TEACH TO TV
- (3) SET CLONE CLOCK FROM TV
- (4) SET TV CLOCK FROM CLONE
- (5) DISPLAY TV SETUP
- (6) DISPLAY CLONE SETUP

- TO CHANGE MENU ITEMS, PRESS CHANNEL KEYS OR DIGITS.

- TO EXECUTE ITEM, PRESS ON/OFF, POWER, OR ENTER.

(Continued on next page)

Learning / Teaching a Master TV Setup using an LT2002 Clone Programmer (Cont.)

(Continued from previous page)

6. Once you select the clone Memory Bank, press **ENTER** on the Installer Remote. The Memory Bank you selected will be shown.
7. Press **POWER** to transfer the Master TV Setup into the selected Memory Bank on the LT2002.

Learning usually takes about 90 seconds. "LEARNING IN PROGRESS" will be displayed on the screen while the LT2002 copies the Master Setup. When the Learning process is complete, a "LEARNING COMPLETE" message will be displayed.

SAVE TV SETUP IN SELECTED CLONE MEMORY

- (1) MEMORY 1 VER XX REV XX
- (2) MEMORY 2 VER XX REV XX
- (3) MEMORY 3 VER XX REV XX
- (4) RETURN TO CLONE MENU

- TO CHANGE MENU ITEMS, PRESS CHANNEL KEYS OR DIGITS.

- TO EXECUTE ITEM, PRESS ON/OFF, POWER, OR ENTER.

(Optional) Set the Clock

Set the time on a Master TV's clock. (If the time has already been copied from a TV into the LT2002 clone programmer, you can set the Master TV's clock by copying the time from the clone programmer.) The LT2002 can copy the current time to both a Master TV and to the clone's internal clock—accurate to within one minute. (Another reason that the LT2002 should be equipped with fresh, high-quality alkaline batteries, is for it to keep the time as accurately as possible.)

Since the LT2002's time cannot be set directly, the current time needs to be copied from an LG TV equipped with MPI input capability.

After the time is copied to the LT2002 clone programmer, the current time can then be transferred to another TV. (This can be a Master TV or another TV which has already had the features set up.)

CLONE SELECTION MENU

- (1) LEARN FROM TV
- (2) TEACH TO TV
- (3) SET CLONE CLOCK FROM TV
- (4) SET TV CLOCK FROM CLONE
- (5) DISPLAY TV SETUP
- (6) DISPLAY CLONE SETUP

- TO CHANGE MENU ITEMS, PRESS CHANNEL KEYS OR DIGITS.

- TO EXECUTE ITEM, PRESS ON/OFF, POWER, OR ENTER.

Teach Master TV Setup to Target TV

1. When Learning is complete, disconnect the MPI cable from the Master TV, and connect it to the MPI port on the Target TV.
2. With "THE CLONE HAS CONTROL OF TV" message on display, press **2** on the Installer Remote to select **TEACH TO TV** from the LT2002 Clone Selection Menu. Then, press **ENTER**.
3. Select the LT2002 Memory Bank in which the new setup is located. Then, press **POWER** to transfer the Master TV Setup to the Target TV.

Teaching usually takes 3 to 4 minutes. "TEACHING IN PROGRESS" will be displayed on the screen during Teaching. When the Teaching process is complete, a "TEACHING COMPLETE" message will be displayed.

4. When Teaching is done, press any key on the Installer Remote to return to the Clone Selection Menu. Then, press **ENTER**.
5. Disconnect the MPI cable from the Target TV, turn OFF the TV, and unplug the TV power cord for 15 seconds.
6. Reconnect the TV power cord, and turn ON the TV. The Master TV Setup should be resident on the Target TV.

CLONE SELECTION MENU

- (1) LEARN FROM TV
- (2) TEACH TO TV
- (3) SET CLONE CLOCK FROM TV
- (4) SET TV CLOCK FROM CLONE
- (5) DISPLAY TV SETUP
- (6) DISPLAY CLONE SETUP

- TO CHANGE MENU ITEMS, PRESS CHANNEL KEYS OR DIGITS.

- TO EXECUTE ITEM, PRESS ON/OFF, POWER, OR ENTER.

COPY SELECTED CLONE MEMORY TO TV

- (1) MEMORY 1 VER XX REV XX
- (2) MEMORY 2 VER XX REV XX
- (3) MEMORY 3 VER XX REV XX
- (4) RETURN TO CLONE MENU

- TO CHANGE MENU ITEMS, PRESS CHANNEL KEYS OR DIGITS.

- TO EXECUTE ITEM, PRESS ON/OFF, POWER, OR ENTER.

Remote Jack Pack / TV Connections & Setup

Remote Jack Pack Setup

RJP Available? If you will use a Remote Jack Pack (RJP) in your system, set Installer Menu item **093 RJP AVAILABLE** appropriately (for example, on a legacy model RJP: HDMI Mode, set RJP AVAILABLE to 001). See Installer Menu detailed descriptions for further information.

093 RJP AVAILABLE 001

TV Connections

! Make these connections **ONLY** after Commercial Mode Setup and Cloning Master TV procedures are complete.

Refer to the appropriate figure below, and connect the RJ-45 Control cable from the RJP cable bundle to the RJP INTERFACE port on the TV's jack panel. Then, connect HDMI, RGB, and Composite Video/Audio connectors, as applicable, for the cable bundle.

LD650H/LD655H Jack Panel

HDMI/DVI IN 1
Connect HDMI connector from RJP cable bundle.

RJP INTERFACE
Connect RJ-45 Control cable from RJP cable bundle.

RGB IN (PC)
Connect RGB connector from RJP cable bundle (legacy RJP only).

(47/55LD650H only)

AUDIO/VIDEO IN 1
Connect Composite Video/Audio connectors from RJP cable bundle. (Composite Video on legacy RJP only.)

LG710H Jack Panel

RGB IN (PC)
Connect RGB connector from RJP cable bundle (legacy RJP only).

HDMI/DVI IN 1
Connect HDMI connector from RJP cable bundle.

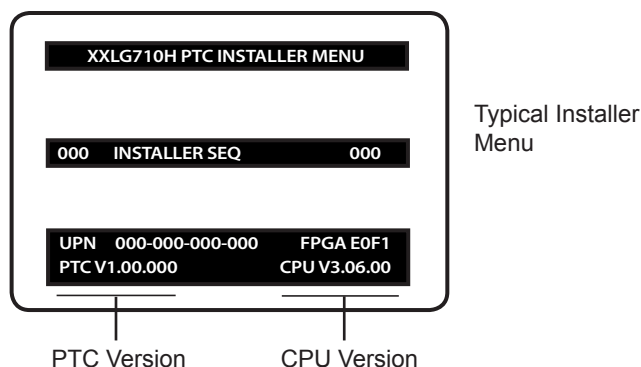
RJP INTERFACE
Connect RJ-45 Control cable from RJP cable bundle.

AUDIO/VIDEO IN 1
Connect Composite Video/Audio connectors from RJP cable bundle. (Composite Video on legacy RJP only.)

Reference: Upgrading TV/PTC Software with a USB Memory Device

Checking the Software Versions

You can check the software versions of the TV by accessing the Installer Menu: Press **MENU** repeatedly until the on-screen menu locks up, and then press **9-8-7-6 + ENTER**. When you are finished, press **ENTER** again to exit the Installer Menu.

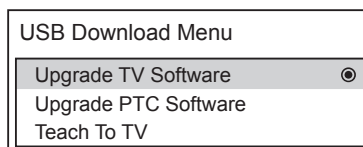


Upgrading TV/PTC Software

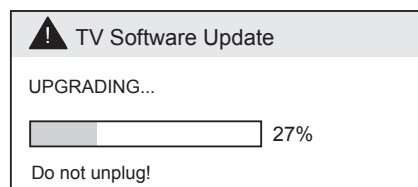
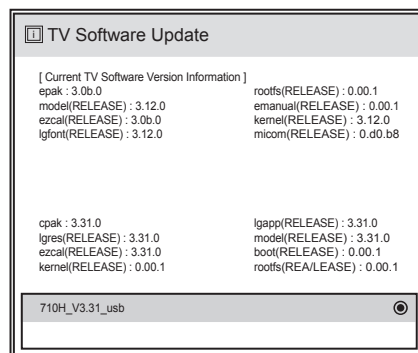
Before you begin, note that the software upgrade files must be stored in a folder named "LG_DTV" in the root directory of USB memory device.

1. Turn the TV ON.
2. Plug the USB memory device into the USB IN port on the TV. Note: Ensure the memory device has been formatted with FAT format.
3. Press **MENU** to display the TV setup menus.
4. Use the arrow navigation keys to select/highlight the **Option** menu icon; then, press the number "7" key a total of seven times to display the USB Download Menu.
5. Use the Up/Down arrow keys to select **Upgrade TV Software** or **Upgrade PTC Software**, as applicable, and press **ENTER**. (See screen samples at right. The TV Software Upgrade screen provides information on the current software as well as the potential software to be downloaded.)
6. Use the Up/Down arrow keys to select/highlight the upgrade to install and press **ENTER**.

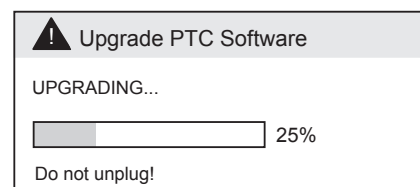
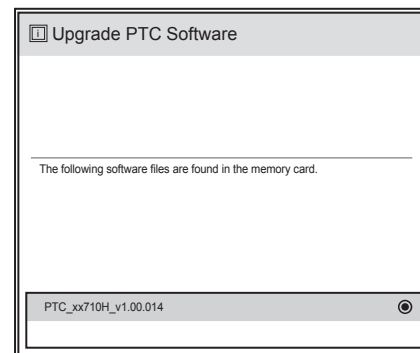
Copying progress will be shown. When the upgrade is complete, the TV will turn OFF.



TV Software Upgrade



PTC Software Upgrade



Note: (TV Software Upgrades only) If the TV detects a later version of software on the USB device, it will automatically display a dialog from which you can start the software upgrade immediately. Otherwise, you can close the dialog, and access the USB Download Menu as described in the procedure.

Reference: Power Consumption Settings

32/37/42/47/55LD650H, 32/37/42LD655H, 32/37/42LG710H

The following tables assume that Installer Menu item 118 POWER SAVINGS is set to 003 (default) and Installer Menu item 099 BACK LIGHTING is set as shown below (default value is 255).

32LD650H/ LD655H

Item 099 Back Lighting (Static)	Picture Lumin.	Power Consumption (Watts)	Percent Savings
100	290.2	96.1	0.00%
90	258.2	90.9	5.41%
80	220.2	84.8	11.76%
70	189.1	80.2	16.55%
60	166.6	75.5	21.44%
50	145.2	69.1	28.10%
40	126.4	63.9	33.51%
30	108.2	58.8	38.81%
20	90.2	53.2	44.64%
10	72.1	48.6	49.43%
1	57.5	44.0	54.21%

Item 099 Back Lighting (Dynamic)	Picture Lumin.	Power Consumption (Watts)	Percent Savings
202	105.1	56.1	41.62%
200	85.5	51.5	46.41%
190	80.0	50.5	47.45%
180	75.7	49.7	48.28%
170	70.6	48.6	49.43%
160	67.1	48.0	50.05%
150	63.2	47.1	50.99%
140	60.0	46.3	51.82%
130	56.6	45.7	52.45%
120	52.5	44.7	53.49%
110	49.2	44.1	54.11%

37LD650H/ LD655H

Item 099 Back Lighting (Static)	Picture Lumin.	Power Consumption (Watts)	Percent Savings
100	193.5	113.4	0.00%
90	178.5	106.5	6.08%
80	163.1	100.1	11.73%
70	149.0	93.8	17.28%
60	134.6	88.0	22.40%
50	118.9	81.5	28.13%
40	104.1	75.2	33.69%
30	89.1	69.2	38.98%
20	72.6	62.5	44.89%
10	57.1	56.1	50.53%
1	41.5	49.7	56.17%

Item 099 Back Lighting (Dynamic)	Picture Lumin.	Power Consumption (Watts)	Percent Savings
202	116.4	82.7	27.07%
200	94.1	72.1	36.42%
190	88.6	70.1	38.18%
180	83.1	67.7	40.30%
170	77.5	65.3	42.42%
160	71.9	63.0	44.44%
150	67.1	61.3	45.94%
140	61.4	59.0	47.97%
130	55.8	56.4	50.26%
120	50.2	54.1	52.29%
110	44.3	51.8	54.32%

42LD650H/ LD655H

Item 099 Back Lighting (Static)	Picture Lumin.	Power Consumption (Watts)	Percent Savings
100	212.8	144.1	0.00%
90	195.8	135.0	6.32%
80	177.9	125.7	12.77%
70	160.0	117.5	18.46%
60	143.7	109.1	24.29%
50	124.7	100.1	30.53%
40	107.6	91.8	36.29%
30	90.8	83.4	42.12%
20	72.6	74.2	48.51%
10	55.3	65.7	54.41%
1	39.4	57.5	60.10%

Item 099 Back Lighting (Dynamic)	Picture Lumin.	Power Consumption (Watts)	Percent Savings
202	109.8	98.2	31.85%
200	90.1	85.8	40.46%
190	84.2	82.8	42.54%
180	78.6	79.7	44.69%
170	72.5	76.6	46.84%
160	66.6	73.6	48.92%
150	62.2	71.2	50.59%
140	56.3	68.2	52.67%
130	50.7	65.2	54.75%
120	45.1	62.1	56.90%
110	39.5	59.8	58.50%

47LD650H

Item 099 Back Lighting (Static)	Picture Lumin.	Power Consumption (Watts)	Percent Savings
100	268.0	199.3	0.00%
90	249.0	188.3	94.48%
80	226.0	174.7	87.66%
70	203.0	162.7	81.64%
60	179.0	150.6	75.56%
50	151.0	137.7	69.09%
40	131.0	125.5	62.97%
30	109.0	113.5	56.95%
20	83.7	100.8	50.58%
10	62.4	89.0	44.66%
1	43.3	77.4	38.84%

Item 099 Back Lighting (Dynamic)	Picture Lumin.	Power Consumption (Watts)	Percent Savings
202	119.0	117.2	58.81%
200	87.3	105.0	52.68%
190	76.8	101.0	50.68%
180	72.1	98.3	49.32%
170	66.2	95.0	47.67%
160	62.1	92.7	46.51%
150	58.1	90.0	45.16%
140	53.2	86.7	43.50%
130	49.3	84.3	42.30%
120	45.1	81.8	41.04%
110	41.6	79.3	39.79%

Note: Values are results of controlled experiments under laboratory conditions.

Reference: Power Consumption Settings (Cont.)

32/37/42/47/55LD650H, 32/37/42LD655H, 32/37/42LG710H

55LD650H

Item 099 Back Lighting (Static)	Picture Lumin.	Power Consumption (Watts)	Percent Savings
100	168.0	246.0	0.00%
90	155.0	230.0	93.50%
80	140.0	214.5	87.20%
70	126.0	199.5	81.10%
60	113.0	184.3	74.92%
50	98.0	168.0	68.29%
40	84.0	152.2	61.87%
30	69.7	136.5	55.49%
20	50.8	113.5	46.14%
10	32.2	91.3	37.11%
1	15.9	69.7	28.33%

Item 099 Back Lighting (Dynamic)	Picture Lumin.	Power Consumption (Watts)	Percent Savings
202	55.1	114.5	46.54%
200	42.1	99.7	40.53%
190	38.4	96.5	39.23%
180	36.0	94.5	38.41%
170	32.8	91.3	37.11%
160	29.8	88.0	35.77%
150	26.9	84.7	34.43%
140	23.9	81.4	33.09%
130	21.2	78.0	31.71%
120	18.3	74.5	30.28%
110	15.8	70.8	28.78%

32LG710H

Item 099 Back Lighting (Static)	Picture Lumin.	Power Consumption (Watts)	Percent Savings
100	206	104	0 %
90	204	103.5	0.48 %
80	203	103	0.96 %
70	172	93	10.58 %
60	147	85	18.27 %
50	127	79	24.04 %
40	108	73.5	29.33 %
30	86	67	35.58 %
20	66	60	42.31 %
10	50	55.5	46.63 %
1	39	51.5	50.48 %

Item 099 Back Lighting (Dynamic)	Picture Lumin.	Power Consumption (Watts)	Percent Savings
200	103	74	28.85 %
190	96	73	29.81 %
180	84	69.5	33.17 %
170	73	65.5	37.02 %
160	64	62	40.38 %
150	57	60	42.31 %
140	51	57.5	44.71 %
130	44	55	47.12 %
120	38	52.5	49.52 %
110	33	50.5	51.44 %
101	29	49	52.88 %

37LG710H

Item 099 Back Lighting (Static)	Picture Lumin.	Power Consumption (Watts)	Percent Savings
100	258	151.5	0 %
90	230	136.5	9.90 %
80	201	122.5	19.14 %
70	170	111	26.73 %
60	145	101.3	33.14 %
50	120	91.5	39.60 %
40	95	81.3	46.34 %
30	72	71	53.14 %
20	54	63.5	58.09 %
10	41	58	61.72 %
1	31	53	65.02 %

Item 099 Back Lighting (Dynamic)	Picture Lumin.	Power Consumption (Watts)	Percent Savings
200	93	91.5	39.60 %
190	79	85.5	43.56 %
180	67	80	47.19 %
170	58	74.8	50.63 %
160	50	70.8	53.27 %
150	44.5	67.5	55.45 %
140	38	63.5	58.09 %
130	31.5	59.3	60.86 %
120	27	56.5	62.71 %
110	23.5	54.5	64.03 %
101	21	52.8	65.15 %

42LG710H

Item 099 Back Lighting (Static)	Picture Lumin.	Power Consumption (Watts)	Percent Savings
100	286	185	0%
90	250	164.5	11.08 %
80	216	147.5	20.27 %
70	185.5	133.5	27.84 %
60	159	121.3	34.43 %
50	133.5	109.5	40.81 %
40	107.5	97	47.57 %
30	81	84	54.59 %
20	61	75	59.46 %
10	46.5	67.5	63.51 %
1	35	61.5	66.76 %

Item 099 Back Lighting (Dynamic)	Picture Lumin.	Power Consumption (Watts)	Percent Savings
200	113	109	41.08 %
190	108	103	44.32 %
180	96	96.4	47.89 %
170	83	89.7	51.51 %
160	73.8	84.5	54.32 %
150	65.2	80.2	56.65 %
140	55.8	75.2	59.35 %
130	46.13	69.9	62.22 %
120	39.6	66.1	64.27 %
110	34.4	63.5	65.68 %
101	29.85	61.4	66.81 %

Note: Values are results of controlled experiments under laboratory conditions.

Reference: TV Camport Auto Sense Operation

The Camport Auto Sense function is enabled when:

1. Installer Menu item 034 CAMPORT EN is set to 1 AND
2. Installer Menu item 040 AUTO CAMPORT is enabled (1).

Selectable: Can be accessed with INPUT key, direct access, etc.

Auto Sense: TV switches to this input when connector is inserted. The Camport (Side Video) has the highest priority and will override any commands including tuning to the Start Channel.

CAMPORT (Side Video) Functionality Control

Item 034 CAMPORT EN	Item 040 AUTO CAMPORT	Side Video Operation
0	0	Disabled
0	1	Disabled
1	0	Selectable
1	1	Auto Sense

Campport Operation (Stand-Alone)

When Camport Auto Sense is enabled as above, the TV's source will switch to the Side Video Aux source whenever a plug is inserted into either of the Side Video panel inputs (Composite Video or S-Video).

When the plug is removed, the TV will switch back to the previous channel or input source that was being displayed before the plug was inserted. However, if any direct access to an RF channel or Aux channel is requested while the Camport is active, then, when the video plug is removed, the TV will switch to the last requested channel. Source changes using any Source keys (INPUT) are ignored. Channel Up/Down and Flashback commands are not direct access tuning commands, and they are also ignored.

Previous State Before Inserting CAMPORT	Operation While CAMPORT is Active	State Upon Removal of CAMPORT
Aux or RF Channel	None	Previous Aux or RF Channel
Aux or RF Channel	Direct Access	Last Requested Aux or RF Channel
Aux or RF Channel	Ch Up/Down, Flashback, and Input Keys	Previous Aux or RF Channel

Campport Operation (FTG or PPV)

The operation will be similar to that of the Stand-alone Mode. However, when the Channel Map is maintained external to the PTC (i.e., FTG and PPV), Channel Up/Down or Flashback keys are sent as Direct Access tuning commands to the PTC/TV.

Previous State Before Inserting CAMPORT	Operation While CAMPORT is Active	State Upon Removal of CAMPORT
Aux or RF Channel	None	Previous Aux or RF Channel
Aux or RF Channel	Direct Access	Last Requested Aux or RF Channel
Aux or RF Channel	Ch Up/Down, Flashback, and Input Keys	Last Requested Aux or RF Channel

Reference: TV Aux Input Configuration

DIRECT ACCESS Tuning		TV		ENABLE				MPI DATA			START AUX SOURCE ASSIGN- MENT
				Installer Menu		MPI DATA STATUS TYPE 0x41 SOURCES ENABLED (R/W)		DATA STATUS TYPE 0xD2 CURRENT AV SOURCE (R)		DATA STATUS TYPE 0x0D AUX SOURCE (R)	
OLD_ OCV = 0	OLD_ OCV = 1	Source Input	Source Mode	Number	Labeling	Value	Labeling	Value	Labeling		
130	90	Video2 (Side)	CV/SVIDEO	34	CAMPORT_EN	0x01	Video Front (Camport)	0	Video Front (Camport)	0 (VIDEO)	2
131	91	Video1 (Rear)	CV/SVIDEO	39	REAR_AUX_EN	0x02	Rear Video (Aux)	1	Rear Video (Aux)	0 (VIDEO)	1
132	92	HDMI2	DTV/PC	91	YPrPb2 EN = 1	0x04	S-Video Rear	2	S-Video Rear	0 (VIDEO)	5
133	93	HDMI1/DVI	DTV/PC	35	COMPPOINT_EN = 1	0x08	Front Computer	3	Front Computer	0 (VIDEO)	3
134	94	RGB	PC	87	REAR RGB EN = 2	0x10	SVGA Rear Computer	4	SVGA Rear Computer	2 (COMPUTER)	4
136	96	Component		38	YPrPb EN	0x40	Y/UV Component	6	Rear Y/PrPb Component Video	0 (VIDEO)	6

Reference: b-LAN Setup & Overview

The *b*-LAN module is internal to the TV. It allows the hotel/institution head end equipment to communicate, via the institution's RF distribution system, with the TV for configuration and control. The *b*-LAN module also comprises the data tuner required for Pro:Centric operation.

Note: MPI cards with *b*-LAN technology—LMT7Z5, LMT7Z7, LMT7Z9—are NOT supported on TVs in which the *b*-LAN module is embedded.

Power to the *b*-LAN module is controlled by Installer Menu item 118 POWER SAVINGS. The default value is 003—the *b*-LAN module is only powered when the TV is turned ON. See chart below.

POWER SAVINGS	TV Standby State	TV Power On State
	<i>b</i> -LAN Power	<i>b</i> -LAN Power
001	On	On
003 (default)	Off	On
007	Off	Off

The control device at the head end, for example, an FMA-LG101 or a PCS100R, can control multiple TVs. When the TV is first installed, it must be turned ON in order for the head end to be able to communicate with the *b*-LAN. At this point, if it is desired for the *b*-LAN to always be powered, including while the TV is in Standby, set Installer Menu item 118 POWER SAVINGS to 001.

If the embedded *b*-LAN, including the Pro:Centric data tuner, will not be used, enable maximum power savings in both Standby and TV Power On Mode by setting Installer Menu item 118 POWER SAVINGS to 007. However, note that this action will disable Pro:Centric operation.

 **Warning for LD650H/LD655H TVs: If an MPI card is installed, POWER SAVINGS must be set to 001. See table below. (Also see note regarding MPI cards at the top of the page.)**

POWER SAVINGS	32/37/42LD650H/LD655H MPI Slot
001	Supported
003 (default)	Not Supported
007	Not Supported

Reference: RJP Model List and Input Auto-sensing Hierarchy

RJP Model List

Legacy Models	Scaler Models
RJP-101M	N/A
RJP-101ML	N/A
RJP-110F	RJP-210F
RJP-110FW	RJP-210FW
RJP-110W	RJP-210W
RJP-110WBR	RJP-210WBR
RJP-110S	RJP-210S
RJP-120G	RJP-220G
RJP-120T	RJP-220T
RJP-201B	RJP-301B
RJP-202B	RJP-302B

RJP Input Auto-sensing Hierarchy

Priority	Video	Audio
1st (Highest)	Digital Video In	Audio In (3.5mm)
2nd	PC Video In	Audio In (L/R)
3rd	Video In	Digital Video In

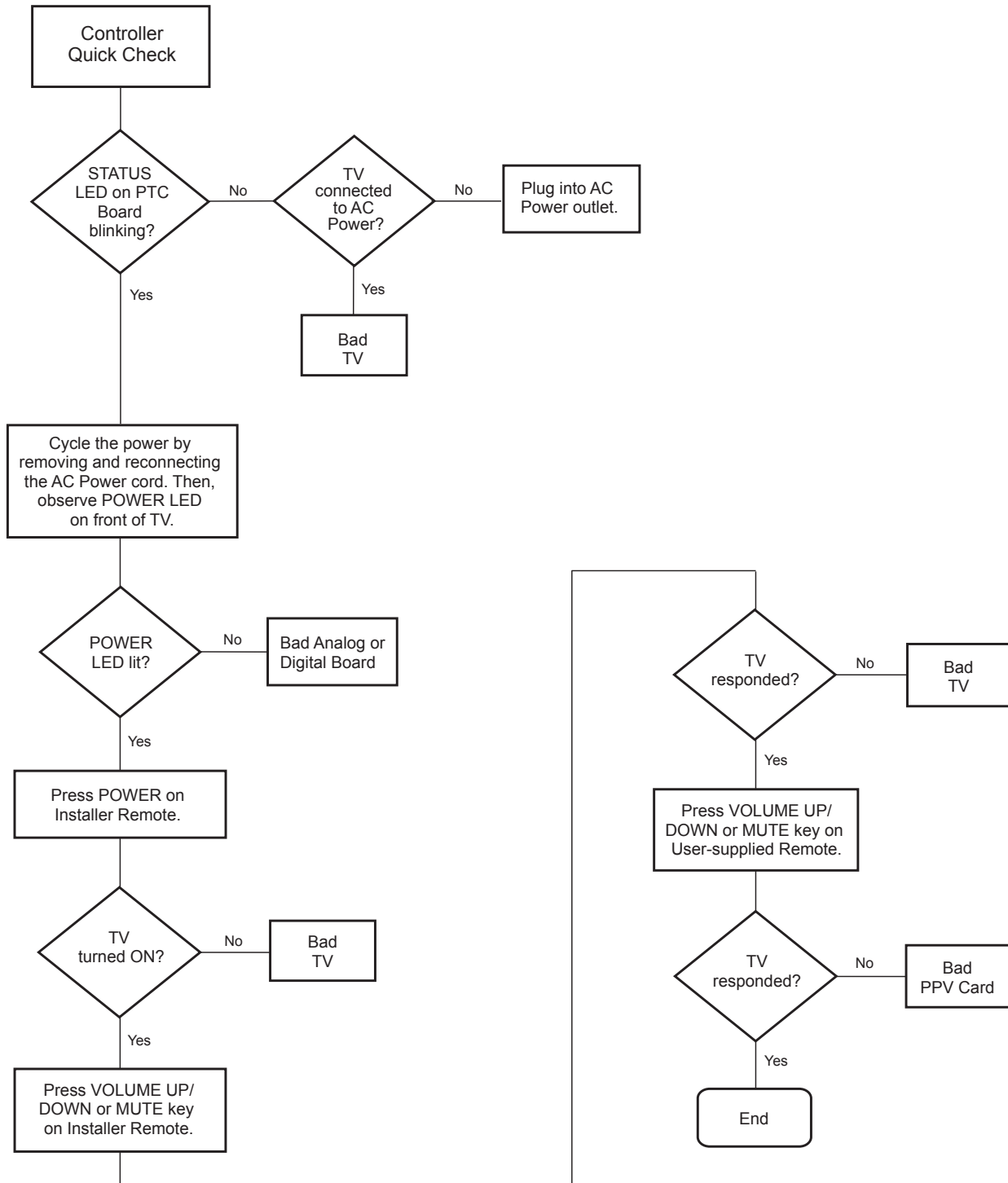
Troubleshooting

General Troubleshooting

Some Quick and Easy Tips for Resolving Problems

Symptom	Possible Cause(s)	Possible Solution(s)
Software Problems		
Cannot direct enter channel number or "No Signal" appears.	Channel not included in channel lineup in TV controller.	After 2-5-5 + MENU, only channels included in TV controller will appear. If channel is available, it can be added to channel lineup. If it is not available, the "No Signal" message appears on the TV screen.
Power		
No power.	See troubleshooting flowchart on following page.	
Display Panel Picture		
No picture.	Display panel is turned off.	• Turn TV ON. • Power failure?
	Antenna/cable not connected.	Connect antenna/cable signal to TV.
	Connections incorrect.	Check connections on TV.
	MPI not connected.	If applicable, connect MPI cable to MPI device.
	Encrypted program.	Try another channel.
	Wrong tuning band.	Adjust Installer Menu settings.
Erratic Operation		
Installer Menu setup.	Wrong Installer Menu settings.	Adjust Installer Menu settings as required.
Installer Remote		
Remote doesn't work.	Remote not in TV Mode.	Use MODE key to select "TV"; puts remote into TV Mode.
	Not aimed at IR remote sensor.	Point remote at TV's IR receiver on TV.
	Remote too far from IR sensor.	Move remote closer to TV's IR receiver or darken room.
	MPI not connected.	If applicable, connect MPI cable to MPI device.
	IR path to TV's receiver obstructed.	Remove obstructions.
	Weak batteries.	Replace batteries.
	Wrong battery polarity.	Check that "+" and "-" match in battery compartment.
	Too much light in room.	Dim room light.
	Wrong Installer Remote.	Requires compatible Installer Remote. Contact your LG dealer.
Picture Reception		
Normal picture, poor or no sound.	Audio muted.	Press MUTE or use Volume Up key to increase sound level.
	Broadcast problem.	Try a different channel.

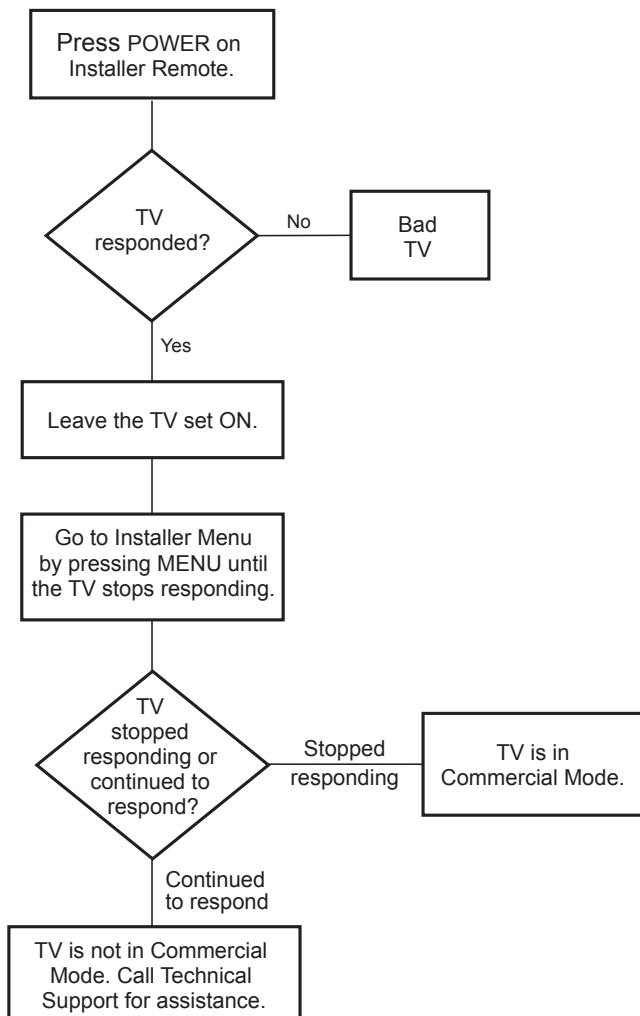
Note: For other problems not caused by the TV, refer to the other devices' operating guide(s).



Troubleshooting (Cont.)

Commercial Mode Check / FTG Operation Troubleshooting

Commercial Mode Check



FTG Operation Troubleshooting

The following table provides troubleshooting information for when the EBL is configured in the FTG Mode of operation.

Symptom	Possible Cause(s)	Solution(s)
Communication Error ("Communications Timeout")	Cable(s) not connected.	Check and connect communication cables.
	TV not powered.	Check/connect the TV power cord.
	TV not turned ON.	TV needs to be turned ON (default FTG Mode).
	Wrong COM (communication) port.	In the FTG Configuration Application, select the correct COM port for the cable being used.

Clone Programmer Troubleshooting



Warning: Do not connect a clone programmer to any PPV card installed in the Master TV or any MPI port while the TV is in PPV Mode, or the clone programmer and the PPV card will be damaged.

Reset Clone Programmer After Static Shock

After replacing exhausted batteries (LT2002 only), or if the clone programmer behaves strangely after a static shock:

- TLL-1100A: Turn the TLL-1100A OFF and then ON.
- LT2002: Use a paper clip or similar instrument inserted through the small hole marked RESET to activate the internal reset switch and restore normal operation.

After a reset, check the real-time clock setting. It may be necessary to reset the clone programmer clock from a TV containing the correct time.

Note

The TLL-1100A and LT2002 clone programmers are designed to be used with TVs containing the 221-01006 and later processors. Use with earlier TVs may give unpredictable results. Processors used before the 221-01006-04 have a limited screen display capability. They cannot display entire screens as shown in the setup instructions accompanying the clone programmer. Use the printed menu illustrations in the documentation supplied with the clone programmer as an aid to making your programming choices.

Symptom	Possible Cause(s)	Possible Solution(s)
Clone Programmer		
Clone copies setup in less than 30 seconds.	Not enough time to copy entire TV setup.	TLL-1100A: Turn the TLL-1100A Off and then ON. LT2002: Press RESET on clone programmer. Then redo Learn/Teach. (Learning usually takes about 90 seconds; Teaching usually takes 3 to 4 minutes.)
Remote does not operate clone programmer.	Wrong Installer Remote.	Only use an LG Installer Remote to operate clone programmer with TV.
Clone menu does not display on TV screen, TLL-1100A shows error message, or LT2002 LED does not blink.	MPI cord not connected. TV not turned ON. (LT2002 only) Weak batteries. (TLL-1100A only) No charge.	Connect MPI cord properly, and ensure good connection. TV must be powered ON for clone programmer to work. Install four (4) fresh AA high-quality alkaline batteries. Ensure the TLL-1100A is fully charged or connected to AC power.
Clone menu hard to read.	Weak signal.	Connect TV to a reliable analog channel signal source.
No time set.	Time not available.	Set time on a TV, and copy time to clone programmer.
Clone not working.	Clone programmer problem.	Try a different clone programmer. Reset the clone programmer.
Clone scans channels more than once.	Clone should only scan channels once.	Ensure TV is set up correctly, and try cloning again.

Master and Target TVs

Cloning did not work.	Procedure interrupted.	Wait until procedure complete message is displayed.
	Different TV models.	Cloning is only possible with identical model TVs.
	Step(s) omitted or not performed.	Refer to the applicable cloning procedure(s), and make sure all tasks were performed.
(LT2002 only) Clone time disappeared.	Batteries were removed.	Batteries must remain installed to retain time settings.
New setup not present.	Target TV not reset.	Disconnect Target TV from AC power for fifteen (15) seconds.

- After cloning operations are complete, unplug the TLL-1100A/LT2002 from the TV.
- If the TV does not display a picture on the TV (blank screen) after a few seconds, just change channels.

Glossary of Terms

A list of definitions for some of the words found in this guide.

75 OHM RF CABLE

The wire that comes from an off-air antenna or cable service provider. The end looks like a hex-shaped nut with a wire through the middle. It screws onto the Antenna/Cable threaded jack on the back of the TV.

300 TO 75 OHM ADAPTER

A small device that connects a 2-wire 300 ohm antenna to a 75 ohm RF jack. It is usually about an inch long with two screws on one end and a round opening with a wire extending out the other end.

A/V CABLES

Audio/Video cables. Three cables bunched together—right audio (red), left audio (white), and video (yellow). A/V cables are used for stereo playback of videocassettes and for higher quality picture and sound from other A/V devices.

A/V DEVICE

Any device that produces video or sound (VCR, DVD, cable box, or television).

AMPLIFIER

An electronic device that amplifies sound from a television, CD player, VCR, DVD, or other Audio/Video device.

ANTENNA

The physical receiver of television signals sent over the air. A large metal piece of equipment does not always have to be visible to be using an antenna.

b-LAN

Licensed proprietary RF communication system used to configure/control TV via RF distribution system.

CABLE

Cable service box. Refers to the descrambler box cable subscribers use to receive cable programming signals.

CATV

Programming provided by a cable service.

COMPONENT VIDEO

Uses three wires for transporting three-color video signals. The end result is usually better video quality.

COMPOSITE VIDEO

Typical video jack, uses one wire for transporting three-color video signals.

DELETE

Lets you remove channels from the list that the end user can scroll through using Channel Up/Down.

DIGITAL TELEVISION

High-resolution, cinema-quality television signals transmitted digitally.

DVI

Digital Video Interface. Accommodates analog and digital interfaces with a single connector.

HDMI

High-definition multi-media interface.

HDSTB

High-definition set top box. Refers to a tuner device that receives high-definition television signals which have higher resolution than ordinary analog TV signals.

HDTV

High-definition television. Refers to television signals that have higher resolution than ordinary analog TV signals.

INPUT

Refers to the input jack that receives a signal from a TV, VCR, DVD Player or other Audio/Video device.

JACK

An input or output connector on the back of a TV, VCR, DVD Player or other Audio/Video device.

MONO SOUND

Mono (monaural) sound is one channel of sound. On more than one speaker, all the speakers play the same audio.

OUTPUT

Refers to the output jack that sends a signal out of a VCR, DVD, or other A/V device.

PHYSICAL CHANNEL NUMBER

The actual channel number. Analog channels use the Physical Channel number and digital channels can use a Virtual Channel number.

RGB (RED, GREEN, BLUE)

Connection input or output port available for producing a video image using three separate colors: Red, Green, and Blue.

RS-232

Serial communication port through which firmware is downloaded.

2ND AUDIO PROGRAMMING/SAP

Second Audio Programming (SAP) is another, separate audio channel available with some programming. Choosing SAP often refers to listening to audio in another language, such as Spanish or French.

SIGNAL

Picture and sound traveling through a cable, or over the air, to the TV.

STEREO SOUND

Stereo (Stereophonic) sound refers to audio that's divided into right and left sides.

TUNER

Device that picks up the broadcast signal and turns it into picture and sound.

VIRTUAL CHANNEL NUMBER

A re-mapped channel number. Analog channels use the Physical Channel number; however digital channels use a Virtual (or false) Channel number.

XDS

Extended Data Service (XDS) is additional program information included on the signal provided at the discretion of the broadcaster.

Note: Refer to www.atsc.org for further information.

Document Revision History

Date	Description
August 2010	Revision A: New document
October 2010	Revision B: Power Savings updates for LD65xH TVs; troubleshooting update

Product documentation is available online at: **www.LGolutions.com/products**. From the Products page, select **TVs, Systems & Solutions**, then **LCD TVs**, then the applicable TV. Click the **Literature & Downloads** tab at the bottom of the TV page, and select the required document(s) from the Downloads list.

Notes



The model and serial number of the TV is located on the back and/or on one side of the TV. Record these numbers below should you ever need service.

MODEL _____

SERIAL _____

1-800-243-0000 USA, Consumer User
1-888-865-3026 USA, Commercial User
1-888-542-2623 CANADA

LG Customer Information Center