

LCD TV OWNER'S MANUAL

Hospital Grade Models

22LG3DCH 26LG3DCH 32LG3DCH

Lodging Grade Model

32LG3DC

Installer Reference for Commercial Mode

Commercial Mode Setup see pages 91-110

Channel Banks Setup see pages 87-90

Pillow Speaker Setup see page 29

MPI/PPV Card Setup see page 20

Please read this manual carefully before operating your set.

Retain it for future reference.

Record model number and serial number of the set.

See the label attached on the back cover and quote this information to your dealer when you require service.

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

P/NO : SAC30708037 (0810-REV00)

WARNING / CAUTION



WARNING / CAUTION

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.

Any changes or modifications 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.

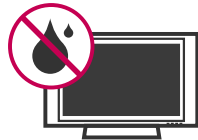
Keep these instructions.

Heed all warnings.

Follow all instructions.



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



- 2** Clean only with 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.



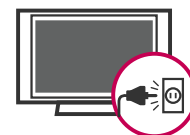
- 7** Only use attachments/accessories specified by the manufacturer.



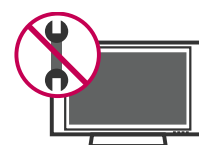
- 8** Use only with the cart, stand, tripod, bracket, or table specified by the manufacturer, or sold with the apparatus. When a cart is used, use caution when moving the cart/apparatus combination to avoid injury from tip-over.



- 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 lighting storm.

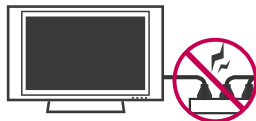
12 When mounting a TV on the wall, make sure not to install the TV by the hanging power and signal cables on the back of the TV.

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.



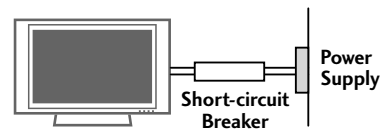
16 Do not expose to dripping or splashing and do not place objects filled with liquids, such as vases, cups, etc. on or over the apparatus (e.g. on shelves above the unit).



17 **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.



18 **DISCONNECTING DEVICE FROM MAINS**

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

19 Keep the product away from direct sunlight.

20 ANTENNAS

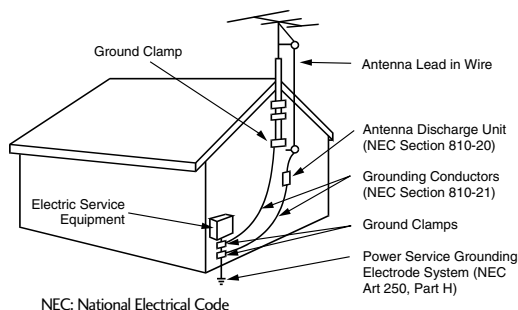
Outdoor antenna grounding

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



21 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.

22 Moving

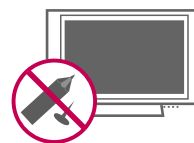
Make sure the product is turned off, unplugged and all cables have been removed. It may take 2 or more people to carry larger TVs. Do not press against or put stress on the front panel of the TV.

23 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.

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

25 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.



CONTENTS

WARNING / CAUTION	1
SAFETY INSTRUCTIONS	2
FEATURES OF THIS TV	7

PREPARATION

Accessories	8
Front Panel Information	9
Back Panel Information	10
Stand Instruction	12
Cable Management	13
Desktop Pedestal Installation	14
Swivel Stand	14
Attaching the TV to a desk	15
VESA Wall Mounting	16
VESA Standard TV Mounts	17
Securing the TV to the wall to prevent falling	
When the TV is used on a stand	18
Antenna or Cable Connection	19
MPI Card Slot	20

EXTERNAL EQUIPMENT SETUP

HD Receiver Setup	21
DVD Setup	24
VCR Setup	26
Other A/V Source Setup	28
Pillow Speaker Setup	29
PC Setup	30

WATCHING TV / CHANNEL CONTROL

Remote Control Functions	36
Installer Remote Control Functions	38
Turning On TV	40
Channel Selection	41
Volume Adjustment	41
On-Screen Menus Selection	42
Channel Setup	
- Auto Scan (Auto Tuning)	43
- Add / Delete Channel (Manual Tuning)	44
- Channel Editing	45
Channel Label	46
Input List	47

PICTURE CONTROL

Picture Size (Aspect Ratio) Control	48
Preset Picture Settings	
- Picture Mode - Preset	51
- Color Tone - Preset	52
Manual Picture Adjustment	
- Picture Mode - User Mode	53
- Picture Mode - Expert Control	54
Picture Improvement Settings	55
Advanced Control - Black (Darkness) Level	56
Advanced Control - Real Cinema	57
Picture Reset	58

SOUND & LANGUAGE CONTROL

Auto Volume Leveler (Auto Volume)	59
Clear Voice	60
Preset Sound Settings (Sound Mode)	61
Sound Setting Adjustment - User Mode	62
- SRS TruSurround XT	63
Balance	64
TV Speakers On/Off Setup	65
Audio Reset	66
Stereo/SAP Broadcast Setup	67
Audio Language	68
On-Screen Menus Language Selection	69
Caption Mode	
- Analog Broadcasting System Captions	70
- Digital Broadcasting System Captions	71
- Caption Option	72

TIME SETTING

Clock Setting	
- Auto Clock Setup	73
- Manual Clock Setup	74
Auto On/Off Time Setting	75
Sleep Timer Setting	76
Auto Shut-off Setting	77

PARENTAL CONTROL / RATINGS

Set Password & Lock System	78
Channel Blocking	81
Movie & TV Rating	82
Downloadable Rating	85
External Input Blocking	86

CHANNEL BANKS

Channel Banks Overview	87
Channel Banks Setup Installer Remote Control Key Functions	88
Channel Banks Setup	89
Reference: Channel Banks Worksheet	90

COMMERCIAL MODE SETUP

Installer Overview	91
TV overview	92
Commercial Mode Setup for Master TV	93
Master TV Profile Setup Learning/Teaching with USB Memory Card	94
TLL-1100A Clone Connections / Learning and Teaching Setups	96
LT2002 Cloning Connections/Learning Setup ..	97
Cloning Learning Setup	98
Cloning Connections/Teaching Setup	99
Installer Menu	100
Reference: Detailed Information For Making A Master TV	107
Reference: Procedures for adding Channel Label Icons/Custom Channel Labels (2-5-4 + MENU Mode)	108
Reference: Clonable Menu Features	109
Reference: Checking Software Version	109
TV Aux Input Configuration	110
Power Saving Setup	110

APPENDIX

Troubleshooting	111
Reference: LT2002 Cloning Procedure Troubleshooting	113
Channel Banks Setup Troubleshooting	114
Troubleshooting Flow Chart	115
Commercial Mode Check	116
Glossary of Terms	117
Maintenance	118
Product Specifications	119
IR Codes	120

FEATURES OF THIS TV



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



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.



USB port shall be used for software update by service personnel only.

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

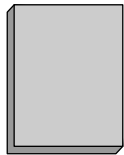
The fluorescent lamp used in this product contains a small amount of mercury. Do not dispose of this product with general household waste. Disposal of this product must be carried out in accordance to the regulations of your local authority.

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.

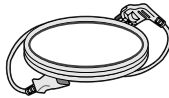
The accessories included may differ from the images below.



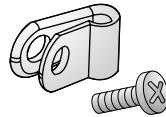
Owner's Manual



CD Manual



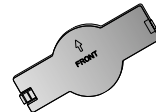
Power Cord



Protective Bracket and Bolt for Power Cord
(Refer to P.13)

(This feature is not available for all models.)

26/32LG3DCH, 32LG3DC only

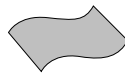


Protection Cover
(Refer to P.12)

22LG3DCH only



Cable Management Clip
(Refer to P.13)



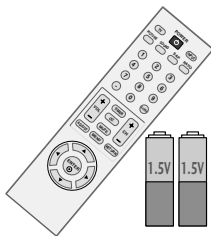
Polishing Cloth

(This feature is not available for 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.

32LG3DC only



Remote Control, Batteries



x 4

M4xL26
(Machine Screw) Bolts for stand assembly
(Refer to P.12)



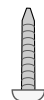
x 4

Ø4xL20
(Plastic Screw)



x 2

M4xL22
(Machine Screw)
Torx plus
Star head screw
(Refer to P.12)

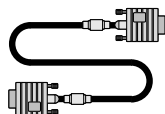


Ø4xL20
(Plastic Screw)
Screw for stand fixing
(Refer to P.15)

Optional Installer Remote Control for Model No. Series 22/26/32LG3DCH

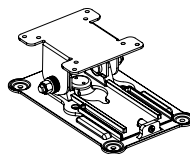
There is an optional Installer remote control available for the 22/26/32LG3DCH models. The installer remote control is NOT included with the TV.

Option Extras

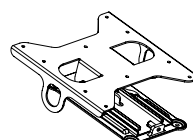


D-sub 15 pin Cable

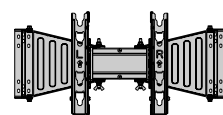
When using the VGA (D-sub 15 pin cable) PC connection, the user must use shielded signal interface cables with ferrite cores to maintain standards compliance.



Wall Mounting Bracket
(RW120)
(Only 22LG3DCH)



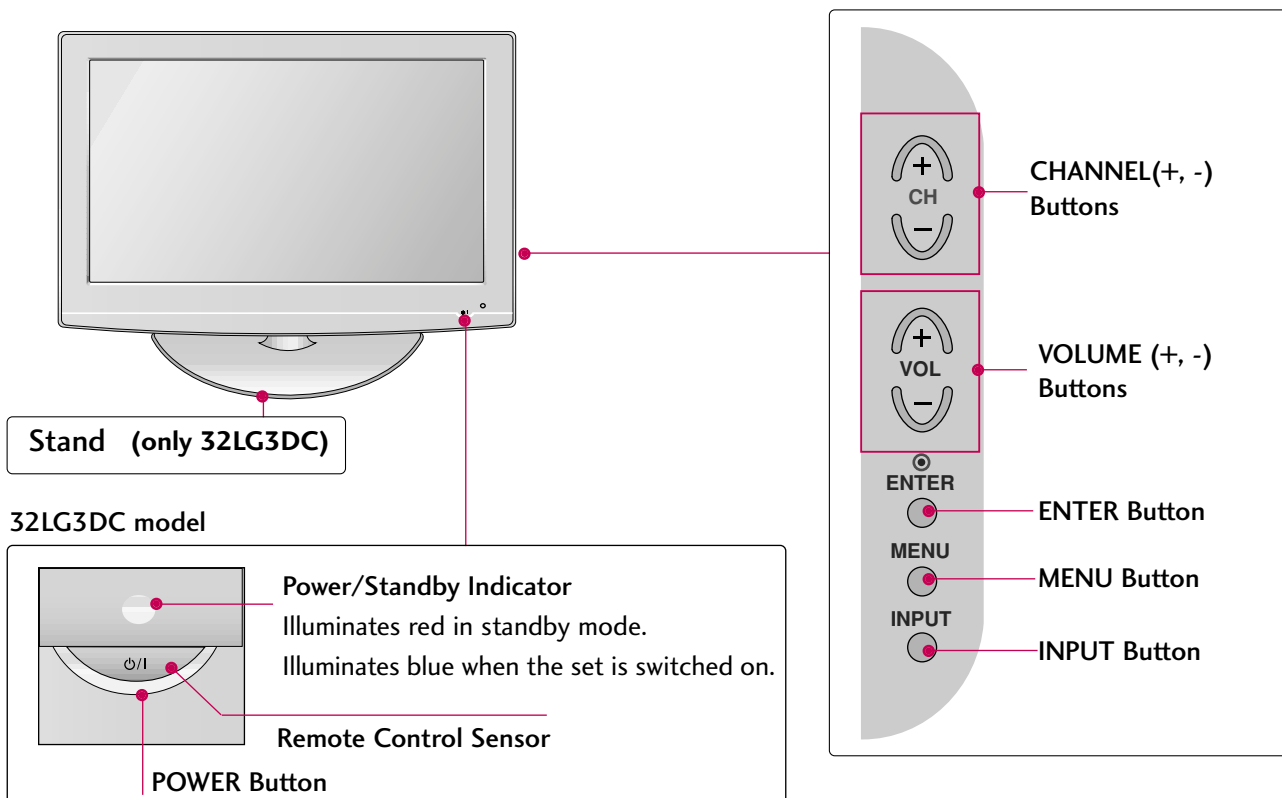
Wall Mounting Bracket
(RW230)
(Only 26LG3DCH)



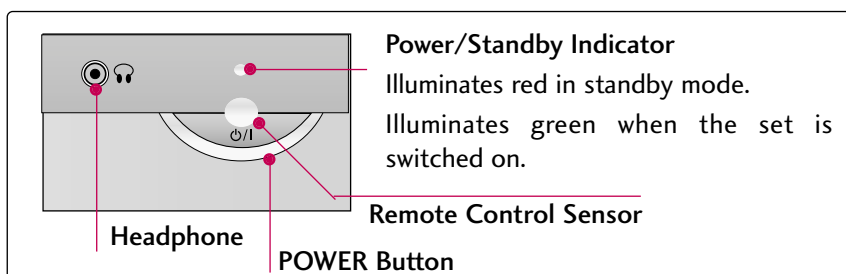
Tilt Wall Mounting Bracket
(AW-47LG30M)
(Only 32LG3DCH)

FRONT PANEL INFORMATION

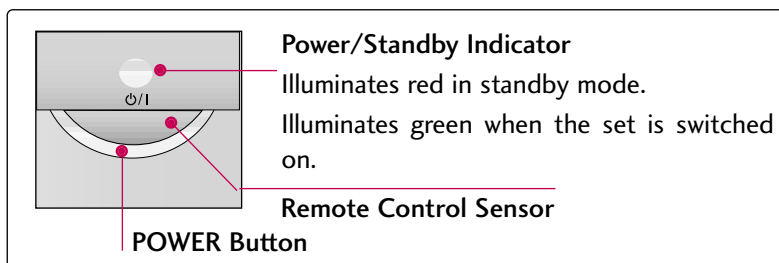
- Image shown may differ from your TV.
- NOTE:** If your TV has a protection tape attached, remove the tape. And then wipe the TV with a cloth (If a polishing cloth is included with your TV, use it).



22LG3DCH model



26/32LG3DCH model

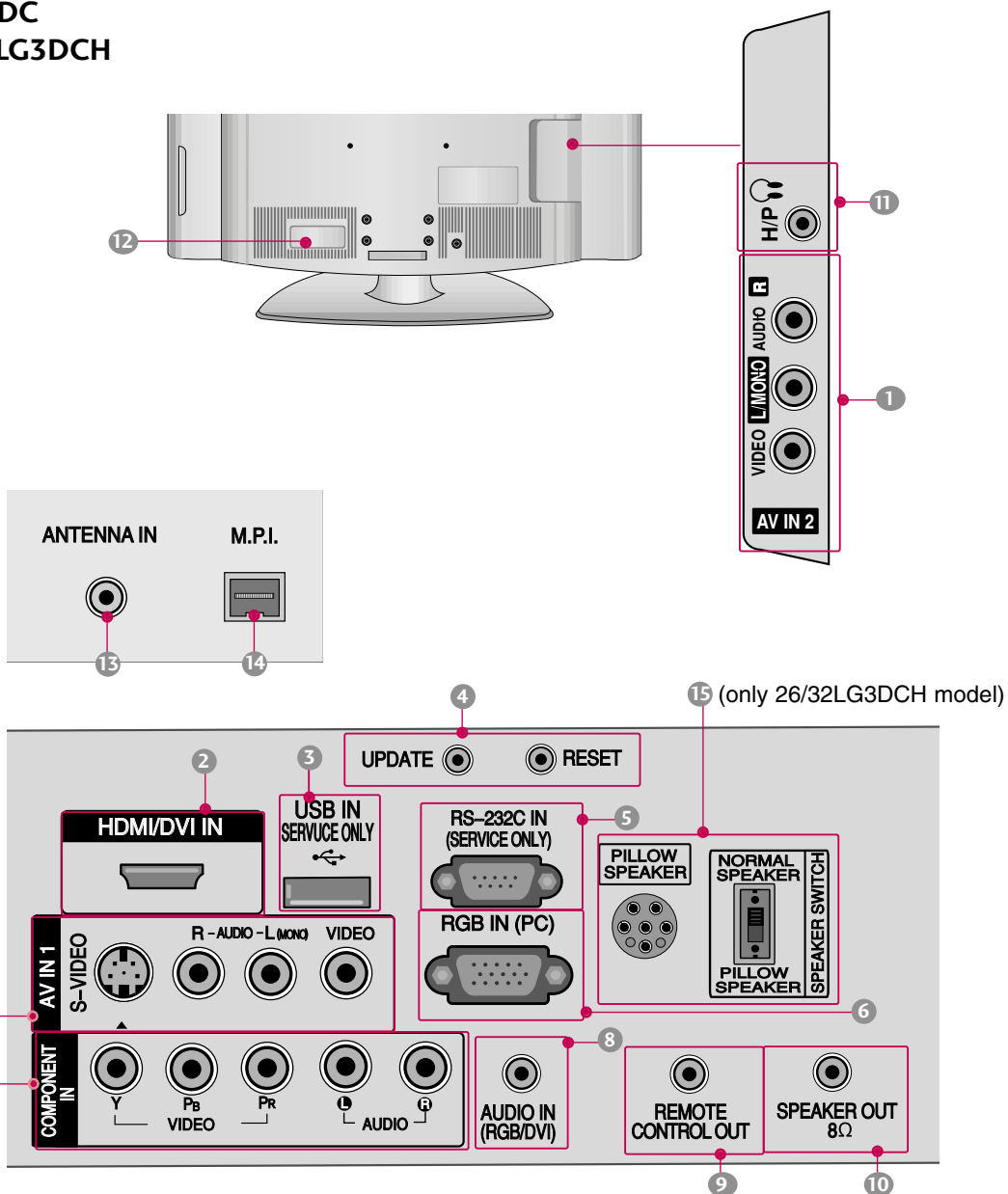


PREPARATION

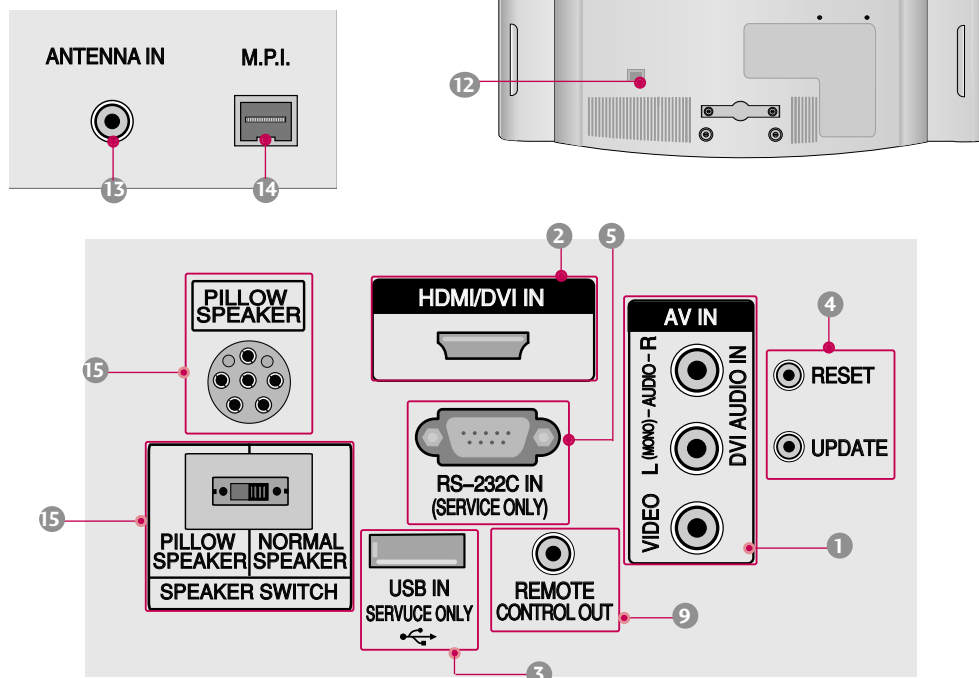
BACK PANEL INFORMATION

■ Image shown may differ from your TV.

For 32LG3DC
26/32LG3DCH



For 22LG3DCH



- 1 AV (Audio/Video) IN**
 Analog composite connection. Supports standard definition video only (480i).
 Used for PC/DTV audio input jack (Only 22LG3DCH-UA model).
S-VIDEO (Except 22LG3DCH model)
 Better quality than standard composite (yellow RCA cable). Supports standard definition video only (480i).
- 2 HDMI/DVI IN**
 Digital Connection. Supports HD video and Digital audio.
 Accepts DVI video using an adapter or HDMI to DVI cable (not included).
- 3 USB IN SERVICE ONLY**
 Used for software updates.
- 4 UPDATE**
 Software downloads and debug mode enable/disable.
RESET
 Hardware reset to PTC microcontroller.
- 5 RS-232C IN (SERVICE ONLY)**
 Used for software updates.
- 6 RGB IN (PC) (Except 22LG3DCH model)**
 Analog PC Connection. Uses a D-sub 15 pin cable (VGA cable).
- 7 COMPONENT IN (Except 22LG3DCH model)**
 Analog Connection.
 Supports HD.
 Uses a red, green, and blue cable for video & a red and white cable for audio.
- 8 AUDIO IN (RGB/DVI) (Except 22LG3DCH model)**
 1/8" headphone jack for analog PC audio input.
- 9 REMOTE CONTROL OUT**
 IR output for controlling an auxiliary device.
- 10 SPEAKER OUT 8Ω (Except 22LG3DCH model)**
- 11 H/P**
 Plug the headphone into the headphone socket.
- 12 Power Cord Socket**
 For operation with AC power.
 Caution: Never attempt to operate the TV on DC power.
- 13 ANTENNA IN**
 Connect over-the air signals to this jack.
- 14 M.P. I.**
- 15 PILLOW SPEAKER (Except 32LG3DC model)**
 Used to connect to pillow speaker.
SPEAKER SWITCH (Except 32LG3DC model)
 Used to select the speaker output switch.
 Note: If Pillow Speaker is selected, no Sound will be heard from TV speakers.
 (NORMAL SPEAKER or PILLOW SPEAKER)

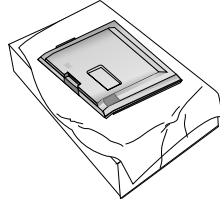
PREPARATION

STAND INSTRUCTION

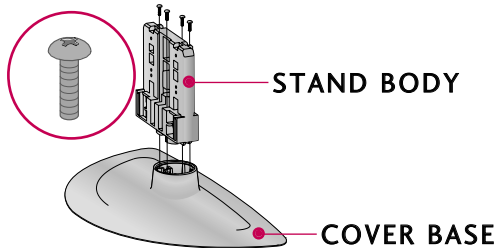
■ Image shown may differ from your TV.

INSTALLATION (Only 32LG3DC)

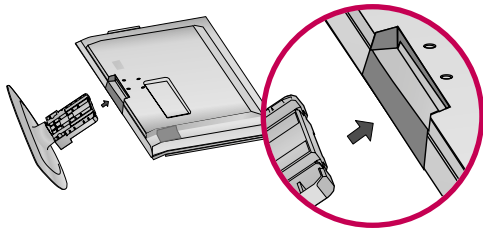
- 1 Carefully place the TV screen side down on a cushioned surface to protect the screen from damage.



- 2 Assemble the parts of the **STAND BODY** with **COVER 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



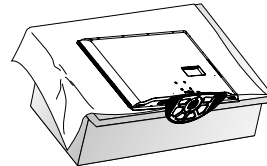
Tighten the two of these four screws and the two Torx plus star head screws (provided as parts of the TV) to secure the TV. Tighten the two Torx plus star head screws with a star head driver bit (not provided as parts of the TV).

NOTE

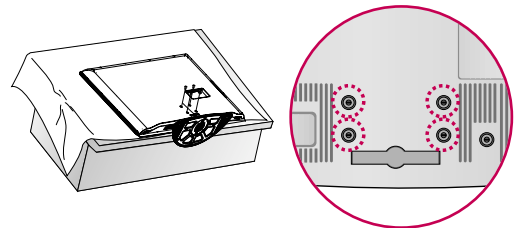
- Make sure the screws in the stand are fully tightened. (If not tightened fully, the product could tilt forward and fall). But do not over tighten, over-tightening can damage the threads on the screws.

DETACHMENT (Only 32LG3DC)

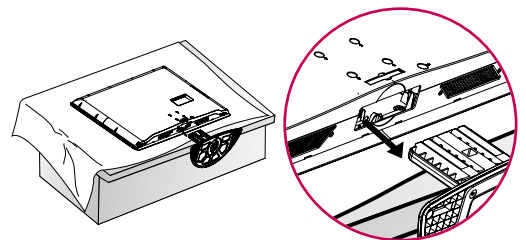
- 1 Carefully place the TV screen side down on a cushioned surface to protect the screen from damage.



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



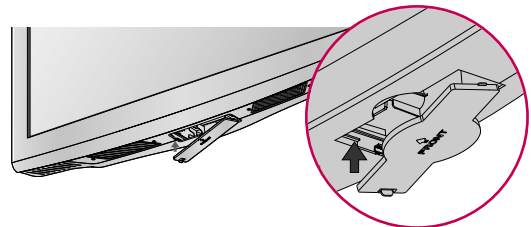
- 3 Detach the stand from TV.



PROTECTION COVER (Except 22LG3DCH)

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.

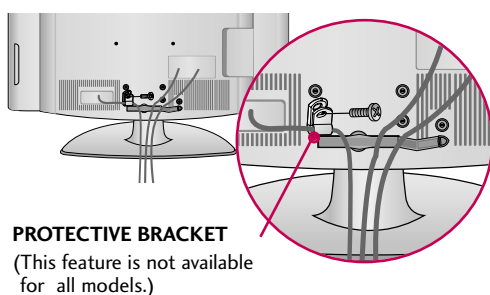


CABLE MANAGEMENT

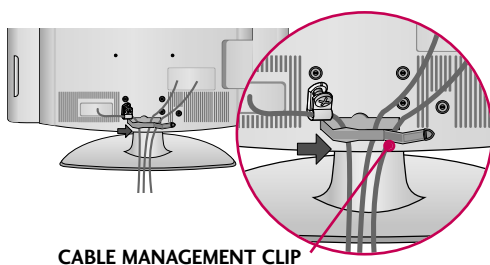
■ Image shown may differ from your TV.

For 26/32LG3DCH, 32LG3DC

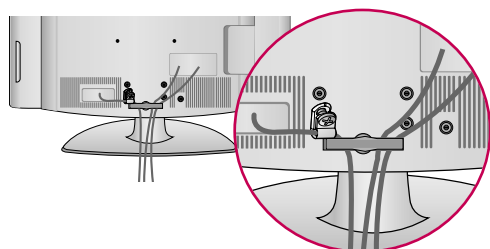
- 1 Connect the cables as necessary.
To connect additional equipment, see the **EXTERNAL EQUIPMENT SETUP** section.
Secure the power cable with the **PROTECTIVE BRACKET** and the screw as shown. It will help prevent the power cable from being removed by accident.



- 2 Install the **CABLE MANAGEMENT CLIP** as shown.

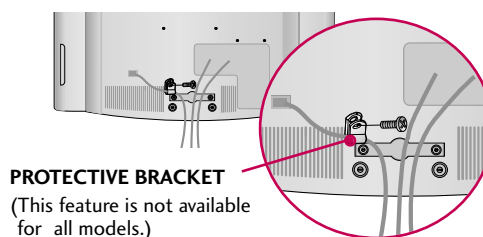


- 3 Put the cables inside the **CABLE MANAGEMENT CLIP** and snap it closed.

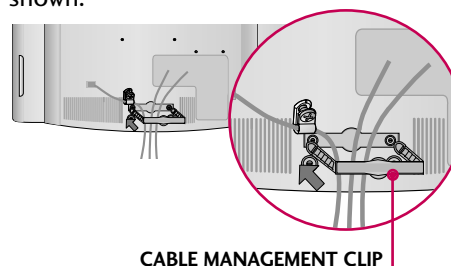


For 22LG3DCH

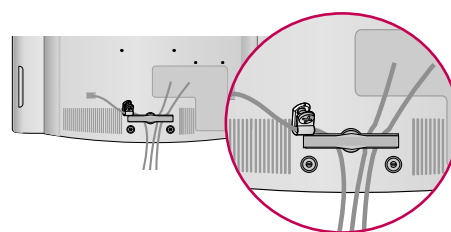
- 1 Connect the cables as necessary.
To connect additional equipment, see the **EXTERNAL EQUIPMENT SETUP** section.
Secure the power cable with the **PROTECTIVE BRACKET** and the screw as shown. It will help prevent the power cable from being removed by accident.



- 2 Install the **CABLE MANAGEMENT CLIP** as shown.

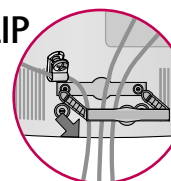


- 3 Fit the **CABLE MANAGEMENT CLIP** as shown.



How to remove the CABLE MANAGEMENT CLIP

- Hold the **CABLE MANAGEMENT CLIP** with both hands and pull it backward.



! NOTE

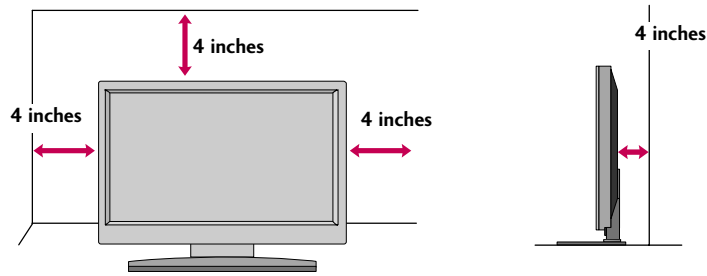
- Do not hold the **CABLE MANAGEMENT CLIP** when moving the TV.
- If the TV is dropped, you may be injured or the product may be broken.

PREPARATION

DESKTOP PEDESTAL INSTALLATION

- Image shown may differ from your TV.
- * This feature is not available for all models.

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

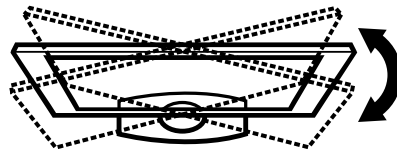


CAUTION

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

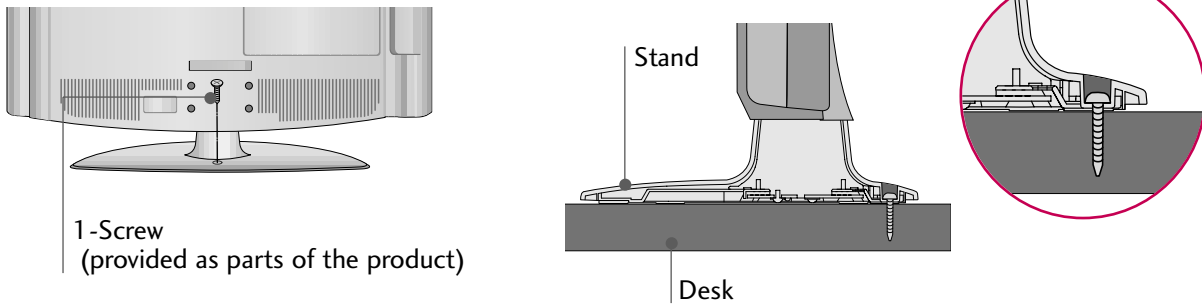
SWIVEL STAND (Only 32LG3DC)

The TV can be conveniently swivelled on its stand 90° to the left or right to provide the optimum viewing angle.



ATTACHING THE TV TO A DESK (Only 32LG3DC)

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



⚠ 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.

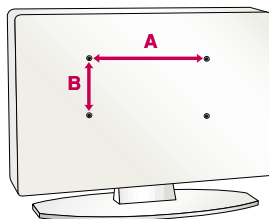
PREPARATION

VESA WALL MOUNTING

Install your wall mount on a solid wall perpendicular to the floor. When attaching to other building materials, please contact your nearest dealer.

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.



Product	Model	VESA (A * B)	Standard Screw	Quantity
LCD TV	26LG3DCH, 32LG3DCH 32LG3DC	200 * 100	M4	4
	22LG3DCH	100 * 100	M4	4

! 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 to 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 tighten the screws too much. It may damage the TV or allow the TV to fall and cause 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 the TV is plugged in. It may result in personal injury due to electric shock.

⚠ WARNING

- ▶ To prevent injury, this apparatus must be securely attached to the wall in accordance with the installation instructions.

VESA STANDARD TV MOUNTS

General Guidelines: Choosing a Location for installing a VESA Standard Mount

Mount

To the right are some examples of VESA standard mounts. Since there are numerous types of stands and mounts available, only a few are shown here. Refer to the instructions provided with the TV stand that will be used to mount the TV. Be sure the style of stand selected is capable of supporting the weight of the TV and is appropriate for the application.

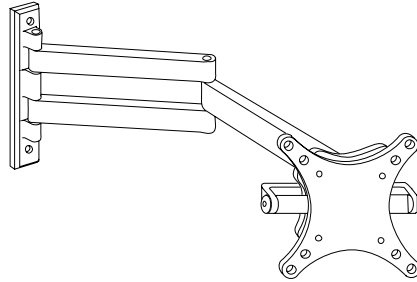
Wall Mounts

If the mount will be on a wall, a typical wooden stud behind the wall board would be the preferred choice for a location to attach the wall mount. The wall mount location chosen should be appropriate for drilling holes and have available the required power source as well as antenna/cable and any other equipment leads as necessary.

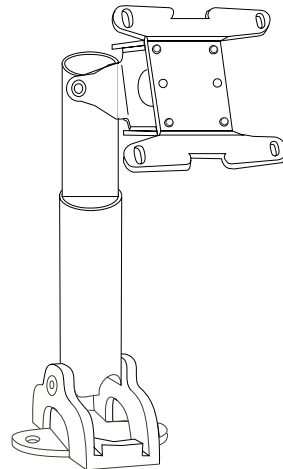
Pedestal Mounts and Stands

A sturdy surface on a desk or other similar flat table-like furniture would be the appropriate location for mounting a pedestal-style TV stand.

Most stands are designed so that the wiring is threaded through the stand itself or a loop-through style clamp so that the wiring is neatly bunched and not strung in such a way as to create a potential hazard to the user. (Some stands are portable and can be moved from one location to another.) Be sure all safety considerations are followed.



Typical Wall Stud Type Mount with Swivel Bracket



Typical Pedestal Type Mount with Swivel Bracket

PREPARATION

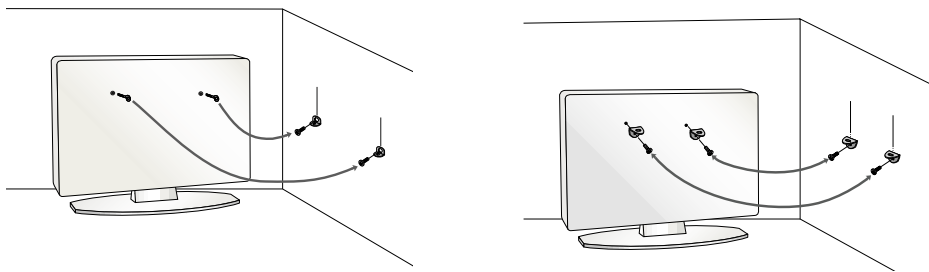
SECURING THE TV TO THE WALL TO PREVENT FALLING WHEN THE TV IS USED ON A STAND

- You should purchase necessary components to prevent TV from falling off of the stand.
- Image shown may differ from your TV.
- * This feature is not available for all models.

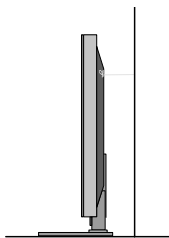
We recommend that you set the TV close to a wall so it cannot fall over if pushed backwards.

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 eye-bolts (or TV brackets and bolts) to attach 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 screws (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 or cord (sold separately) to tie the product. It is safer to tie the rope so it becomes horizontal between the wall and the product (the less slack in the rope, the better).

! 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.

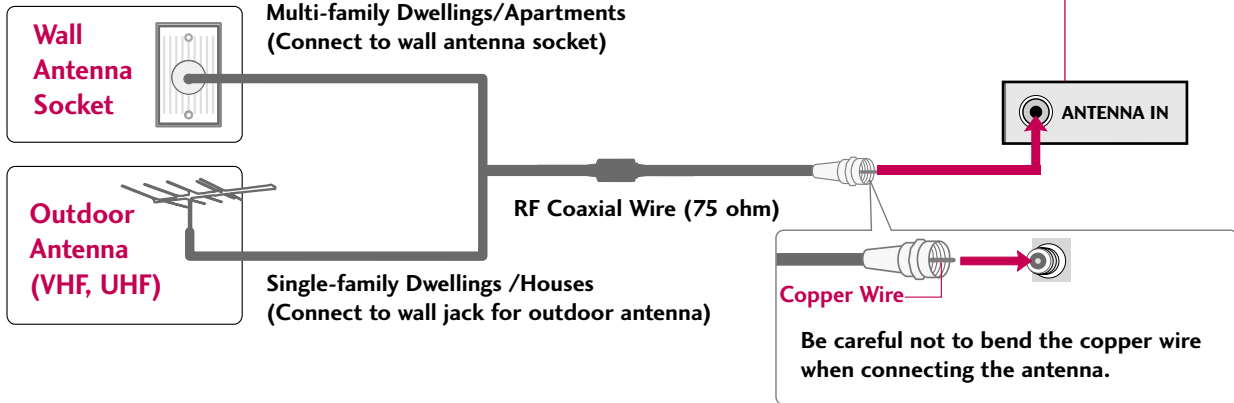
- To prevent damage do not connect to the power outlet until all connections are made between the devices.

ANTENNA OR CABLE CONNECTION

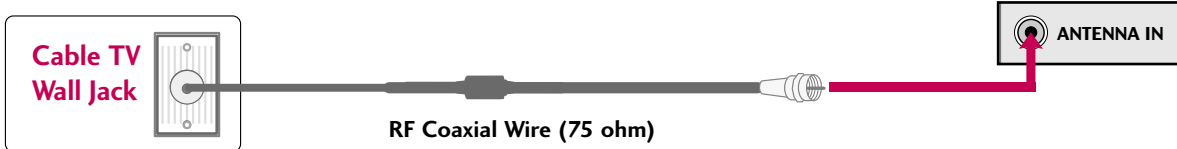
1. Antenna (Analog or Digital)

Wall Antenna Socket or Outdoor Antenna without a Cable Box Connection.

For optimum picture quality, adjust the direction if needed.



2. Cable



- 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.

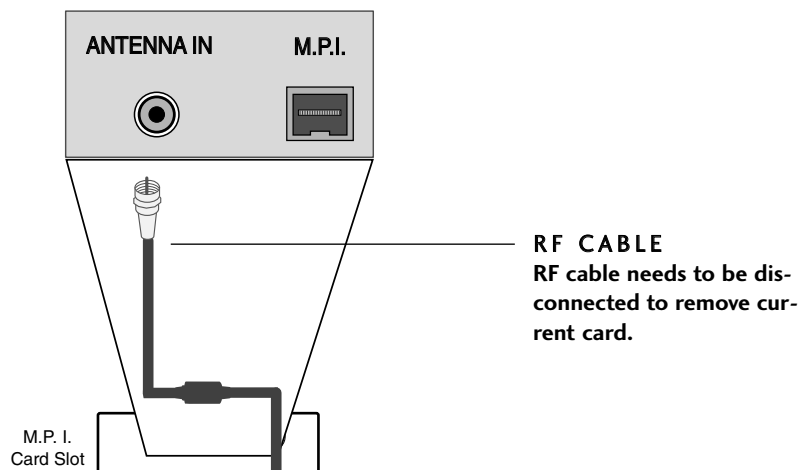
PREPARATION

MPI CARD SLOT

The MPI card is equipped with an RF jack for antenna/cable signal source connection. The slot is also available for installing a 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.
2. Detach RF cable.
3. Place new PPV card into slot and slide it in far enough to reconnect RF cable.
4. 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.



EXTERNAL EQUIPMENT SETUP

- To prevent the equipment damage, never plug in any power cords until you have finished connecting all equipment.
- This part of EXTERNAL EQUIPMENT SETUP mainly uses the picture for 32LG3DC model.

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.

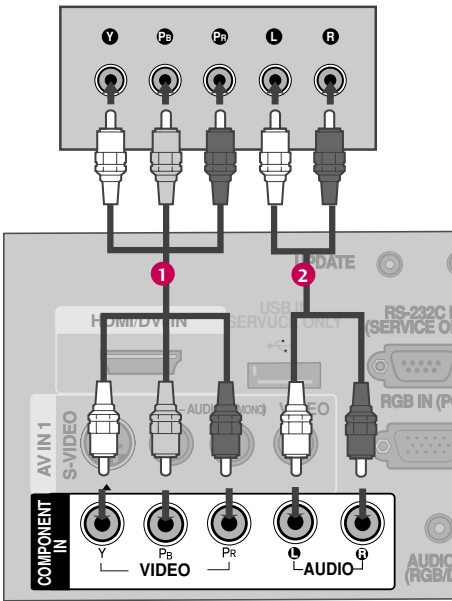
Component Connection (Except 22LG3DCH)

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	Yes
480p	Yes	Yes
720p	Yes	Yes
1080i	Yes	Yes
1080p	No	Yes

Y, Cb/Pb, Cr/Pr

Resolution	Horizontal Frequency(KHz)	Vertical Frequency(Hz)
720x480i	15.73	59.94
	15.73	60.00
720x480p	31.47	59.94
	31.50	60.00
1280x720p	44.96	59.94
	45.00	60.00
1920x1080i	33.72	59.94
	33.75	60.00

EXTERNAL EQUIPMENT SETUP

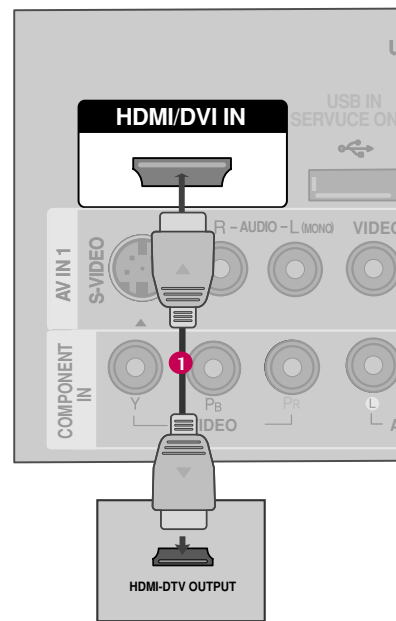
HDMI Connection

1. How to connect

- 1 Connect the digital set-top box to **HDMI/DVI IN** 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 **HDMI** input source with using the **INPUT** button on the remote control.



HDMI-DTV

Resolution	Horizontal Frequency(KHz)	Vertical Frequency(Hz)
720x480i	15.73	59.94
	15.73	60.00
720x480p	31.469	59.94
	31.500	60.00
1280x720p	44.96	59.94
	45.00	60.00
1920x1080i	33.72	59.94
	33.75	60.00
1920x1080p	67.50	60.00

DVI to HDMI Connection

1. How to connect

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

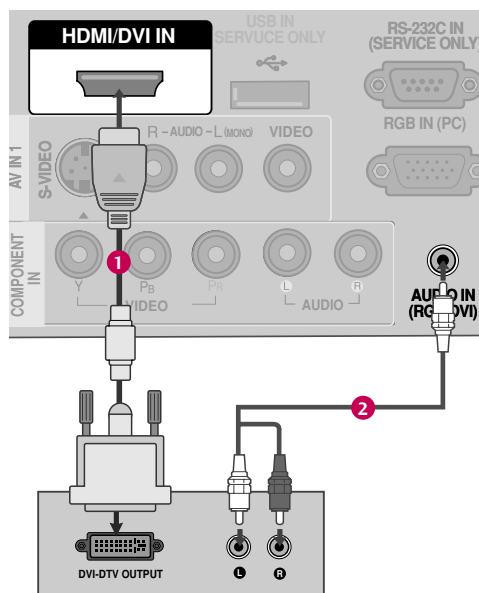
2. How to use

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

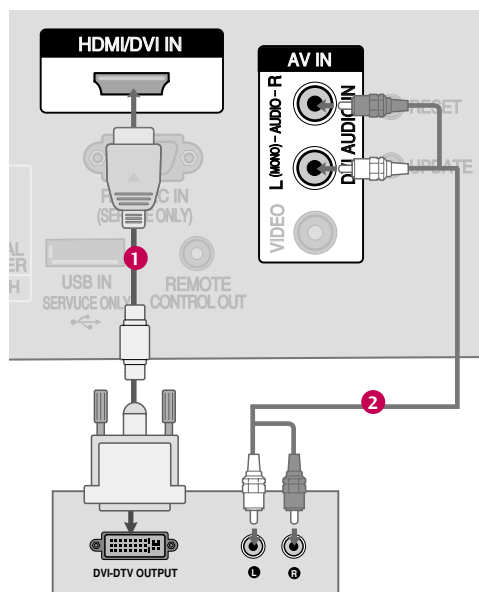
! NOTE

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

26/32LG3DCH,
32LG3DC model



22LG3DCH model



EXTERNAL EQUIPMENT SETUP

DVD SETUP

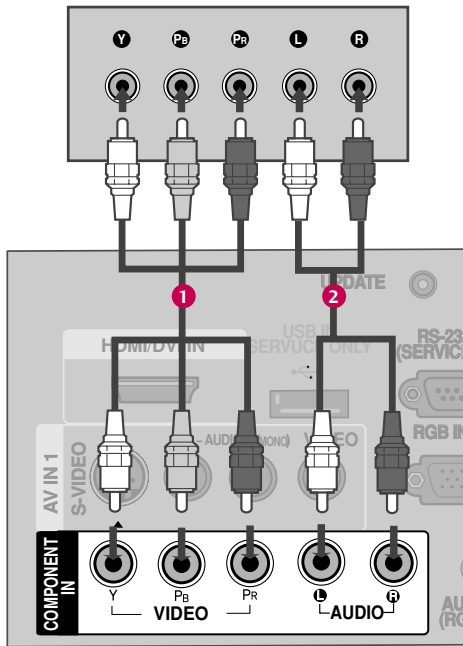
Component Connection (Except 22LG3DCH)

1. How to connect

- 1 Connect the video outputs (Y, PB, PR) of the DVD to the **COMPONENT IN VIDEO** jacks on the TV.
Match the jack colors (Y = green, PB = blue, and PR = 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

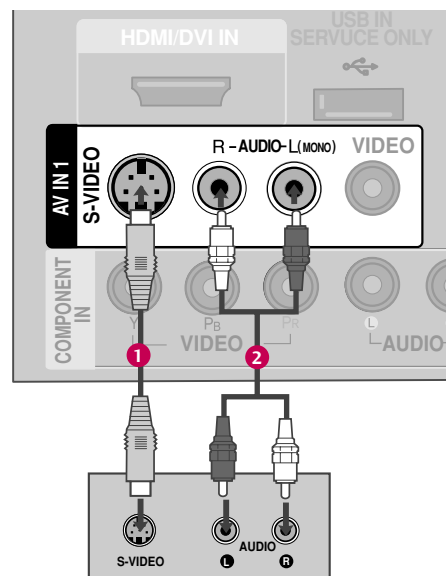
S-Video Connection (Except 22LG3DCH)

1. How to connect

- 1 Connect the S-VIDEO output of the DVD to the **S-VIDEO** input on the TV.
- 2 Connect the audio outputs of the DVD to the **AUDIO** input jacks on the TV.

2. How to use

- Turn on the DVD player, insert a DVD.
- Select the **AV1** input source on the TV using the **INPUT** button on the remote control.
- Refer to the DVD player's manual for operating instructions.



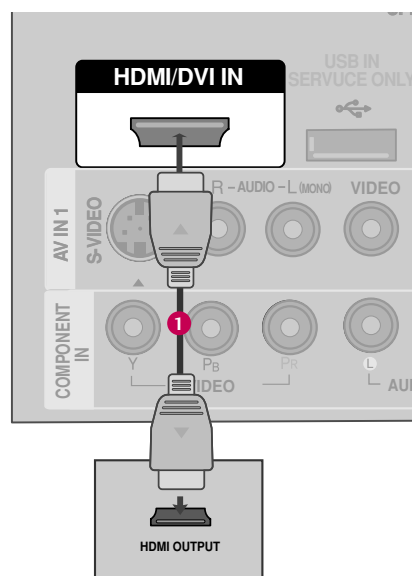
HDMI Connection

1. How to connect

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

2. How to use

- Select the **HDMI** 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

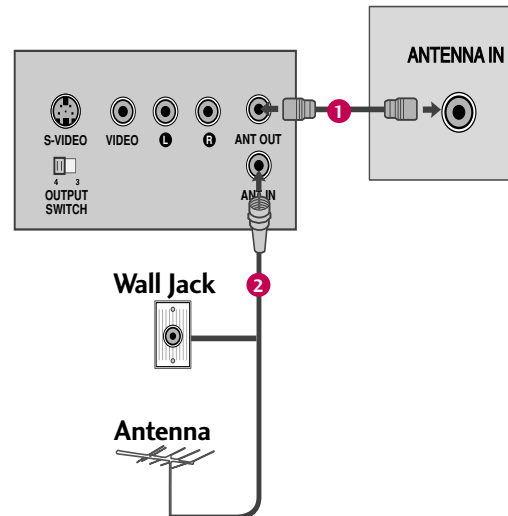
VCR SETUP

- To avoid picture noise (interference), leave an adequate distance between the VCR and TV.
- If the 4:3 picture format is used; the fixed images on the sides of the screen may remain visible on the screen. This phenomenon is common to all TVs and is not covered by warranty.

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

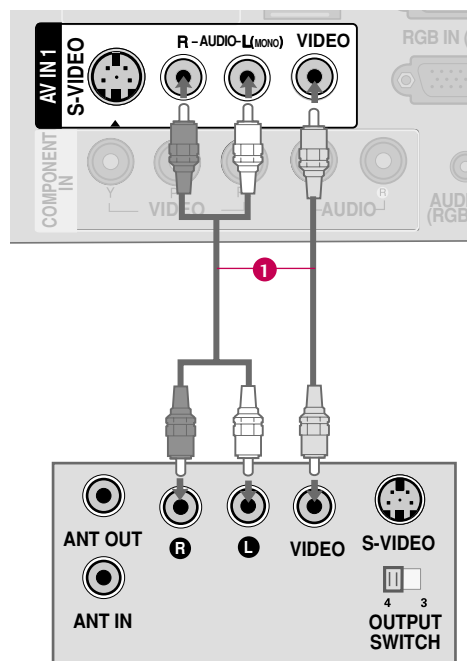
- 1 Connect the **AUDIO/VIDEO** jacks between TV and VCR. Match the jack colors (Video = yellow, Audio Left = white, and Audio Right = red)

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 **AV** or **AV1** input source on the TV using the **INPUT** button on the remote control.
- If connected to **AV IN2**, select **AV2** input source on the TV (Except 22LG3DCH).

! NOTE

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



S-Video Connection (Except 22LG3DCH)

1. How to connect

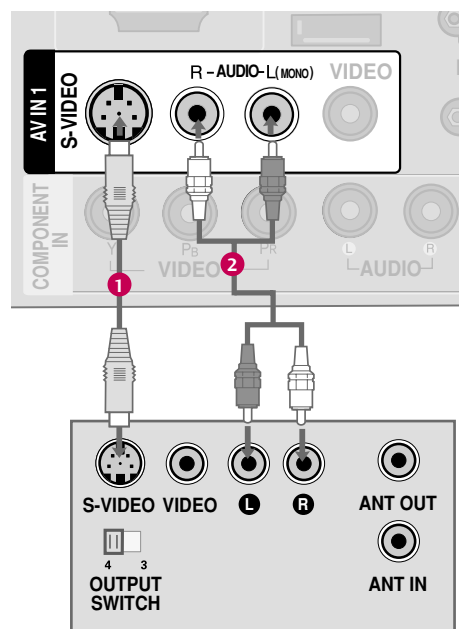
- 1 Connect the **S-VIDEO** output of the VCR to the **S-VIDEO** input on the TV.
- 2 Connect the audio outputs of the VCR to the **AUDIO** input jacks on the TV.

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.

! NOTE

- S-Video provides better quality than composite. Use it when available.



! CAUTION

- Do not connect to both Video and S-Video at the same time. In the event that you connect both Video and the S-Video cables, only the S-Video will work.

EXTERNAL EQUIPMENT SETUP

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)

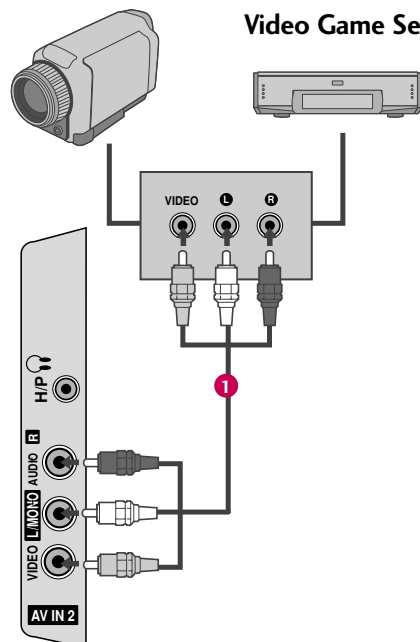
2. How to use

- Select the **AV2** input source on the TV using the **INPUT** button on the remote control. (Except 22LG3DCH)
- If connected to **AV IN** or **AV IN1** input, select the **AV** or **AV1** input source on the TV.
- Operate the corresponding external equipment.

26/32LG3DCH,
32LG3DC model

Camcorder

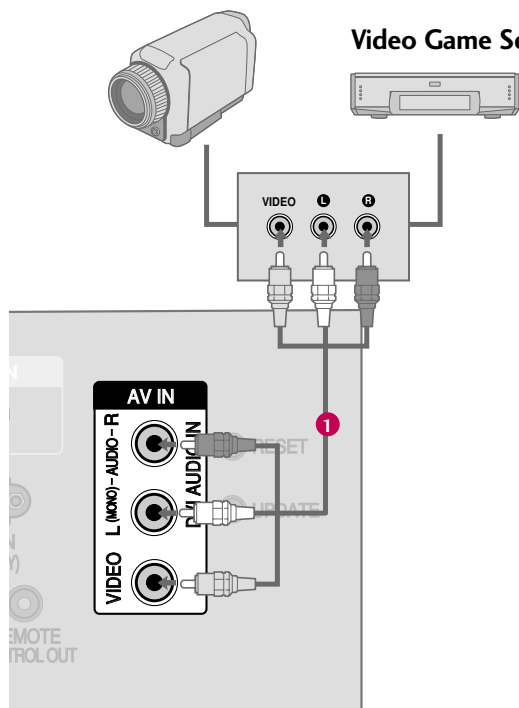
Video Game Set



22LG3DCH model

Camcorder

Video Game Set



PILLOW SPEAKER SETUP (Except 32LG3DC)

- Connect a pillow speaker to the LCD TV/Monitor.

1. How to connect

- 1 Connect the **PILLOW SPEAKER** output jack on the back of the TV.
- 2 Connect an accessory pillow speaker or wired remote control unit to this 6-pin jack.
- 3 Select **PILLOW SPEAKER** on the rear panel of the TV.

- NOTE: If the pillow speaker switch is set to Pillow Speaker, no sound will be heard from the TV speakers. Also, Auto Volume will be grayed out and not accessible on the Sound menu.

Use a pillow speaker that is a UL recognized pendant control bearing the warning:

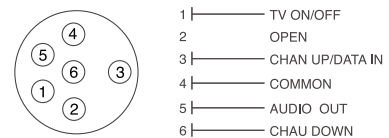
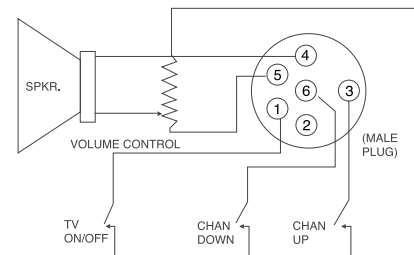
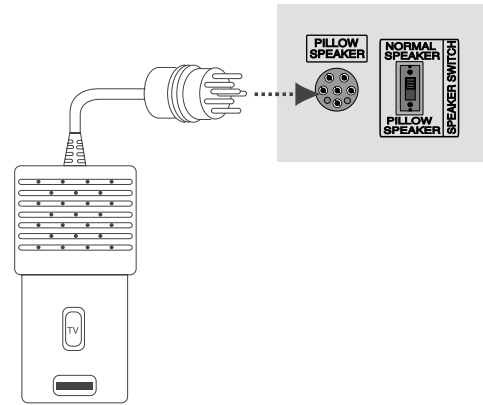
“Risk of fire if used in oxygen enriched atmosphere. Keep pendant control away from oxygen equipment.”

Controlling the TV with Serial Data

The TV is capable of being controlled by a single-wire, serial data signal. This is a LG patented technology and is being implemented by certain brands of “smart” pillow speakers.

Pillow Speaker Interface

This connector furnishes three control lines and an audio output. A patient-pendant remote control, or entertainment audio and nurse call system may be connected here. All lines are isolated from the AC power line and earth ground. (Optoisolators isolate the control lines, and a transformer isolates the audio. There are no relays or inductive components in the control lines.)



pin No.	Purpose
1	External TV On/Off switch.
2	(Not used.)
3	External Channel Up switch or Data in.
4	Common connection for control, data, and audio output. Impedance to earth ground is a 10-meg resistor in parallel with a 1100 pf capacitor.
5	Isolated audio output. Nominal 14-ohm source impedance with short circuit protection. Intended for a pillow speaker with a low-impedance pad-type volume control.
6	External Channel Down switch.

Controlling the TV with Mechanical Switches

Pin 4 (common) is momentarily connected to pin 1, 3, or 6 via push-action switches to control On/Off and Channel Up/Down. These pins are at +13volts DC (when measured from pin 4) with the switches open. Current draw is 8 mA when a switch is closed. (This operation is identical to previous LG models using the 5-Wire Interface except that only +7 volts DC was supplied and current draw was only 2.5 mA.)

EXTERNAL EQUIPMENT SETUP

PC SETUP

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

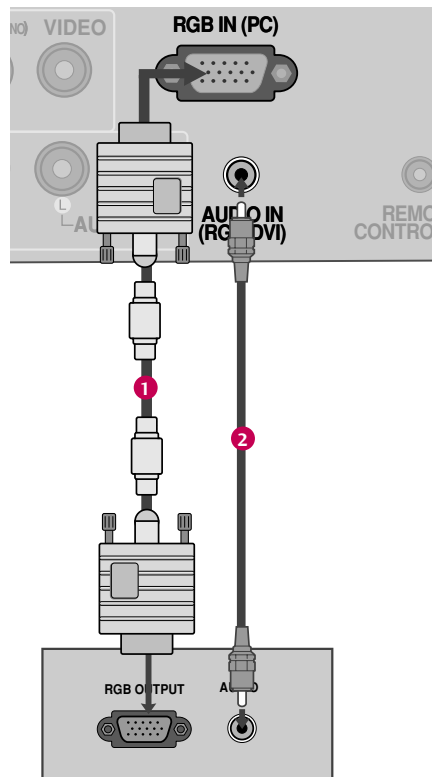
VGA (D-Sub 15 pin) Connection (Except 22LG3DCH)

1. How to connect

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

2. How to use

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



Supported Display Specifications (RGB-PC, HDMI-PC)

Resolution	Horizontal Frequency(KHz)	Vertical Frequency(Hz)
640x350	31.469	70.08 ●
720x400	31.469	70.08 ●
640x480	31.469	59.94
800x600	37.879	60.31
1024x768	48.363	60.00
1280x768	47.776	59.87
1360x768	47.712	60.01
	47.720	59.799
1366x768	47.130	59.65

* Only RGB-PC mode

! NOTES

- ▶ To get the the best picture quality, adjust the PC graphics card to 1360x768.
- ▶ 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.
- ▶ 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.

DVI to HDMI Connection

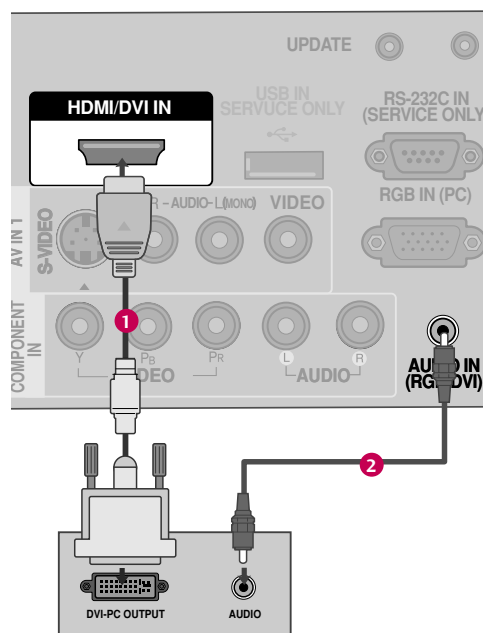
1. How to connect

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

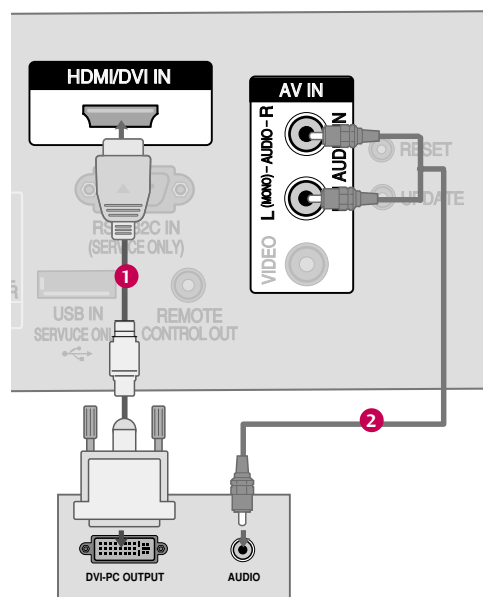
2. How to use

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

26/32LG3DCH,
32LG3DC model



22LG3DCH model



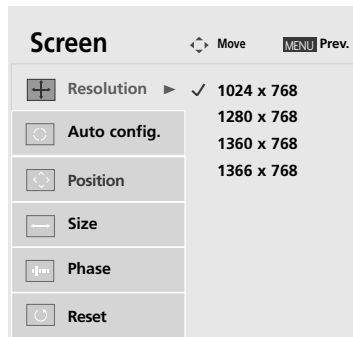
EXTERNAL EQUIPMENT SETUP

Screen Setup for PC mode (Except 22LG3DCH)

Selecting Resolution

You can choose the resolution in RGB mode.

The **Position**, **Phase**, and **Size** can also be adjusted.

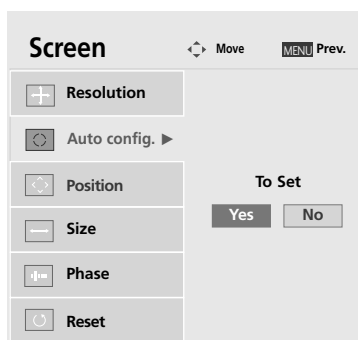


- 1  Press the **ADJUST** button.
- 2  Select **Resolution**.
- 3   Select the desired resolution.
- 4  Return to TV viewing.

■ You can also adjust **Screen(RGB-PC)** in the **PICTURE** menu.

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  Press the **ADJUST** button.

2  Select **Auto config.**

3   Select **Yes**.

4  Start Auto Configuration.

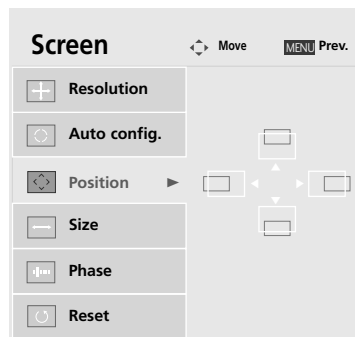
- If the position of the image is still not correct, try Auto adjustment again.
- If picture needs to be adjusted again after Auto adjustment in RGB, you can adjust the **Position**, **Size** or **Phase**.

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 mode.

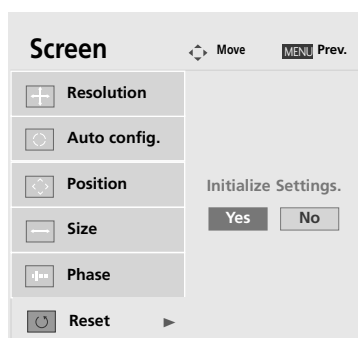


- 1  Press the **ADJUST** button.
- 2  Select **Position**, **Size**, or **Phase**.
- 3   Make appropriate adjustments.
- 4  Return to TV viewing.

- **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. The **Size** adjustment range is **-30 ~ 30**.
- **Phase:** This function allows you to remove any horizontal noise and clear or sharpen the image of characters. The **Phase** adjustment range is **-32 ~ 31**.

Screen Reset (Reset to original factory values)

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



1  Press the **ADJUST** button.

2  Select **Reset**.

3   Select **Yes**.

4 

WATCHING TV / CHANNEL CONTROL

REMOTE CONTROL FUNCTIONS (Only 32LG3DC)

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

POWER Turns your TV on or off.

TV In AV1-2, Component, RGB, and HDMI input sources, screen returns to the last TV channel.

INPUT External input modes rotate in regular sequence: TV, AV1-2, Component, RGB, and HDMI.

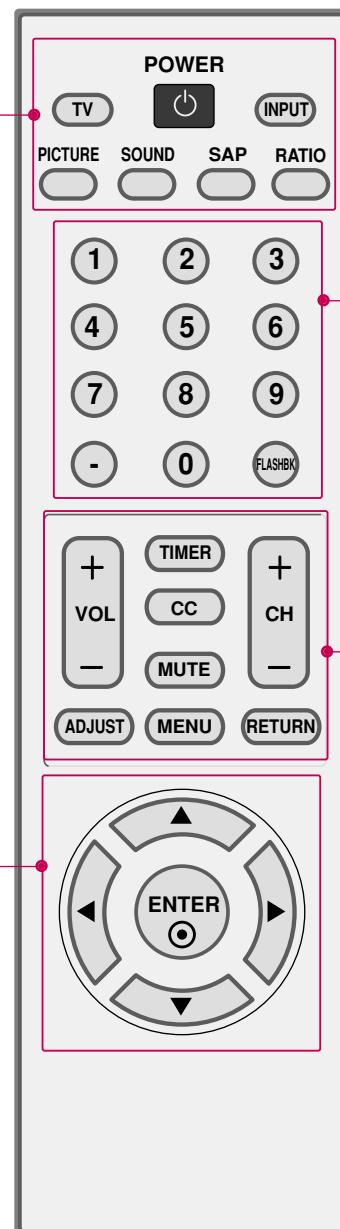
PICTURE Selects the factory preset picture depend on the viewing environment. ► p.51

SOUND Selects the factory preset sound for type of program.
► p.61

SAP • Analog mode: Selects MTS sound (Mono, Stereo, or a SAP). ► p.67
• DTV mode: Changes the audio language.

RATIO Change the aspect ratio. ► p.48

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



NUMBER button

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

FLASHBK Tune to the last channel viewed.

VOLUME UP /DOWN Increase/decrease the sound level.

TIMER Select the amount of time before your TV turns off automatically. ► **p.76**

CC Select a closed caption. ► **p.70**

MUTE Switch the sound on or off. ► **p.41**

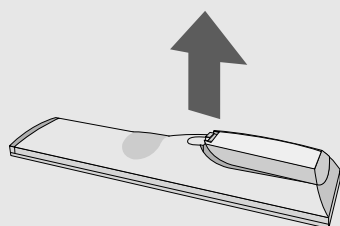
CHANNEL UP/DOWN Select available channels.

ADJUST Adjust the screen resolution, position, size and phase. ► **p.32 - p.35**

MENU Displays the main menu.

RETURN Allows the user to move return one step in an interactive application or other user interaction function.

Installing Batteries



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

INSTALLER REMOTE CONTROL FUNCTIONS

LG Multi-brand Remote Control

Use the MODE button to select TV and put installer remote into TV operating mode.

Notes: This remote is not supplied with the TV. This typical LG multi-brand remote control is shown for reference.

Follow the instructions provided in the Installer menu section to configure the TV's features.

All features shown may not be available on all TVs.

TV INPUT/INPUT Select available input sources.

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

MULTI Selects available auxiliary input sources.

- [Light Bulb Icon] + Adjusts picture brightness.

MODE Selects remote operating mode: TV, VCR, or DVD. Select these other operating modes for remote to operate external devices.

VOLUME UP/DOWN Increases/decreases the sound level.

CHANNEL UP/DOWN/PAGE Selects available channels found with Auto tuning. Moves to next available page.

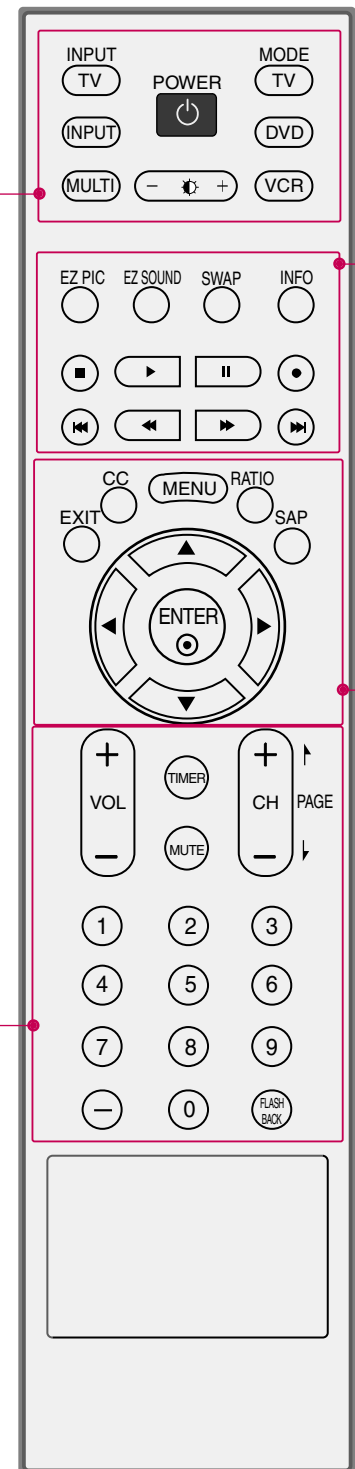
TIMER Sets the amount of time before the TV automatically turns itself Off.

MUTE Switches the sound on or off.

NUMBER Use to enter a program number or channels.
Buttons (0 - 9)

— (DASH) Dash for multiple channels such as 9-1, 9-2, etc.

FLASHBK Returns to the previously viewed channel.



EZ PIC Selects the factory preset picture appropriate for the viewing environment.

EZ SOUND Sets the appropriate sound for the program's content.

SWAP Exchanges the main/sub images in Twin picture mode.

INFO While watching a TV program, will display program information on top of the screen.
Info feature is not functional for Aux sources.

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

MENU Brings up the main menu to the screen.
Enters or exits a Panel Menu in the TV Guide on-screen menu system.

CC Selects a closed caption option: Off, CC1 ~ 4, Text1 ~ 4.

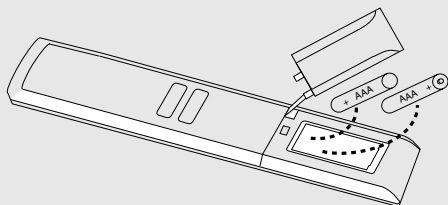
EXIT Clears all on-screen displays and returns to TV viewing from any TV menu.

RATIO Adjusts the picture aspect ratio.

SAP Selects MTS sound:
Mono, Stereo, and SAP in Analog mode.
Changes the audio language in DTV mode.

THUMBSTICK Use to navigate on-screen menus / adjust the system settings to your requirements.
(Up/Down/Left
Right/ENTER)

Installing Batteries in Installer Remote Control



- Remove the battery compartment cover on the back side by sliding the cover downward until the batteries are exposed and can be removed. Install new batteries matching correct polarity as shown (+ with + and - with -). Slide cover back into position to close compartment.
- Install two high-quality 1.5V AAA batteries. Never mix old or used batteries with new ones. Replace cover.

WATCHING TV / CHANNEL CONTROL

TURNING ON TV

- 1 First, connect power cord correctly.
At this moment, the TV switches to standby mode.
 - In standby mode to turn TV on, press the ϕ /I button on the TV or press the **POWER** button on the remote control.
 - Note: Only for 32LG3DCH the TV also turn on with **CH (+ or -)** button on the remote.
- 2 Select the viewing source by using the **INPUT** button on the remote control.
 - This TV is programmed to remember which power state it was last set to, even if the power cord is out.
- 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 -)** or **NUMBER** buttons to select a channel number.
-

VOLUME ADJUSTMENT

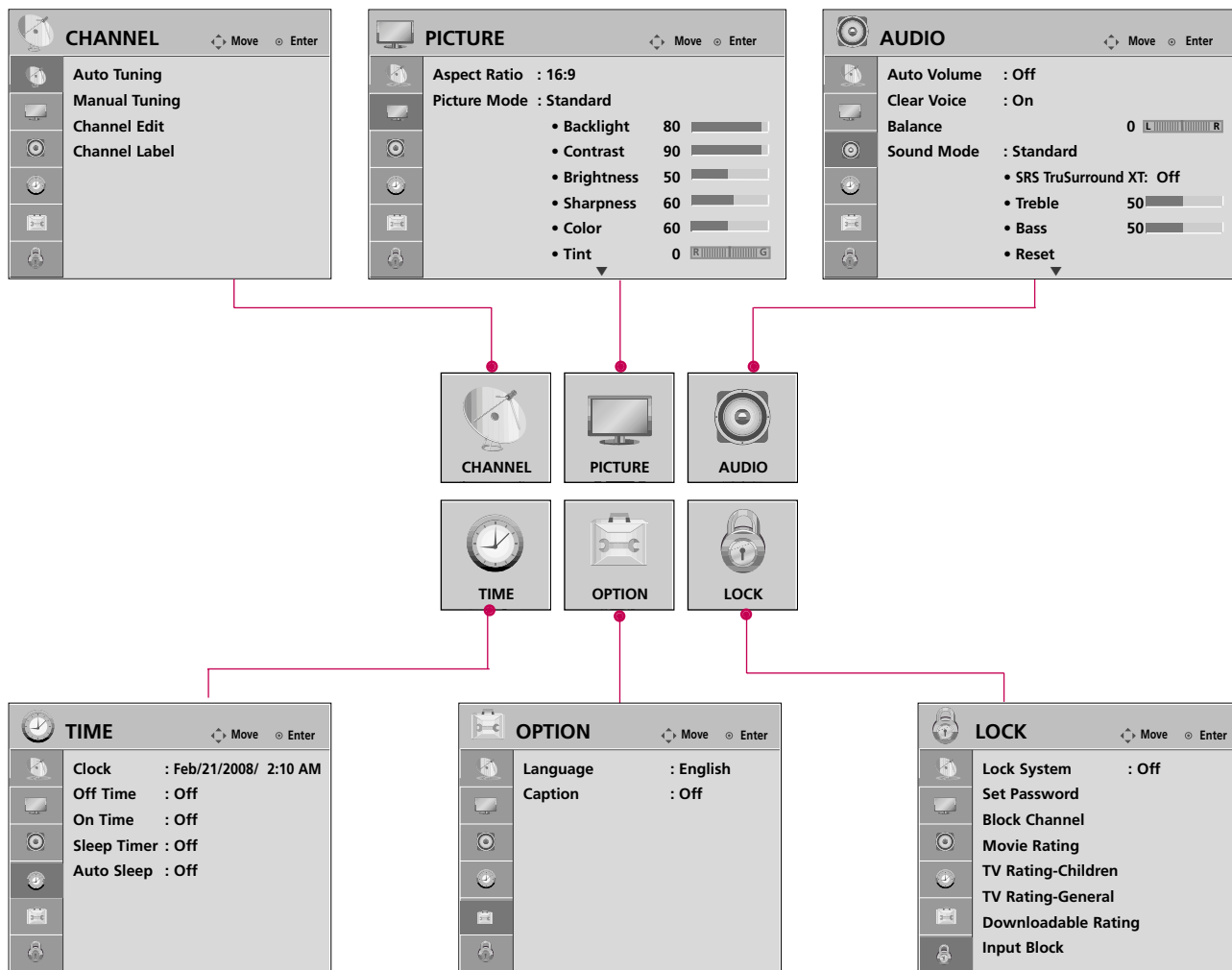
Adjust the volume to suit your personal preference.

- 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.
-

WATCHING TV / CHANNEL CONTROL

ON-SCREEN MENUS SELECTION

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



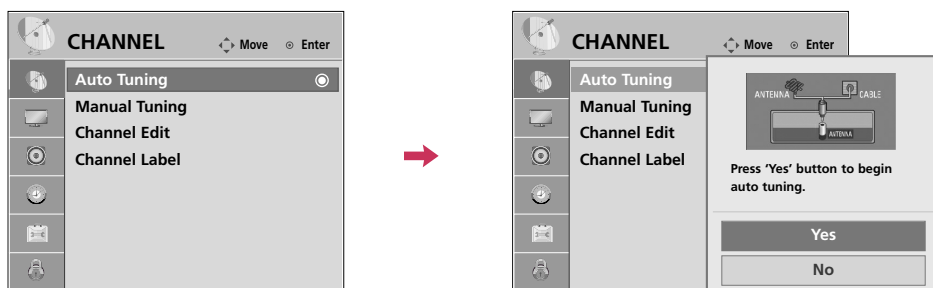
-   Display each menu.
-   Select a menu item.
-  Enter to the pop up menu.
-  Return to TV viewing.

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.



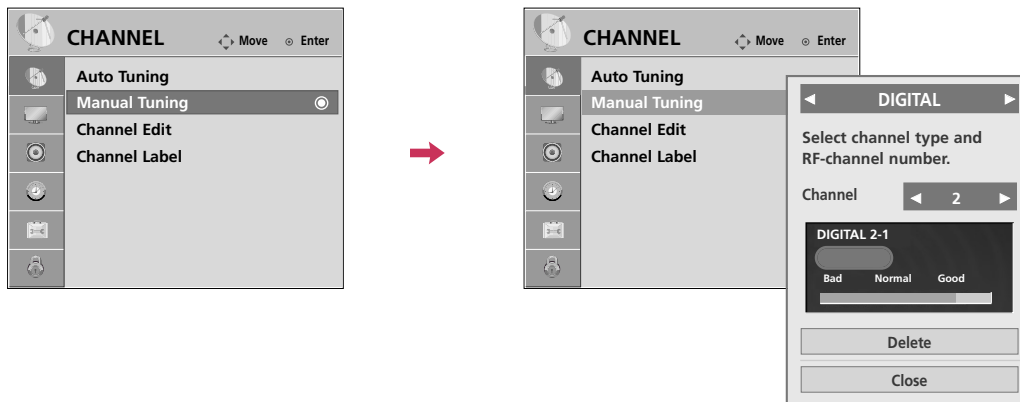
- 1   Select **CHANNEL**.
- 2   Select **Auto Tuning**.
- 3   Select **Yes**.
- 4  Run **Auto tuning**.
- 5  Return to the previous menu.
-  Return to TV viewing.

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

WATCHING TV / CHANNEL CONTROL

Add/Delete Channel (Manual Tuning)

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



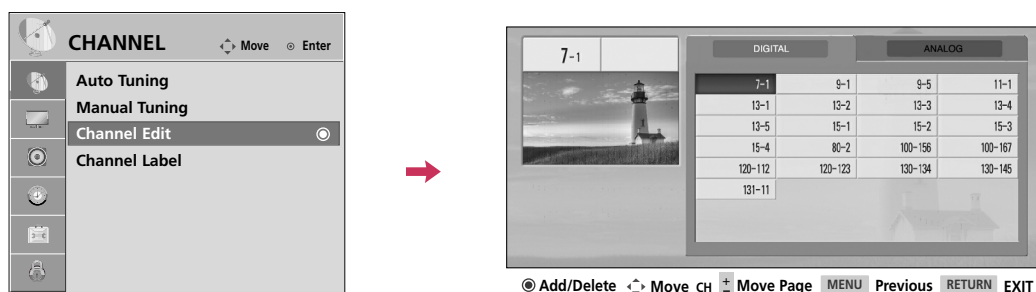
- 1   Select **CHANNEL**.
- 2   Select **Manual Tuning**.
- 3   Select **DIGITAL** or **ANALOG**.
- 4   Select channel you want to add or delete.
- 5   Select **Add** or **Delete**.
- 6  Return to the previous menu.
-  Return to TV viewing.

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

Channel Editing

A custom list can be created by toggling each channel on or off with **ENTER** button. The channels in the Custom List are displayed in black and the channels deleted from the Custom List are displayed in gray.

Once a channel is highlighted you can add or delete the channel by referring to the small window at the top-right corner of the screen.



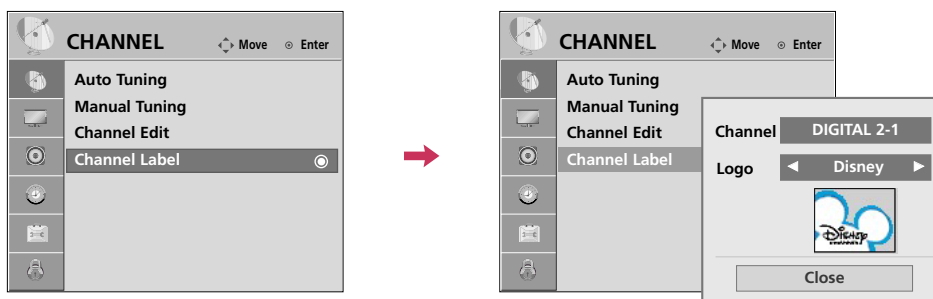
- 1   Select **CHANNEL**.
- 2   Select **Channel Edit**.
- 3   Select a channel.
- 4  Select channel you want to add or delete.
- 5  Return to the previous menu.
-  Return to TV viewing.

WATCHING TV / CHANNEL CONTROL

CHANNEL LABEL

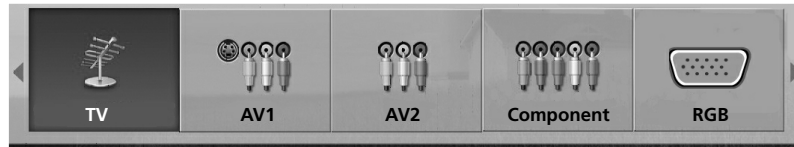
Choose preset labels for your channels.

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.



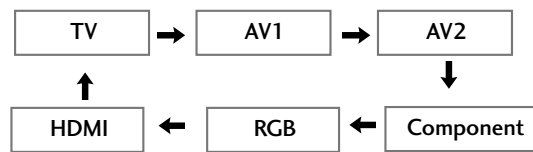
- 1   Select **CHANNEL**.
- 2   Select **Channel Label**.
- 3   Select Channel.
- 4  Select a channel to set logo.
- 5   Select the appropriate logo for the channel.
- 6  Return to the previous menu.
-  Return to TV viewing.

INPUT LIST

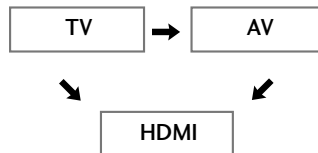


Select the desired input source.

For 26/32LG3DCH
32LG3DC



For 22LG3DCH



- **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:** Select it to view PC input.
- **HDMI:** Select them to watch high definition devices.

PICTURE CONTROL

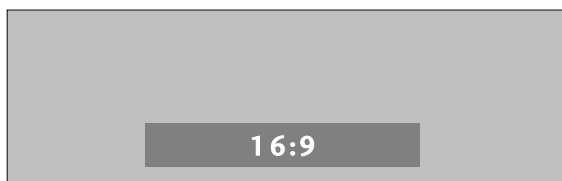
PICTURE SIZE (ASPECT RATIO) CONTROL

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

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

! NOTE

- ▶ If a fixed image is displayed on the screen for a long time, the image could become imprinted on the screen and remain visible. This phenomenon is rare on LCDs, but is possible when the image is on the screen for a very long time. This phenomenon is common to all manufacturers and is not covered by warranty. When watching video that does not fill the screen, any after-image from the black bars will normally dissipate after a few minutes.



Press the **RATIO** button repeatedly to select the picture options
: **Set By Program**, **4:3**, **16:9**, **Full**(Only 22LG3DCH), **Zoom1**, **Zoom2**,
Just Scan.



Return to TV viewing.

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

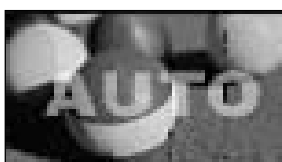
Set by program

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.



Full (Only 22LG3DCH)

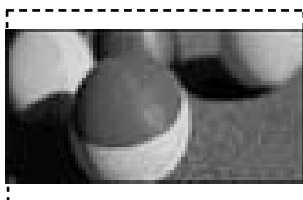
When TV receives the wide screen signal, it will lead you to adjust the picture horizontally or vertically, in a linear proportion, to fill the entire screen fully.



PICTURE CONTROL

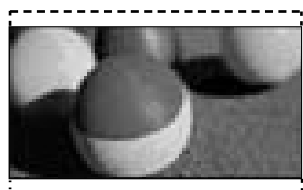
Zoom 1

Choose Zoom 1 when you want to view the picture without any alteration. However, the top and bottom portions of the picture will be cropped.



Zoom 2

Choose Zoom 2 when you want the picture to be altered, both vertically extended and cropped. The picture taking a halfway trade off between alteration and screen coverage.



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.

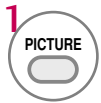
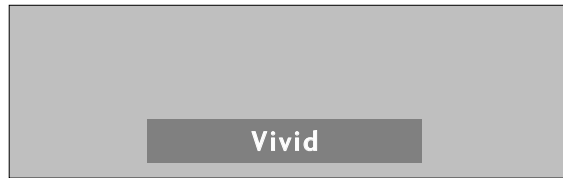
Just Scan operates only with DTV/CADTV/HDMI-DTV/DVI-DTV (720p/1080i/1080p), Component(720p/1080i) input sources.



PRESET PICTURE SETTINGS

Picture Mode - Preset

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



Press the **PICTURE** button repeatedly to select the picture options : **Vivid, Standard, Cinema, Sport, Game** and **Expert1-2**.



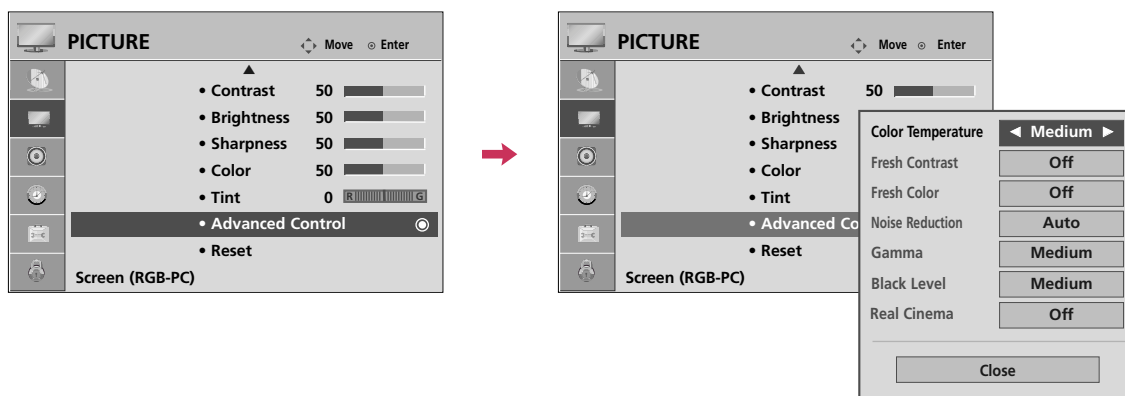
Return to TV viewing.

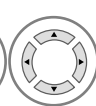
■ You can also adjust **Picture Mode** in the **PICTURE** menu.

PICTURE CONTROL

Color Tone - Preset

Choose one of three automatic color adjustments. Set to warm to enhance hotter colors such as red, or set to cool to see less intense colors with more blue.



- 1   Select **PICTURE**.
- 2   Select **Advanced Control**.
- 3   Select **Color Temperature**.
- 4  Select **Cool, Medium, or Warm**.
- 5  Return to the previous menu.
-  Return to TV viewing.

MANUAL PICTURE ADJUSTMENT

Picture Mode - User Mode

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

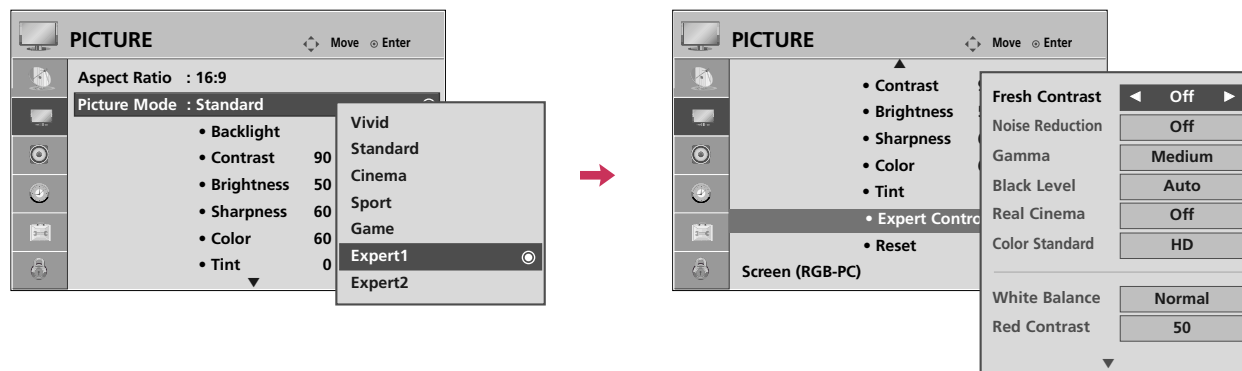


- 1   Select **PICTURE**.
- 2   Select **Picture Mode**.
- 3   Select **Vivid, Standard, Cinema, Sport, or Game**.
- 4   Select **Backlight, Contrast, Brightness, Sharpness, Color, or Tint**.
- 5   Make appropriate adjustments.
- 6  Return to the previous menu.
-  Return to TV viewing.

PICTURE CONTROL

Picture Mode - Expert Control

Expert1 and **Expert2** allow you set you own custom settings.



- 1   Select **PICTURE**.
- 2   Select **Picture Mode**.
- 3   Select **Expert1** or **Expert2**.
- 4   Select **Expert Control**.
- 5   Select your desired menu option.
- 6  Make appropriate adjustments.
- 7  Return to the previous menu.
-  Return to TV viewing.

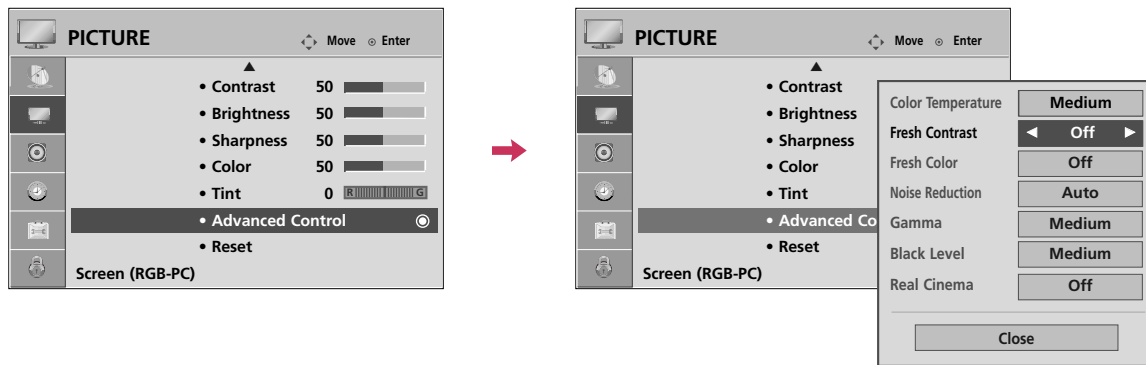
PICTURE IMPROVEMENT SETTINGS

Fresh Contrast: Optimizes the contrast automatically according to the brightness of the reflection.

Fresh Color: Adjusts the color of the reflection automatically to reproduce as close as possible natural colors.

Noise Reduction: Removes interference up to the point where it does not damage the original picture.

Gamma: High gamma values display whitish images and low gamma values display high contrast images.

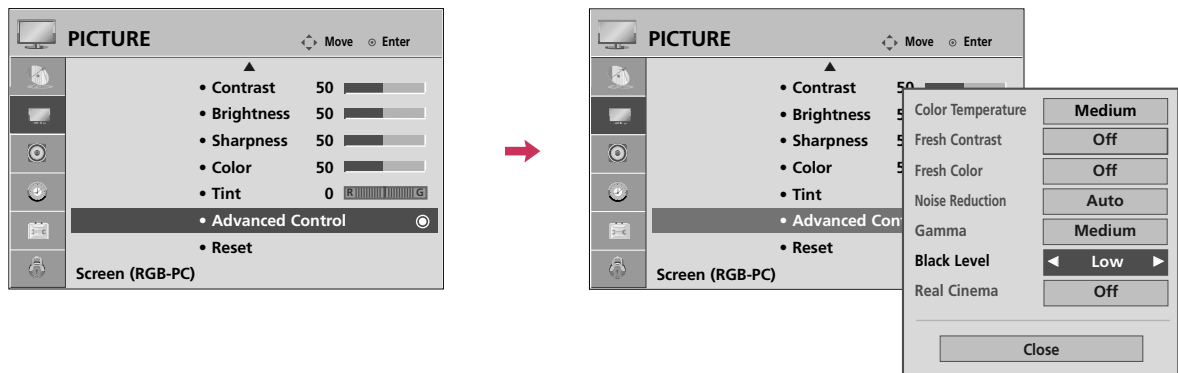


- 1   Select **PICTURE**.
- 2   Select **Advanced Control**.
- 3   Select **Fresh Contrast, Fresh Color, Noise Reduction, or Gamma**.
- 4   Select your desired options.
- 5  Return to the previous menu.
-  Return to TV viewing.

PICTURE CONTROL

ADVANCED CONTROL - BLACK (DARKNESS) LEVEL

Adjusting the contrast and the brightness of the screen using the black level of the screen.
This feature is disable in DTV and RGB mode.



- 1   Select **PICTURE**.
- 2   Select **Advanced Control**.
- 3   Select **Black Level**.
- 4  Select **Low** or **High**.
- 5  Return to the previous menu.
-  Return to TV viewing.

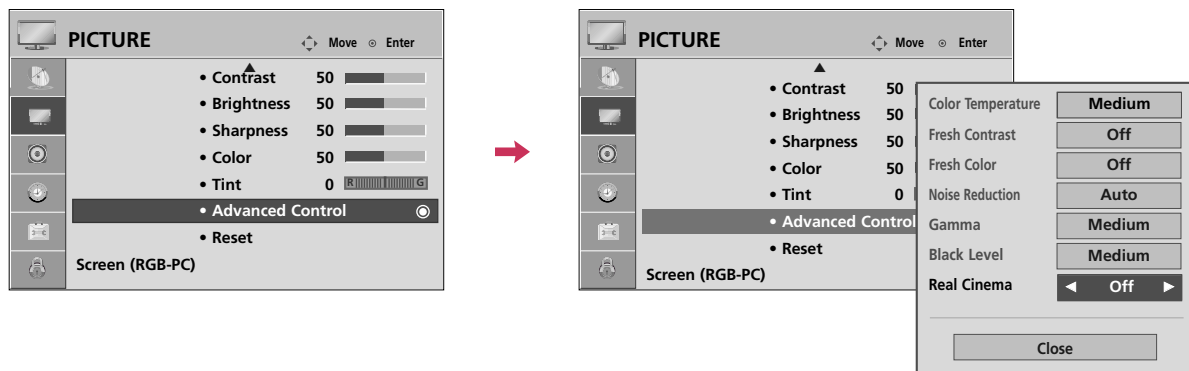
- **Low:** The reflection of the screen gets darker.
- **High:** The reflection of the screen gets brighter.
- **Auto:** Realizing the black level of the screen and set it to High or Low automatically.

ADVANCED CONTROL - REAL CINEMA

Set up the TV for the best picture appearance for viewing movies.

When you operate Real Cinema (3:2 Pull-Down Mode or Cinema Correction Mode), the TV will adjust 24 fps video from movies to 30 fps video for display.

This feature operates only in TV (Analog TV/CATV, Digital DTV/CADTV), AV/AV1-2, Component 480i/1080i, and HDMI 480i/1080i mode.

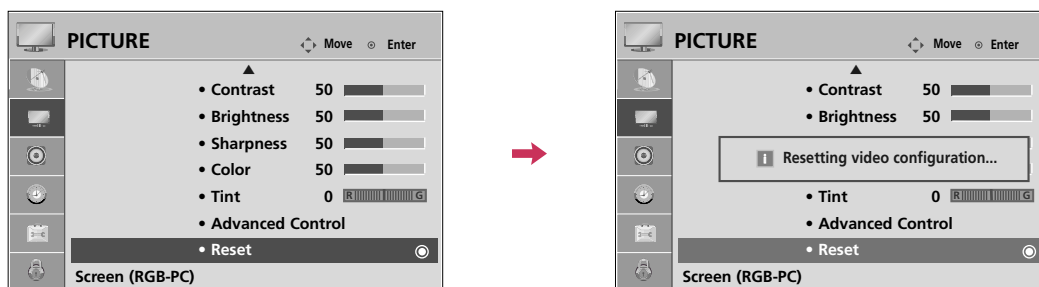


- 1   Select **PICTURE**.
- 2   Select **Advanced Control**.
- 3   Select **Real Cinema**.
- 4  Select **On** or **Off**.
- 5  Return to the previous menu.
-  Return to TV viewing.

PICTURE CONTROL

PICTURE RESET

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

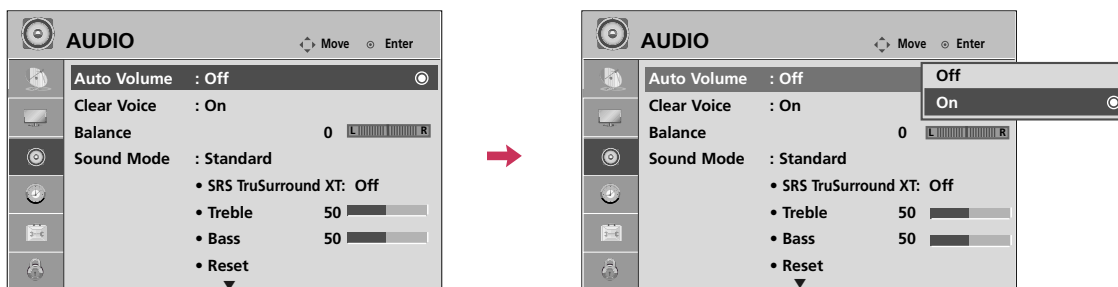


- 1   Select **PICTURE**.
- 2   Select **Reset**.
- 3  Initialize the adjusted value.
-  Return to TV viewing.

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.

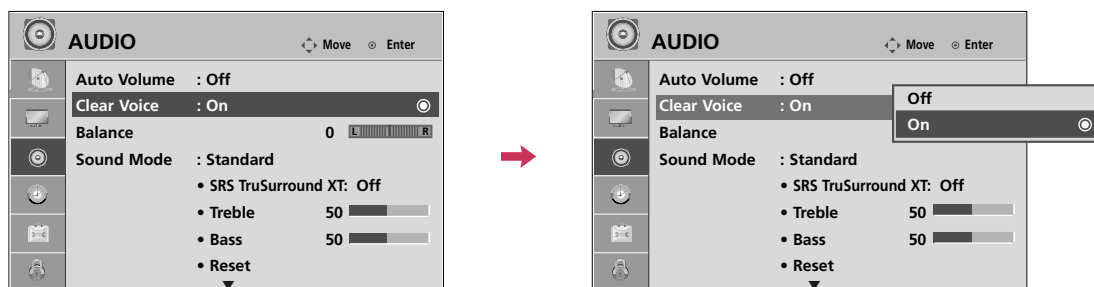


- 1   Select **AUDIO**.
- 2   Select **Auto Volume**.
- 3   Select **On** or **Off**.
- 4  Return to the previous menu.
-  Return to TV viewing.

SOUND & LANGUAGE CONTROL

CLEAR VOICE

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



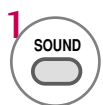
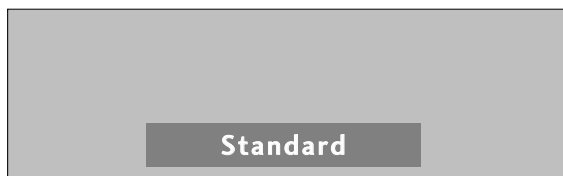
- 1   Select **AUDIO**.
- 2   Select **Clear Voice**.
- 3   Select **On** or **Off**.
- 4  Return to the previous menu.
-  Return to TV viewing.

■ If you select “Clear Voice-On”, SRS TruSurround XT feature will not work.

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.

Standard, Music, Cinema, Sport, and Game are preset for optimum sound quality at the factory and are not adjustable.



Press the **SOUND** button repeatedly to select the sound options : **Standard, Music, Cinema, Sport, and Game**.



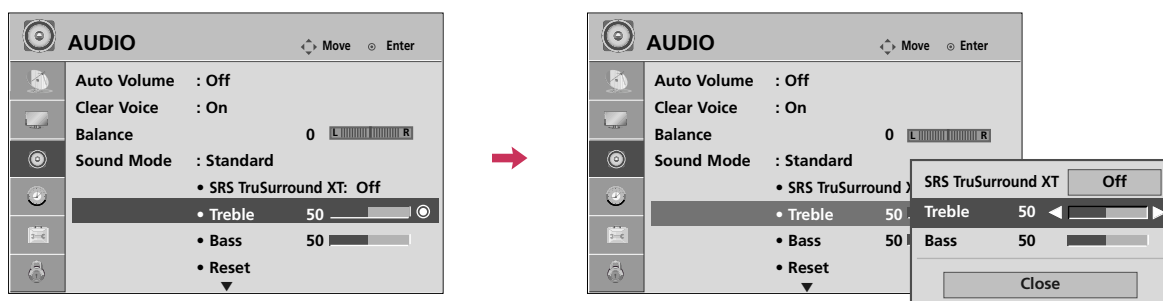
Return to TV viewing.

■ You can also adjust **Sound Mode** in the **AUDIO** menu.

SOUND & LANGUAGE CONTROL

SOUND SETTING ADJUSTMENT - USER MODE

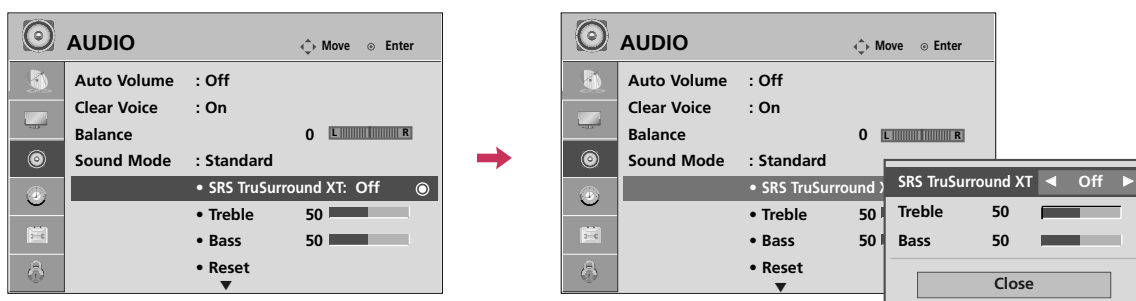
Adjust the sound to suit your taste and room situations.



- 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.

SRS TRUSURROUND XT

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.

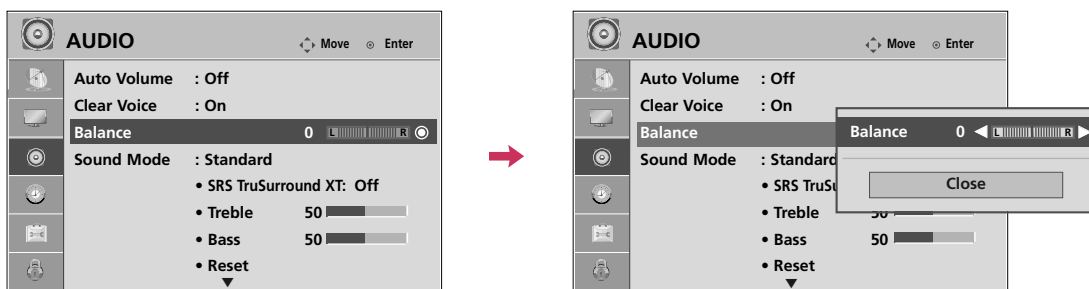


- 1   Select **AUDIO**.
- 2   Select **SRS TruSurround XT**.
- 3   Select **On** or **Off**.
- 4  Return to the previous menu.
-  Return to TV viewing.

SOUND & LANGUAGE CONTROL

BALANCE

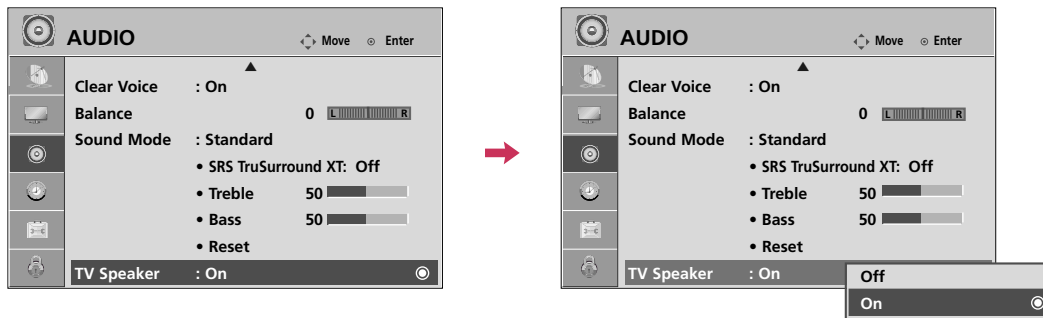
Adjust the left/right sound of speaker to suit your taste and room situations.



- 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

Turn the TV speakers off if using external audio equipment.

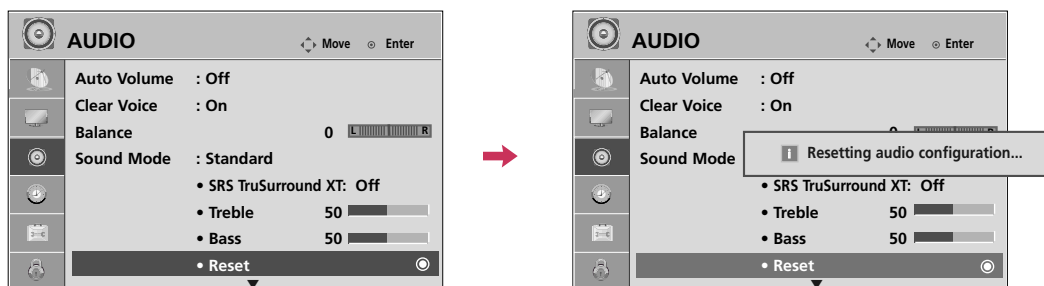


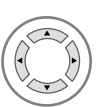
- 1   Select **AUDIO**.
- 2   Select **TV Speaker**.
- 3   Select **On** or **Off**.
- 4  Return to the previous menu.
-  Return to TV viewing.

SOUND & LANGUAGE CONTROL

AUDIO RESET

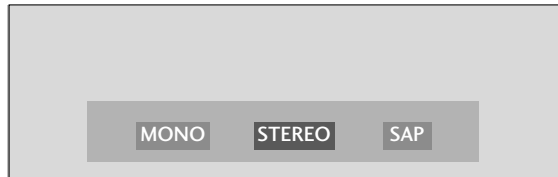
Settings of the selected Sound Mode return to the default factory settings.



- 1   Select **AUDIO**.
- 2   Select **Reset**.
- 3  Initialize the adjusted value.

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.



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

2  Return to TV viewing.

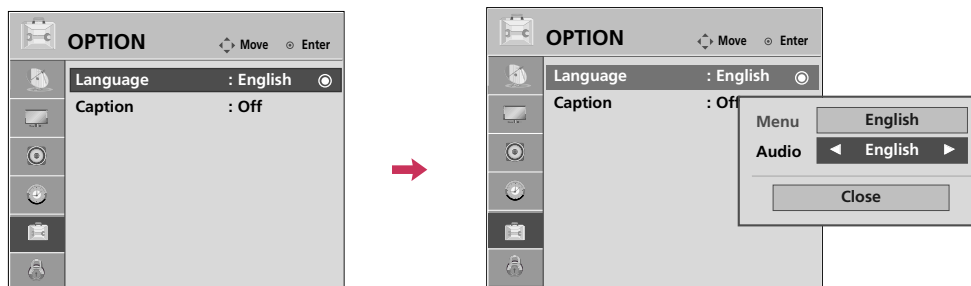
■ If other languages available on the digital signal, select them with the **SAP** button.

SOUND & LANGUAGE CONTROL

AUDIO LANGUAGE

Other languages may be available if a digital signal is provided by the broadcasting station.

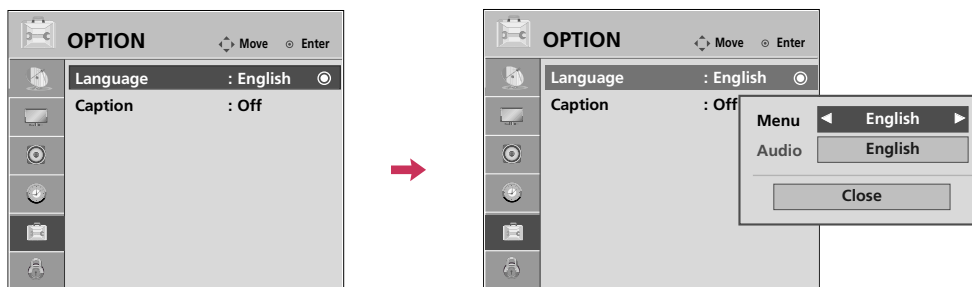
This feature operates only in DTV/CADTV mode.



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

SOUND & LANGUAGE CONTROL

CAPTION MODE

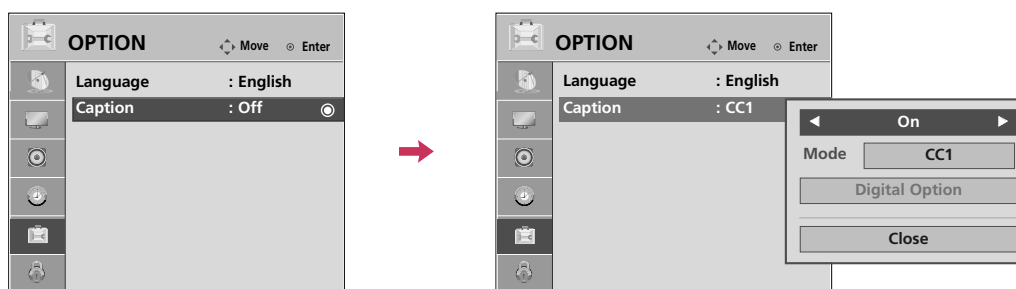
Caption must be provided to help people with hearing loss watch TV.
This feature operates only in TV, AV/AV1-2 mode.

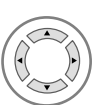
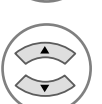
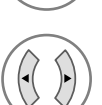
- 1  Select Caption **On** or **Off**.

- When selecting **Off**, Sub-menus for Analog, DTV, and Digital Option become disabled.

Analog Broadcasting System Captions

Caption must be provided to help people with hearing loss 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.



- 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.

■ 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

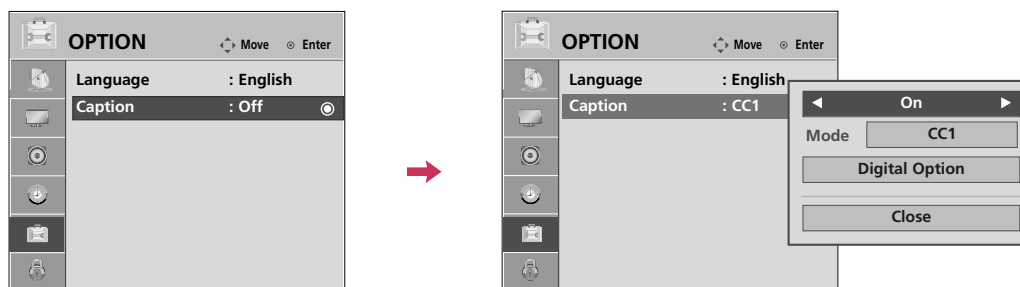
The term for the words that appear in a large black frame and almost cover the entire screen; usually messages provided by the broadcaster.

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**.



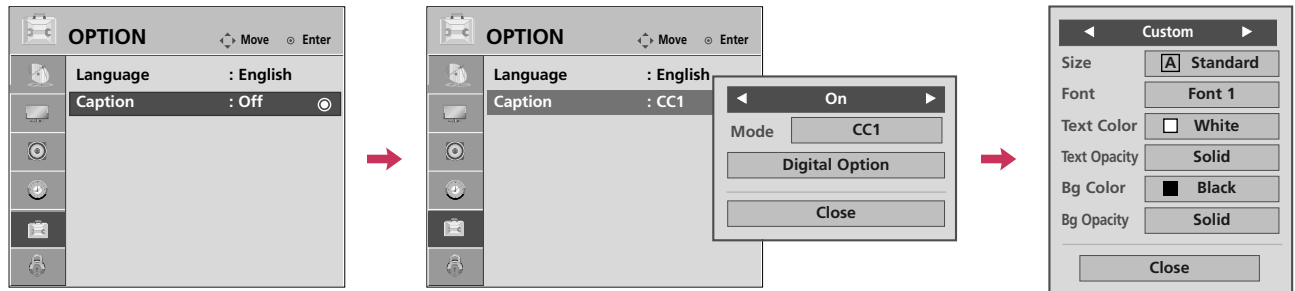
- 1   Select **OPTION**.
- 2   Select **Caption**.
- 3   Select **On**.
- 4   Select **CC1-4, Text1-4, or Service1 - 6**.
- 5  Return to the previous menu.
-  Return to TV viewing.

SOUND & LANGUAGE CONTROL

Caption Option

Customize the DTV/CADTV 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 **Style, 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.

TIME SETTING

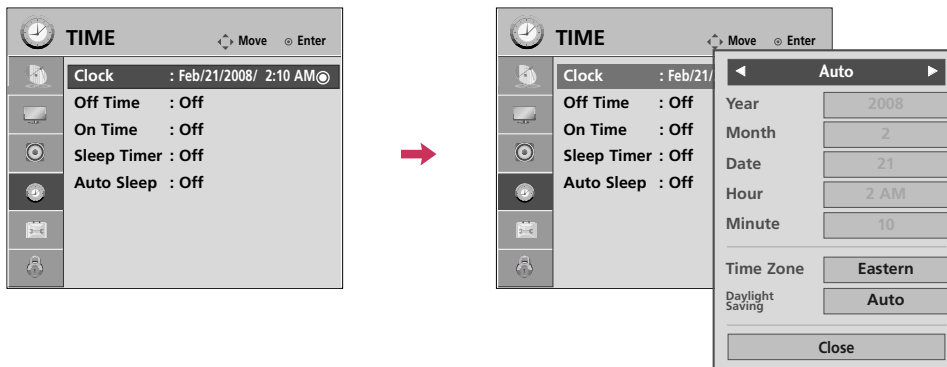
CLOCK SETTING

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.

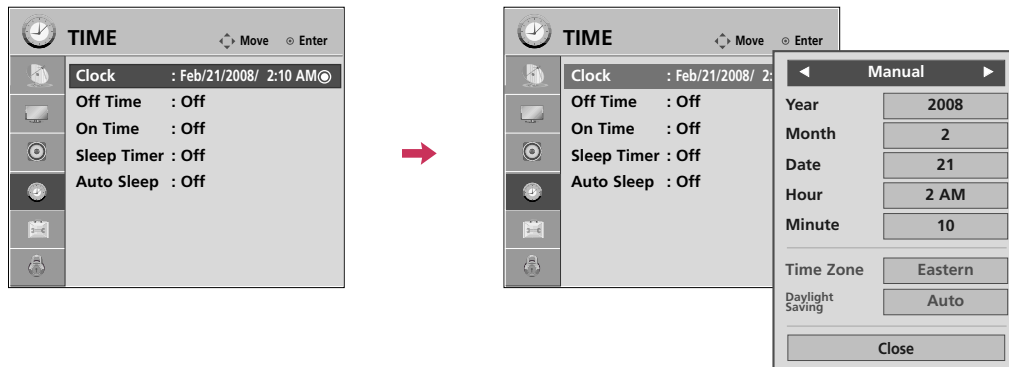


- 1   Select **TIME**.
- 2   Select **Clock**.
- 3   Select **Auto**.
- 4   Select your viewing area time zone.
: **Eastern, Central, Mountain, Pacific, Alaska, or Hawaii.**
- 5   Select **Auto, On, or Off** (depending on whether or not your viewing area observes Daylight Saving time).
- 6  Return to the previous menu.
-  Return to TV viewing.

TIME SETTING

Manual Clock Setup

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



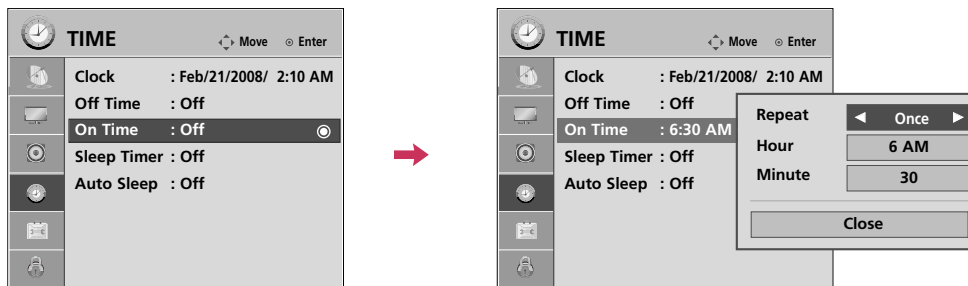
- 1   Select **TIME**.
- 2   Select **Clock**.
- 3   Select **Manual**.
- 4  Select the Year, Month, Date, Hour, or Minute option.
- 5  Set the Year, Month, Date, Hour, or Minute option.
- 6  Return to the previous menu.
-  Return to TV viewing.

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.



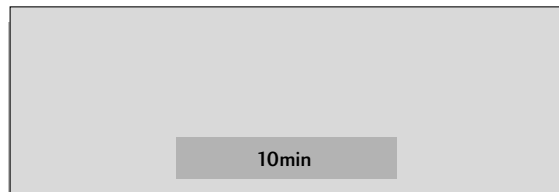
- 1   Select **TIME**.
- 2   Select **Off Time** or **On Time**.
- 3   Select **Repeat**.
- 4  Select **Off**, **Once**, **Everyday**, **Mon~Fri**, **Mon~Sat**, **Weekend**, or **Sunday**.
- 5   Select and set **Hour** or **Minute**.
- 6  Return to the previous menu.
-  Return to TV viewing.

TIME SETTING

SLEEP TIMER SETTING

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

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



Press the **TIMER** button repeatedly to select the number of minutes.
Sleep timer options: Off, 10, 20, 30, 60, 90, 120, 180, and 240 minutes.

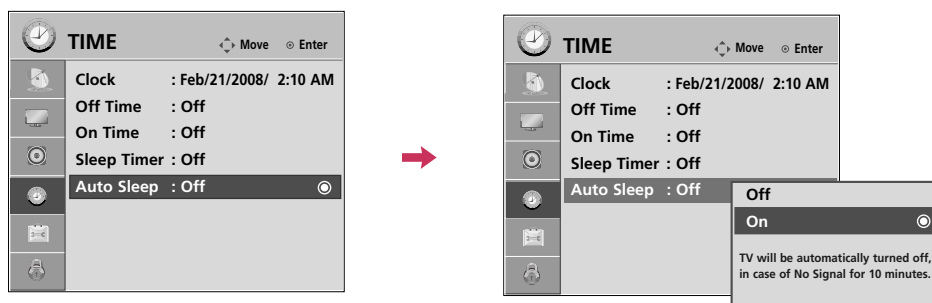


Return to TV viewing.

■ You can also adjust **Sleep Timer** in the **TIME** menu.

AUTO SHUT-OFF SETTING

TV will be automatically turned off, in case of no signal for 10 minutes.



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

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 :

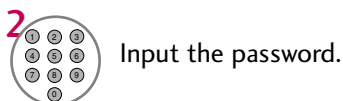
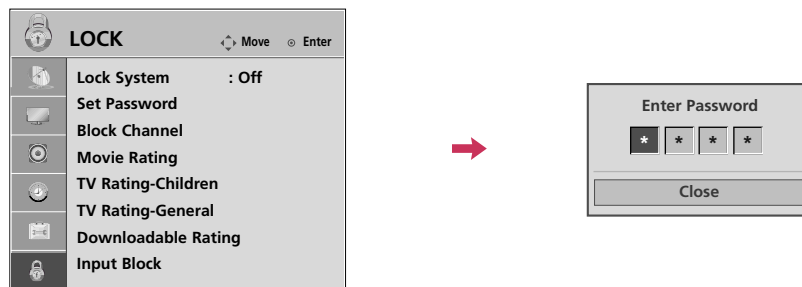
- | | |
|---------------------------------------|----------------------------------|
| ■ TV-G (General audience) | ■ TV-MA (Mature audience only) |
| ■ TV-PG (Parental guidance suggested) | ■ TV-Y (All children) |
| ■ TV-14 (Parents strongly cautioned) | ■ TV-Y7 (Children 7 years older) |

SET PASSWORD & LOCK SYSTEM

Setting up Your Password

Set up blocking schemes to block specific channels, ratings, and external viewing sources.

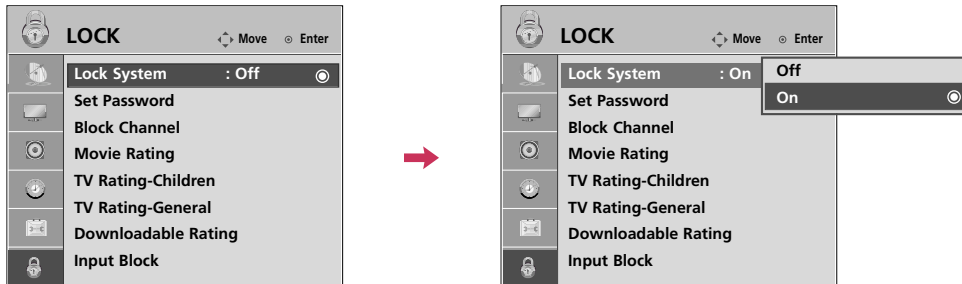
A password is required to gain access to this menu.



- Enter the password as requested.
- The TV is set up with the initial password "0-0-0-0".

Lock System

Enables or disables the blocking scheme you set up previously.



1 Select **LOCK**.

2 Input the password.

3 Select **Lock System**.

4 Select **On** or **Off**.

5 Return to the previous menu.

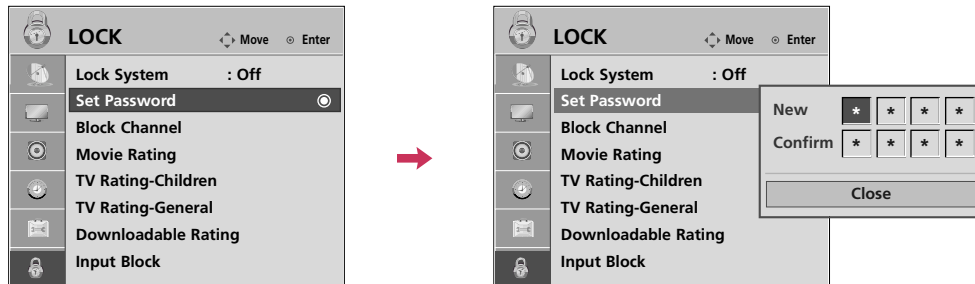
Return to TV viewing.

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

PARENTAL CONTROL /RATINGS

Set Password

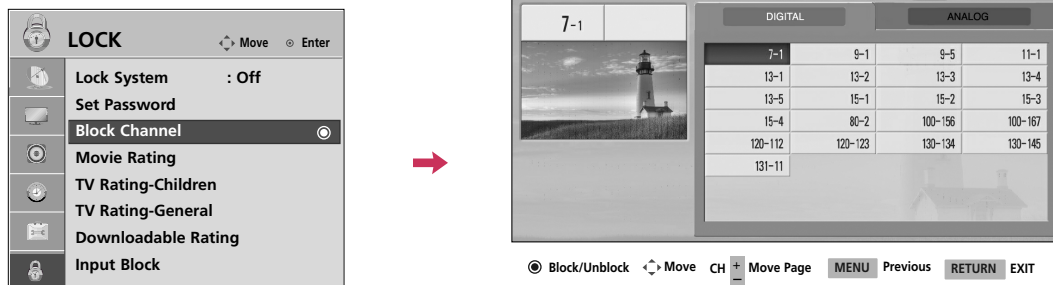
Change the password by inputting a new password twice.



- 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.

CHANNEL BLOCKING

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



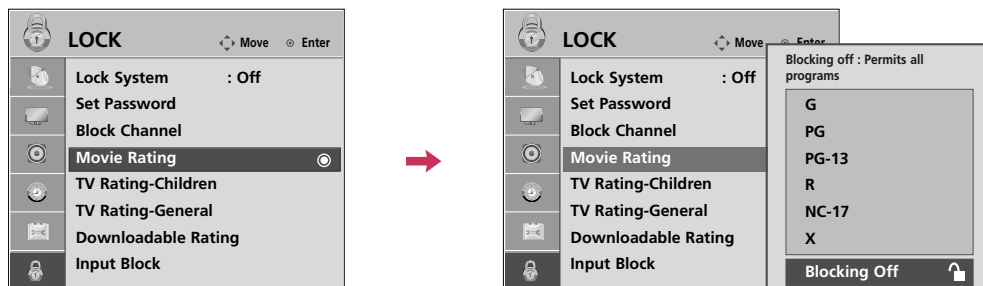
- 1 Select **LOCK**.
- 2 Input the password.
- 3 Select **Block Channel**.
- 4 Select a channel to block or unblock.
- 5 Block or unblock a channel.
- 6 Return to the previous menu.
- Return to TV viewing.

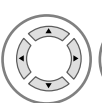
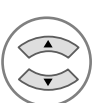
PARENTAL CONTROL / RATINGS

MOVIE & TV RATING

Movie Rating (MPAA)

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.

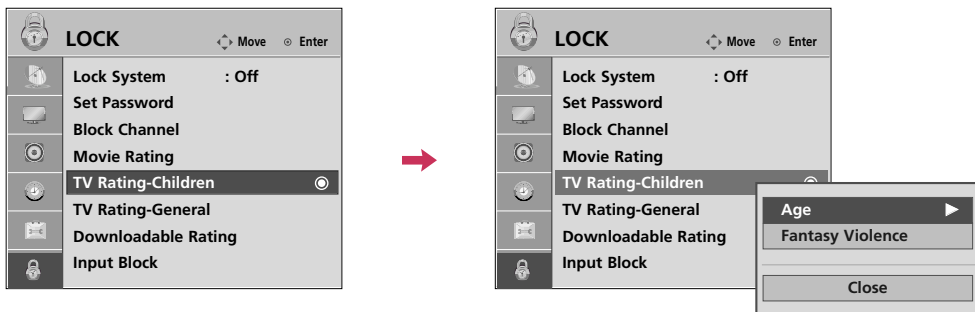


-    Select **LOCK**.
-  Input the password.
-  Select **Movie Rating**.
-   Select **G, PG, PG-13, R, NC-17, X, or Blocking Off**.
-  Return to the previous menu.
-  Return to TV viewing.

- 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.

TV Rating Children

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.



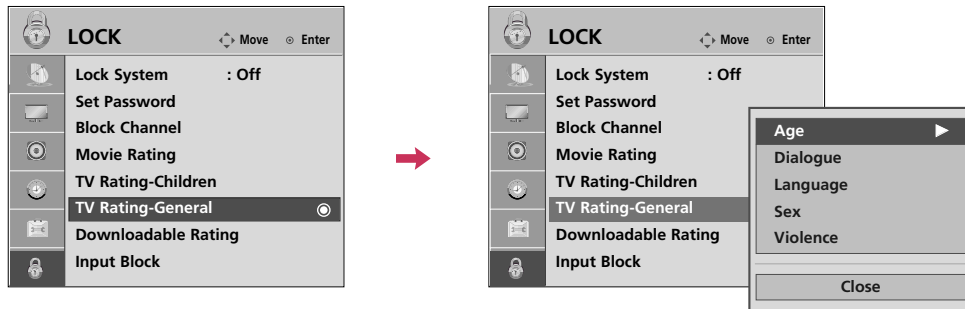
- 1    Select **LOCK**.
- 2  Input the password.
- 3  Select **TV Rating-Children**.
- 4   Select **Age** or **Fantasy Violence**.
- 5   Select block options.

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

PARENTAL CONTROL /RATINGS

TV Rating General

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



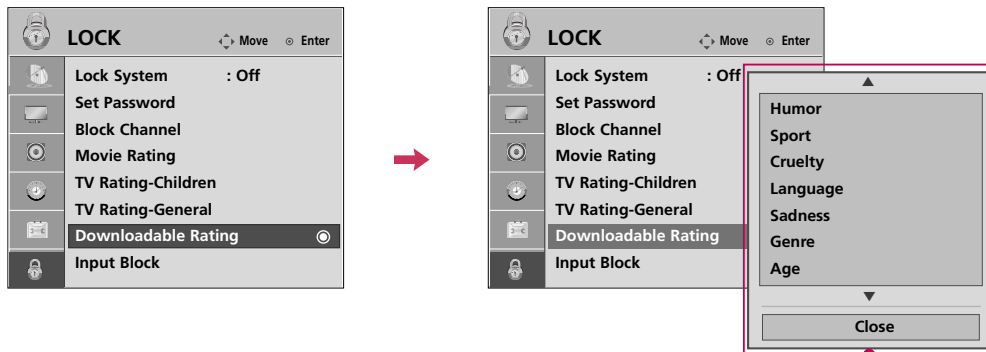
- 1    Select **LOCK**.
- 2  Input the password.
- 3  Select **TV Rating-General**.
- 4   Select **Age, Dialogue, Language, Sex or Violence**.
- 5   Select block options.
- 6  Return to the previous menu.
-  Return to TV viewing.

- 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).

DOWNLOADABLE RATING

This function may become available in the future and will be available only for digital channels.

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



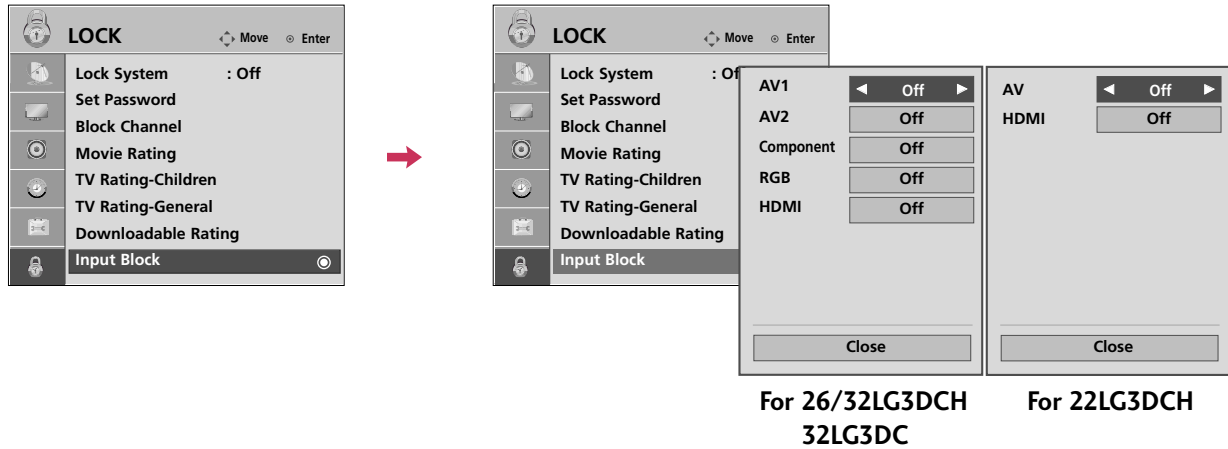
- Based on rating table, your TV's OSD (On Screen Display) may differ slightly from what is shown in this manual.

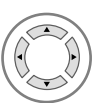
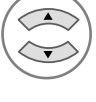
- 1 Select **LOCK**.
- 2 Input the password.
- 3 Select **Downloadable Rating**.
- 4 Select desired **Downloadable Rating** option.
- 5 Select desired option and block it.
- 6 Return to the previous menu.
- Return to TV viewing.

PARENTAL CONTROL /RATINGS

EXTERNAL INPUT BLOCKING

Enables you to block an input.



-    Select **LOCK**.
-  Input the password.
-  Select **Input Block**.
-   Select input source.
-  Select **On** or **Off**.
-  Return to the previous menu.
-  Return to TV viewing.

CHANNEL BANKS

CHANNEL BANKS OVERVIEW (Except 32LG3DC)

Channel Banks Note: Disable all Aux sources in the Installer menu that will not be made available to the end user.

Channel Banks Overview

Purpose of Channel Banks: Allows the institution administrator to control access to patient in-room TV programming. A channel bank can be enabled for a patient for a pre-determined fee. For Banks 1-2 and 3, the institution can create programming levels. Each level would offer a custom channel line-up. Top tier would be the most programming (premium etc.), 2nd tier=lesser programming, 3rd tier=basic programming etc. Channel Bank 4 would display the 'Inactive TV Call Attendant' message when the TV is turned on. The administrator could activate Banks 1-2 or 3 depending on the programming tier selected by the patient. When the patient leaves the hospital, the administrator can then select Bank 4 to reinstate the Inactive TV message.

Channels Available Charts

All channels found in the channel search are included in all channel banks. Default is for all channels to be active in channel banks 1-2-3 and 4. Create channel banks charts similar to the examples on the following pages. Show on the channel bank chart, the status for each channel in all channel banks. This then becomes the patient entertainment programming offerings plan.

Channel Banks Setup

Operating the Channel Banks menu.

Note: Channel banks can only be set up after the 2-5-5+Menu procedure has been completed. See remote key functions for channel banks menu on the following page.

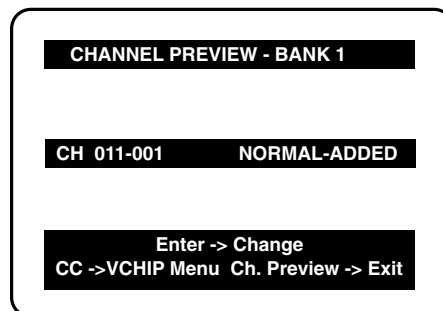
Channel Status Options Available for Channel Banks

In the Ch Preview-Channel Banks menu, use the channel up-down arrows to go to a channel and the Left-Right arrows to select the channel status. See channel status chart.

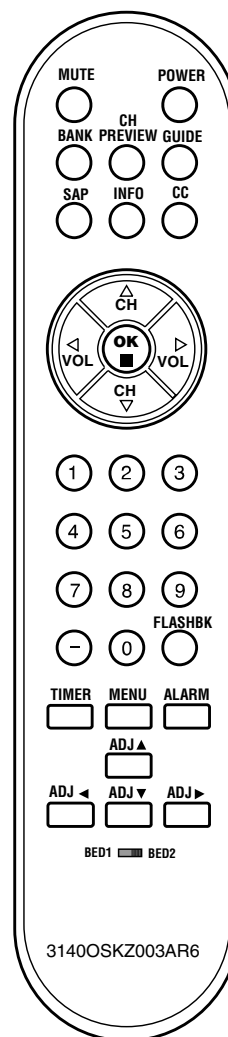
Inactive TV Setup

Go to Channel Bank 4. Select 'Normal Delete' for all channels. When the TV is powered on by the patient, the 'Inactive TV Call Attendant' message will appear on the screen and after a few moments the TV will turn itself off. With the Installer remote, the administrator can activate Banks 1, 2 or 3 depending on the entertainment programming tier selected by the patient. When the patient leaves the hospital, the administrator can then select Bank 4 to reinstate the 'Inactive TV' message.

Note: Default setting for Aux sources is to be active in the Installer menu. The Aux sources will appear between the highest Analog and lowest Digital channel number in the channel scan with Channel Up/Down. If the Aux sources will not be used, it is advisable to set them to 000 (Off) before doing 2-5-5 + Menu. After doing 2-5-5 + Menu, the only way to turn the Aux sources off so they will not appear in the channel scan, is to go to the Channel Bank menus and select 'Normal Delete'. Refer to Installer menu items: 35 and 39.



Channel Bank Setup Menu

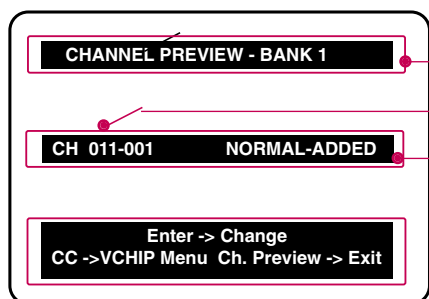


Use to access Ch Preview Menu

CHANNEL BANKS

CHANNEL BANKS SETUP INSTALLER REMOTE CONTROL KEY FUNCTIONS (Except 32LG3DC)

Channel Banks Setup Remote Control Key Functions



Channel Bank Setup Menu

After doing 2-5-5 + Menu, select a channel bank with the input/source or Banks button. After desired bank is selected, press Ch Preview to display the Channel Banks editing menu.

Shows currently selected Channel Bank.

Shows currently selected Channel.

Shows channel status in selected bank.

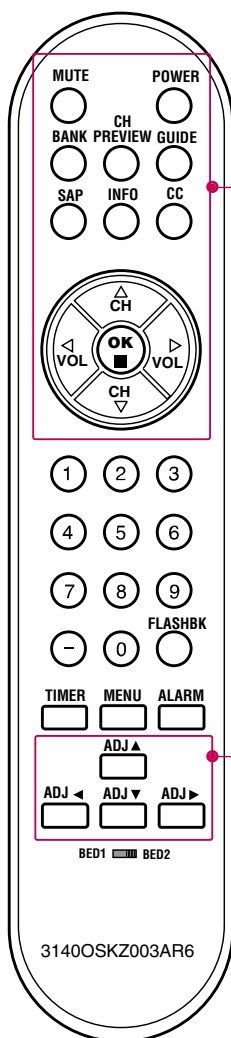
In Channel Banks menu, use the Left-Right arrows to select:

Normal-Added Channel will appear in channel scan.

Normal-Deleted Channel will not appear in channel scan.

Blank-Added Channel will appear in all channel banks, video will be black, no picture.

Blank-Deleted Channel will be blanked in all channel banks.



Typical Installer Remote Control

Bank Selects channel banks 1-2-3-4.

Ch Preview Selects channel banks setup menu.
Exits menu.

Channel Up Selects next higher channel number.

OK (Enter) Tunes in deleted channels in scan.

Channel Down Selects next lower channel number.

Up/Down Left/Right ADJ Arrows

Up-Down Tune to added channels in menu.

Left-Right Choose menu options.

Note: Pressing CC Displays V-Chip menu.

CHANNEL BANKS SETUP (Except 32LG3DC)

Use the Channel Banks to format the channel lineup programming package options for the end user

Each channel bank is capable of storing broadcast digital and analog channels

Figure 1. Typical channel banks after running Auto Tuning

BANK	Purpose	Channel Number																											
			1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25		
1				A			A			A						A	A	A	A	A	A	A			A	A	A	A	
2				A			A			A							A	A	A	A	A	A	A			A	A	A	A
3				A			A			A							A	A	A	A	A	A	A			A	A	A	A
4				A			A			A							A	A	A	A	A	A	A			A	A	A	A

A = Active -- Channel was found during AUTO TUNING

Figure 2. Typical channel banks after running Auto Tuning, and customizing with Add/Del/Blnk

BANK	Purpose	Channel Number																									
			1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
1	Basic		BC	A			A		A		A				D	D	D	D	D	D	D			D	D	D	D
2	Extend		BC	A			A		A		A				A	D	A	D	A	A	A			D	D	D	D
3	All CTV		BC	A			A		A		A				A	D	A	D	A	A	A			A	D	A	A
4	Other		BC	A			A		A		A				A	A	A	A	A	A	A			A	A	A	A

A = Active Channel was found during AUTO TUNING
 D = Delete Channel was deleted using Add/Del option.
 BC = Blanked Channel Channel was blanked using BLANK channel option (ADD/DEL/BLNK).

Adding / Deleting / Blanking Channels

It is best to do ADD / DEL customizing before doing "BLANK." Auto Tuning (channel search) enters the same channel numbers in channel banks 1, 2, 3 and 4. Auto Tuning removes any channels previously customized with ADD / DEL / BLANK. The channels found in the channel search on your antenna / cable will be included, and any channels previously found but not currently available will not be included. ADD and DEL (not BLANK) can be used independently for channel banks 1, 2, 3 and 4. (If a channel is not found in the channel search, it can be added see the Channel Menu Manual Tuning option.)

Notes: A channel blanked, is blanked in all channel banks.

Selecting Deleted Channels

To tune to a Normal Delete channel: Select a Channel Bank where the channel is added. Or, direct enter the

channel number then go to the bank where the channel is set as 'Normal

Delete' and reconfigure the channel status.

Note: Ch Override must be set to 001 to allow access to the channel scan.

Channel allocations in tuning bands:

- Broadcast and Broadcast Digital: 2 - 69
- CABLE - CATV, HRC or ICC: 1 - 125

Inactive TV Setup for Channel Bank 4

To create an inactive TV display on Channel Bank 4, select 'Normal Delete' for every channel in Bank 4. When Bank 4 is selected with the bank button on installer remote, the 'Inactive TV, call attendant' message will be shown on the TV screen. The TV will turn itself off afterward. This will prompt the patient to arrange for an available programming package on Banks 1, 2 or 3.

CHANNEL BANKS

REFERENCE: CHANNEL BANKS WORKSHEET (Except 32LG3DC)

Use the Channel Banks worksheet provided below to plan your program packages. Photocopy additional worksheets as needed.

PLAN YOUR CHANNEL BANKS BY FILLING IN THESE CHARTS (or use photocopies)

B A N K	Purpose	Channel Number																								
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
1																										
2																										
3																										
4																										

B A N K	Purpose	Channel Number																								
		26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50
1																										
2																										
3																										
4																										

B A N K	Purpose	Channel Number																								
		51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75
1																										
2																										
3																										
4																										

B A N K	Purpose	Channel Number																								
		76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100
1																										
2																										
3																										
4																										

B A N K	Purpose	Channel Number																								
		101	102	103	104	105	106	107	108	109	110	111	112	113	114	115	116	117	118	119	120	121	122	123	124	125
1																										
2																										
3																										
4																										

Date _____ Installer _____ Page ____ of ____
Location _____

COMMERCIAL MODE SETUP

INSTALLER OVERVIEW

Operating Installer Menu

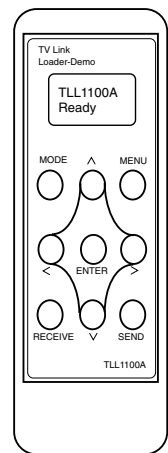
To set up the controls for the TV you will need to know how to enter the TV Installer menu and make changes to the default values. If necessary, familiarize yourself with the TV Installer menu and how to make and save changes to the items in the menu.

LG Installer Remote

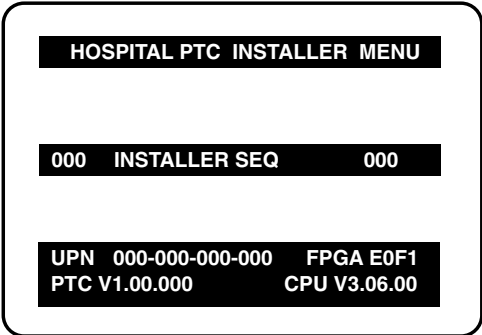
You will need an **LG Installer remote** control similar to the one shown to the right. The installer remote must have a “Source” button or its equivalent. The remote shown for reference in this manual has “INPUT” -- this button serves the purpose of a Source button.

The TV’s clonable features need to be set up. This is a critical step. If the Master TV display panel’s clonable features like added channel icons or channel labels are not done correctly, then the cloned TVs will all have problems. Refer to the TV menus for other TV features: Picture, Audio, Option, Closed captions, Lock (V-Chip), etc.

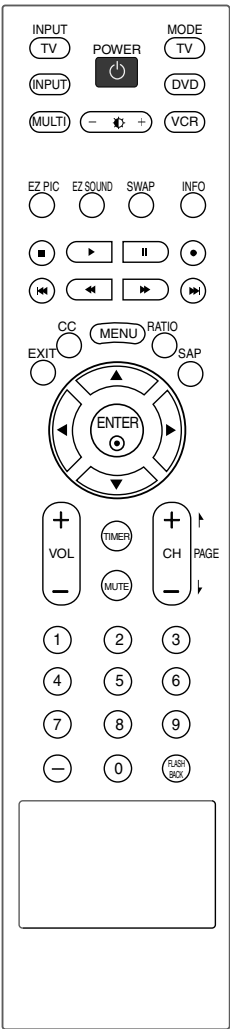
TLL-1100A Clone Programmer



The TLL-1100A is a very simple cloner to use. It can be set up to clone a master TV setup and transfer it into a target TV. Cloning is possible using MPI protocol. Be sure the Master TV is set up completely. Cloning is only possible when the signal source is an Analog channel, not a digital channel. Refer to TLL-1100A instruction manual supplied with the cloner.



Typical Installer Menu



COMMERCIAL MODE SETUP

TV OVERVIEW

Notes

- See the Installer's menus to set up the operational features of the TV. The Installer's section content is intended to be used primarily by qualified TV electronics technicians.
- Reference is made to installer remote controls used for menu operation within the manual. The remote information is provided for reference only. The typical installer remote control shown for reference in this manual may be different than the actual remote control used to configure the TV.
- For any additional information, contact your LG representative.

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

Using a Hospital Grade TV, the patient has available the following entertainment options.

- Pillow Speaker control of TV.
- Auxiliary inputs connections panel, if enabled.
- Analog and Digital programming entertainment as provided by hospital:
VHF, UHF, DTV, CATV, CADTV.
- 22 Inch screen size.
- 16:9 Aspect Ratio.
- Auto Volume sound control
- Digital Captions
- Tier programming as available through Channel Banks setup, RF delivered programming content options for premium as well as basic entertainment packages.
- Headphone(s) output jack.

COMMERCIAL MODE SETUP FOR MASTER TV

This page provides an overview of the TV configuration. See the pages referenced for more specific, detailed instructions at each step; how to access and use the Installer menu etc.

Note 1: Disconnect all Aux inputs. Under certain conditions, Auto Tuning (Channel search) is disabled if there is an Aux input active.

Overview: Commercial Mode Setup Procedure

1. Set Installer Menu Items

(Enter TV Installer Menu, see Installer menus for detailed instructions.)

- Set Installer menu item **117 FACT DEFAULT**, to **001** and press **ENTER** on Installer remote. (This clears all installer menu custom settings, channel labels / icons etc. and reloads the factory default settings.)
- Set Item **003 BAND/AFC**.
 - **Broadcast**: set to **000**. - **HRC**: set to **002**
 - **CATV**: set to **001**. - **IRC**: set to **003**
- Set item **028 CH OVERRIDE** to **001**. This allows access to Auto Tuning, Manual Tuning and Channel Edit submenus in the Channel Menu.
- Set other particular installer items that affect your TV programming network. Enable/Disable Aux sources etc. See Installer menu pages.
Note: Disable all Aux sources that will not be active.
- After all required installer menu item settings have been adjusted, press **ENTER** on the remote to remove Installer Menu.

2. Set Up TV Features (See TV Menus section)

Channel, Picture, Sound, Lock, Time, Option (Digital Captions etc).
See TV Clonable Options page.

3. Run Auto Tuning (Channel Search)

(Search for all available channels.) Go to the Channel menu and access the Auto Tuning option, follow onscreen instructions.

- Edit Channel Scan. In the Channel Menu, access Channel Edit.
- Add/Delete channels per your system requirements.
Note: Physical channel numbers are used to identify Virtual channels.
 - Add familiar Channel Trademarks/Logos like ABC, CBS, NBC etc. to the Channel-Time onscreen display. In the Setup menu, select the Channel Label option. Add identifiable labels for the end user to readily know what common networks are available.

4. Transfer TV Setup to Internal TV Controller: 2-5-5 + Menu Mode

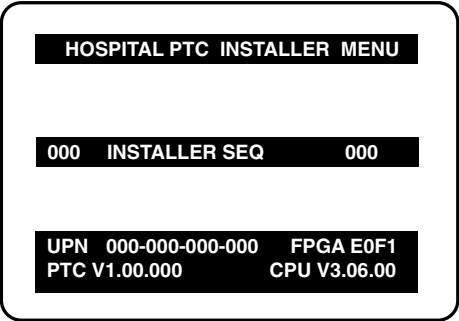
After the TV channel scan has been edited and channel label icons added, enter the Installer menu. Once in the Installer menu, press 2-5-5 and MENU on the remote. This transfers the TV setup to the internal controller box.
Note: The maximum number of channels including Aux sources that can be transferred to the TV controller is 140.

5. Add Custom Channel Labels for analog channels: 2-5-4 + Menu Mode

Enter Installer menu, press 2-5-4 and Menu. Add your own custom text labels to channel onscreen displays. Note: Digital Channels often have a broadcaster generated text label. When done to exit mode, press **MENU**.

6. Verify TV Setup

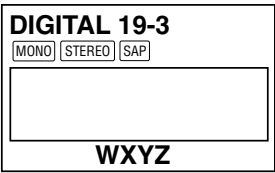
At this point, verify that the channel lineup, channel icons and custom labels are correct. Make sure the TV features are set per your requirements. Set Installer menu item **028 Ch Override** to **000** to lock the channel scan. After the preceding has been completed, the Master TV setup is ready to be copied to a Clone Programmer, see Clone programmer pages.



Typical TV Installer Menu

117	FACT DEFAULT	00X
003	BAND/AFC	00X
028	CH. OVERRIDE	001

Review the settings for these
Installer Menu Items



Custom Channel Label 'WXYZ' created in
2-5-4 + Menu (Add Channel Label) Mode

028	CH. OVERRIDE	000
-----	--------------	-----

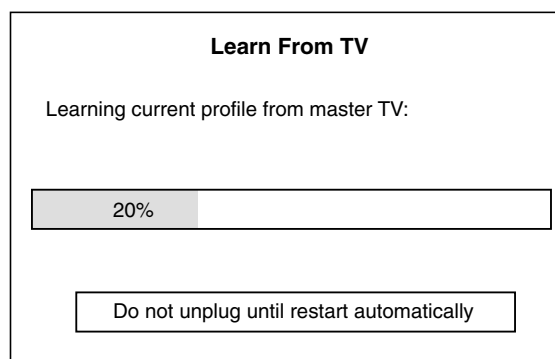
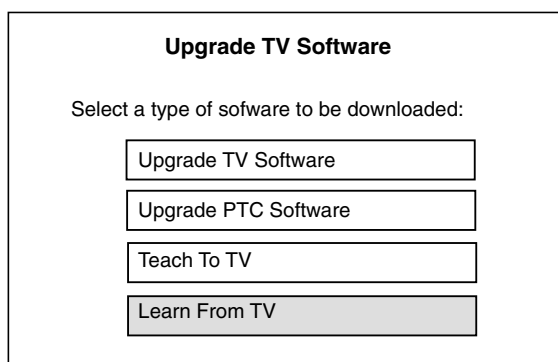
After Master TV setup has been completed, set Installer menu item 028 Ch Override to 000. This action locks the channel scan.

COMMERCIAL MODE SETUP

MASTER TV PROFILE SETUP LEARNING/TEACHING WITH USB MEMORY CARD

On Master TV, Create Profile and Learn

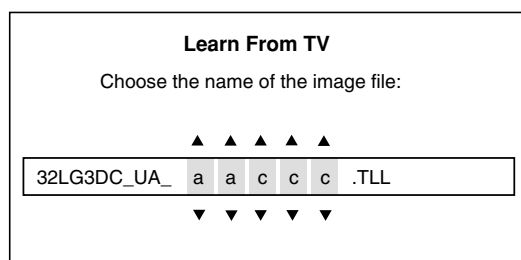
1. Set up all Master TV features on the menus and do a Channel Search. Add Channel and Aux Labels etc. Tune in an analog channel.
2. Plug USB memory card into the USB In port on Master TV.
3. Press Menu key to open Main menu. Highlight the Option icon.
4. Press the Left arrow key once, the Option icon on left side of menu will be highlighted.
5. Press number key '7' a total of 7 times.
6. Key in password* used to enter Installer Menu.
7. Using Up/Down arrow key, highlight "Learn Current Profile", then press Enter.
8. To identify the profile from others, you can change the last 5 digits. Key in a custom file name, then press the Enter key.
9. The Learning status will be shown on progress bar. As soon as learning the current profile is complete, a message will appear on screen indicating the learning process is done.
10. Remove the USB memory card.



* See Installer Menu pages.

Optional: Edit/Change File Name

If necessary, the file name can be edited or changed.



Notes

- Do not remove TV power cord or USB memory card while Learning, doing so might harm your USB memory card.
- Do not remove TV power cord or USB memory card while Teaching, doing so may cause the TV to malfunction.
- You are allowed to edit the file name, however, a file with edited contents will not be recognized.
- Since clock data is copied into USB memory card as numeric data, the time difference between teaching and learning is not automatically adjusted. Either set the clock manually, or use Auto Clock set on TV main menu.

On Target TV, Teach Master TV Profile

1. Plug USB memory card with Master TV Profile setup into Target TV USB input port.
2. Press Menu key to open Main menu and then highlight the Option Menu icon.
3. Press the Left arrow key once, this will highlight the Option icon on left side of menu.
4. Press number key '7', a total of 7 times.
5. Using the Up/Down arrow key, select 'Teach New Profile', then press Enter key.
6. Use Up/Down arrow keys to navigate through profiles. Select the profile that you want to install by highlighting it and pressing the Enter key.
7. Teaching progress will be shown on the progress bar.

As soon as teaching is done, a message will appear indicating that the teaching process has been completed.

Teach To TV

The following software files are found in the memory card.
Select the file you want to download to this TV.
Or, Press EXIT to cancel the upgrade.

Software File List in USB Memory
32LG30_UA_128.TLL
32LG30_UA_126.TLL

Teach Current Profile

Teaching the selected profile to the TV:

20%

Do not unplug until restart automatically!

COMMERCIAL MODE SETUP

TLL-1100A CLONE CONNECTIONS/LEARNING AND TEACHING SETUPS

Connections for the TLL-1100A Clone Programmer to Learn the Master TV Setup

On Master TV

Set up all Master TV features on the menus and do a Channel Search. Add Channel and Aux labels etc. Tune in an analog channel. Insert MPI cable into TV MPI port.

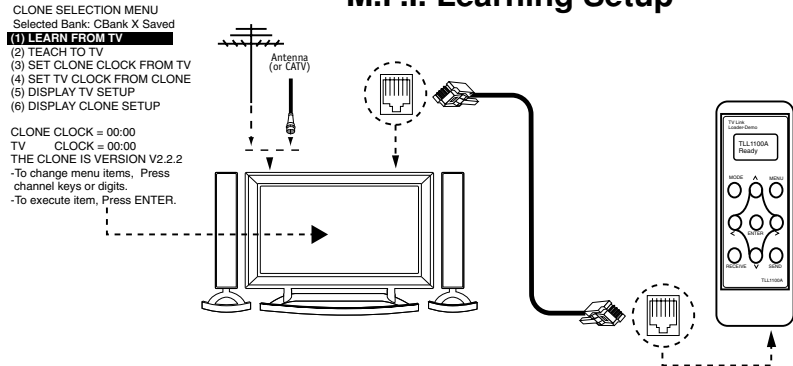
On TLL-1100A

1. Turn On the TLL-1100A.
2. Use the Mode button to select Clone Mode.
3. Use the Left/Right arrow to select the CBank (1 - 8) to store the master TV setup in.
4. Plug the other end of the MPI cable into the MPI port on the bottom of the TLL.
5. With the Installer remote control, select item 1 on TLL menu.
6. Press Enter, to transfer the Master TV setup into CBankX on the TLL. The TLL will copy the master TV setup.
7. When learning is done, disconnect MPI cable from Master TV.

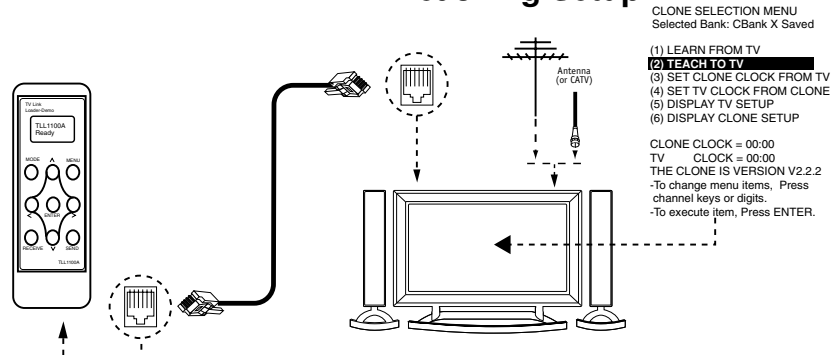
On Target TV

1. Connect MPI cable from the TLL to the MPI port on the Target TV. Assure that the correct CBank(X) is selected on TLL.
2. With the Installer remote control, select item 2 to Teach the target TV the master TV setup.
3. Press Enter to begin teaching.
4. When Teaching is done, disconnect MPI cable and power the TV Off. Unplug TV power cord.
5. Reconnect TV power cord. Power the TV On and the master TV setup should be resident on the target TV.

M.P.I. Learning Setup



M.P.I. Teaching Setup

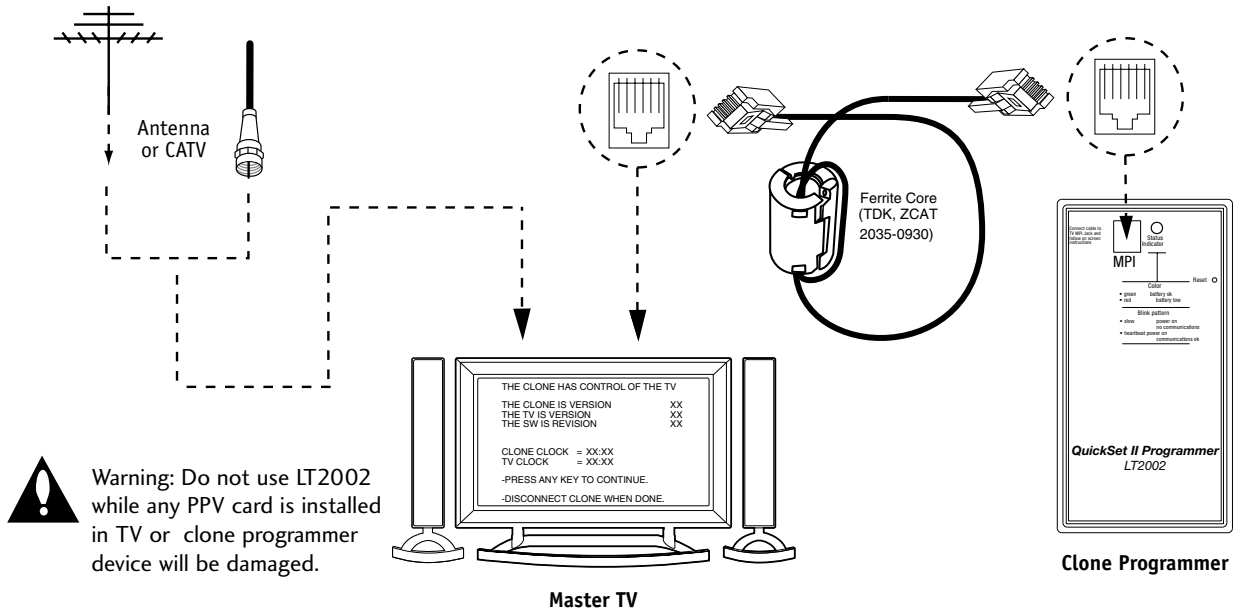


Warning: Do not use the TLL-1100A while any PPV card is installed or clone programmer device will be damaged.

Notes: It is assumed that the TV is connected to a signal source, the TV source selected is Antenna (RF) In, the signal is from an Analog channel, not a digital channel, all equipment is connected to power and turned on and the TLL-1100A Cloner main menu is displayed on the TV screen, see above.

LT2002 CLONING CONNECTIONS/LEARNING SETUP

Connections for the LT2002 Clone Programmer to Learn the TV Master TV Setup



Notes: It is assumed that the TV is connected to a signal source, the source selected is Antenna (RF) In, the signal is from an Analog channel, not a digital channel, all equipment is connected to power and turned on and the LT2002 Clone Programmer main menu (THE CLONE HAS CONTROL OF THE TV) menu is displayed on the TV screen, see above and next page.

Before you begin cloning...

- The Master TV should be connected to a good, stable signal from an over-the-air antenna or cable service Analog channel and connected to power. (See above.)
 - Teaching and Learning is only possible between identical model TV/STBs. (However, the LT2002 Clone programmer can store up to 3 different 'master' setups.)
- 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.
- Use an Installer's remote to operate Learning and Teaching menus.
 - Make sure that the batteries in the Clone programmer are fresh.
 - If batteries are removed, the Clone Clock time will be

lost.

- 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 had the clock set to the current time.
- Setting the time and transferring it to the Clone or other device is a separate procedure.
- Follow the connection diagram above to connect the Clone to a Master TV display panel. After learning is complete, to another identical TV display panel to "teach" it the master TV setup.
- See the Clone Troubleshooting section to resolve problems.

Turn to the next page to continue Cloning Setup.

COMMERCIAL MODE SETUP

CLONING LEARNING SETUP

Learning the Master TV Setup

Instructions for the Clone Programmer to Learn the Master TV Setup

Use MPI Cable to Connect LT2002 Clone Programmer to Master TV MPI Port

If there is a good connection, "THE CLONE HAS CONTROL OF TV" message will appear. Press any key on the Installer remote.

Learn Setup from Master TV

Press 1 to select the "LEARN FROM TV" option, then press ON/OFF, POWER, or ENTER to go to the Memory Bank Selection Menu. Pick the Memory "Bank" you want to store the master TV's setup in by pressing either Channel key repeatedly to choose Memory 1, 2 or 3. (If you choose a Memory "Bank" that has a master device's setup programmed into it, that setup will be overwritten by the new master TV's setup.) Once the Clone memory bank is selected, press ON/OFF, POWER, or ENTER. The Clone memory bank you have selected will be shown. Press ON/OFF or POWER to begin copying the master TV's setup.

Set the Clock (Optional)

Set the time on a Master TV's Clock. (If the time has already been copied from a TV into the Clone programmer, you can set a master TV's clock by copying the time from the Clone programmer.) The Clone Programmer 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 Clone programmer should be equipped with fresh, high-quality alkaline batteries, is for it to keep the time as accurately as possible.)

Since the Clone Programmer's time cannot be set directly, the current time needs to be copied from a Zenith/LG TV equipped with M.P.I. input capability.

After the time is copied to the 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.)

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.

This menu should appear by itself after the LT2002 is connected to the TV MPI port.

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

This menu should appear after any key is pressed on the Installer remote.

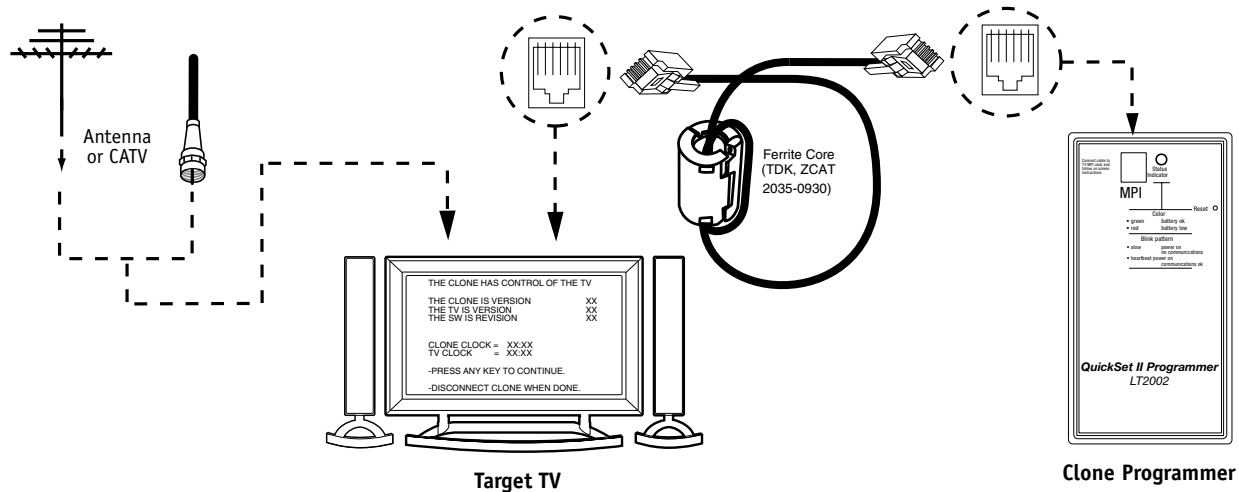
LT2002 Clone Programmer Communication Problems

- A slow flashing green light indicates 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 programmer batteries are low and should be replaced. Install 4 high-quality alkaline AA batteries.

CLONING CONNECTIONS/TEACHING SETUP

Teaching the Master Setup to Another TV

Connections for the LT2002 to Teach another TV the Master Setup



Teach Master TV's Setup to the target TV

After learning is complete, remove the M.P.I. cable from the master TV and connect it to the target TV that you want to copy the master TV's setup into. With "THE CLONE HAS CONTROL OF TV" message displayed, press 2 or use either Channel key to go to the "TEACH TO TV" option, press ON/OFF, POWER, or ENTER. Select the LT2002 memory that the new setup is in. Press On/Off to transfer the new setup and other information to the new TV. Teaching usually takes 2-3 minutes. After the "TEACHING COMPLETE" message is displayed, press any key to return to the Clone menu, then press ON/OFF, POWER, or ENTER. If finished, detach M.P.I. cable from the target, newly-cloned TV.

Disconnect TV Power for 15 Seconds

Unplug the AC power cord of the newly-cloned TV from the power outlet for about 15 seconds to activate the newly-copied setup.

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

This menu should appear after any key is pressed on the Installer remote.

TEACHING IN PROGRESS,
PLEASE WAIT

This display will appear during Teaching function.

TEACHING COMPLETE

This display will appear after Teaching is complete.

COMMERCIAL MODE SETUP

INSTALLER MENU

Use the Installer's Menu to set up or change operational settings.
See more detailed descriptions of the Installer menu items on the following pages...

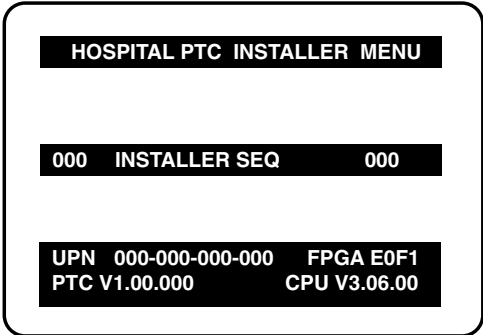
Accessing the Installer's Menu

Make sure TV is on. Installer's menu items can be accessed by using an installer's remote control. Just press MENU repeatedly until the TV seems to stop responding, then press 9, 8, 7, 6, and ENTER to access the Installer's menu. To remove the Installer's menu, press ENTER again. *Any changes you make will be stored in nonvolatile memory.*

The Installer's 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, then pressing MENU. For example, to access the Sleep Timer option which is item 015, press 0-1-5, then MENU. To change a setting, use the Left/Right arrow keys. Or, enter a value directly.

Using the Installer's Menu

Items 000 ~ 118 are immediately accessible only upon entering the Installer's Menu. Their numbers, descriptions, ranges, factory default settings, and a place for listing any changes made on-site are given below and on the following pages.



Typical Installer Menu

Installer Menu Items 000 through 29

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 auto shut Off.
002	AC ON	0 / 1	0	Set to 1 to enable auto turn On at power up.
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 at turn-on (Set to 255 to tune in last channel before power Off).
005	CHAN LOCK	0 / 1	0	If set to 1, cannot tune from current channel.
007	STRT VOLUME	0 ~ 63, 255	255	Sets Volume level at TV turn-on (Set 255 to retain last volume level).
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	1	Set to 1 to disable menu navigation keys on TV.
012	IR BANKS EN.	0 / 1	0	Set to 1: enables TV to respond to IR code
013	SCAN MODE	0 / 1	1	Typically used for Hospitals: puts TV On-Off event in Ch Up/Down sequence.
014	STRT CH IN SM	0 / 1	0	Set to 1 to put TV On/Off below start channel number.
015	SLEEP TIMER	0 / 1	1	Set to 1 to enable Sleep Timer.
016	EN TIMER	0 / 1	1	Set to 1 to enable On/Off Timers.
017	ALARM	0 / 1	1	Set to 1 to enable Alarm.
020	FEATURE LEVEL	0 / 1	1	Zen 1 Leave default set 1 (1 Zen 1)
021	V-CHIP	0 / 1	1	Set to 1 to enable V-Chip functions.
022	MAX BLK HRS	0 ~ 99	12	Sets the number of V-Chip (Parental Control) blocking hours.
023	CAPTION LOCK	0 / 1	0	Set to 1 to retain caption setting at power Off.
025	FUNCTION PRE.	0 ~ 3	1	Controls channel preview in Pay-Per-View function
027	HOSPITAL MODE	0 ~ 2	2	Leave default set to 2.
028	CH. OVERRIDE	0 / 1	1	If set to 0, limits direct access to only channels in TV memory.
029	OLD OCV	0 / 1	0	Set to 1 to change M.P.I. operation to OCV.

COMMERCIAL MODE SETUP

Installer Menu Items 030 through 117

Menu Item	Function	Value Range	Default Value	Brief Description of Function and Comments
030	ACK MASK	0 / 1	0	If set to 1, changes M.P.I. for some OCV boxes.
031	POLL RATE	20 ~ 169	94	Selects poll rate for M.P.I.
032	TIMING PULSE	186 ~ 227	207	Sets baud rate for M.P.I.
035	COMPPORT EN.	0 / 2	1	Set to 0 to disable HDMI 1. Set to 1 for DTV.
039	REAR AUX EN	0 / 1	1	Set to 1 to enable display panel Video 1 input jack.
046	STRT AUX SRCE	0 ~ 6	3	Sets the starting AUX source.
047	AUX STATUS	0 / 1	0	Set to 1 for M.P.I. AUX source to be reported as a channel number instead of Channel 0.
053	DIS. CH-TIME M.	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.
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 channel list in TV memory.
075	REVERT CH	0 / 1	0	If set to 1 and loss of M.P.I. communication occurs, TV tunes to Start Channel.
077	QUICK SHUTOFF	0 ~ 17	0	Allows TV timed power Off press and hold setup with pillow speaker channel Up/Down button.
078	UPN MSB	0 ~ 255	255	User programmable number, most significant byte.
079	UPN MSB-1	0 ~ 255	255	User programmable number, most significant byte - 1.
080	UPN MSB-2	0 ~ 255	255	User programmable number, most significant byte - 2.
081	UPN LSB	0 ~ 255	255	User programmable number, least significant byte.
082	CHKSM ERROR	0 / 1	0	Enforces rigid M.P.I. checksum.
083	HANDSHK TIME	0 ~ 5	5	Relaxes M.P.I. 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.
088	EN NOISE MUTE	0 / 1	1	If set to 1, mutes audio if no signal is present.
090	KEY LOCK	0 / 1	0	Set to 1 to disable front keyboard. Set to 1 to enable front keyboard functionality.
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, 2, 4, 5	2	Sets default aspect ratio at power up. See detailed descriptions and item 106.
099	BACK LIGHTING	1 ~ 100 101 ~ 200	200	Sets the brilliance of the TV picture backlighting. Settings above 100 control dynamic back lighting and disable power saving mode..
102	ATSC BAND	0 ~ 4	4	Selects ATSC band.
103	ATSC TUNE MODE	0 / 1	1	Default 1 for physical channel scan. Set to 0 for Virtual Channel scan.
104	START MINOR CH	0 ~ 255	0	Selects Minor start channel. Set 0 for NTSC. Not 0, sets Minor channel number.
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	0=Normal. 1=Loads presets of all above settings.

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 MANAGE function is for saving energy. If set to 0, Power Manage is Off. Settings range from 0 to 7, with 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, allows the TV to turn On just by applying AC power. 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 ADJ Left/Right arrow to choose 0 or 1 where 0 is the default is 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 4 possible settings for this option:

0 = Broadcast	1 = CATV
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)

CHAN LOCK is ideal if the system must always be on the same channel. Changing channels with 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 START

CHANNEL (Installer 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 — change values with ADJ Left/Right arrow. 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 MAX VOLUME level (described below).

009 - MAX VOLUME (Maximum Volume)

This function determines the maximum volume level allowable with the VOLUME (VOL) Up/Down controls. 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. Change values with ADJ Left/Right arrow keys. 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 MIN VOLUME level (described previously).

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.

(Continued on next page)

COMMERCIAL MODE SETUP

Detailed Descriptions of Installer Menu Items

011 - KEY DEFEAT (Keyboard Defeat)

If set to 1, key defeat prevents the end user from accessing the on-screen menus with the TV front panel—MENU, SELECT, and Left / Right arrow keys do not function. If set to 0, those keys do function.

NOTE: The menus can always be accessed by pressing MENU on the remote.

012 - IR BANKS EN (IR Banks Enable)

For direct access to a particular Channel Bank. When enabled, installer can access a channel bank by inputting the IR code for the bank.

013 - SCAN MODE (Functional after 2-5-5+Menu setup transfer)

Allows variation in setting the TV On/Off with Channel UP/DOWN. You may opt for TV channels only; TV channels + Off/ON; with these settings for Scan Mode: SCAN MODE Characteristics

- | | |
|---|---|
| 0 | Channel up/down keys change channels only. |
| 1 | Channel down below the lowest channel (or channel up higher than the highest) and TV turns off. |

014 - STRT CH IN SM

(Start Channel in Scan Mode) If set to 1, installs TV On/Off event below the start channel at TV turn On. 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 entered for scanning can be selected.

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

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

020 - FEATURE LEVEL

Installer should leave item 20 FEATURE LEVEL set to 1 (default).



Default set to ZEN 1 for Zenith IR codes remote control operation. Set O, P LBL for Zenith Private Label IR remote control opera-

tion.

Warning: Do not set to "0" or remote will not control TV.

021 - V-CHIP (Parental Control)

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

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

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

Set to 1 to restore previous caption On/Off state after turn Off. If set to 0, captions are always Off at turn On.

025 - FUNCTION PRE (Function Preview)

Set to 0 to suppress CHANNEL PREVIEW from the FUNCTION menu with some Pay-Per-View systems.

027 - HOSPITAL MODE

The default is 2 (which favors most hospitals). With this setting two things are affected: Channel Banks 1, 2 and 3 are accessible, while Bank 4 can be made inactive by removing all the channels from Channel Bank 4. Then, if Channel Bank 4 is selected when the TV is turned on, the TV screen will show "Inactive TV". The Channel Bank 4 setup allows the hospital to present TV viewing options to the patient. The patient can select programming options available in either Bank 1, 2 or 3. Channel Banks are available in all hospital modes 1 and 2.

• The IR code that will control the TV depends on Item 20-I Feature Level setting.

Hosp. Mode = 0 Hospital Mode disabled.

Hosp. Mode = 1 Zenith P.L. IR Code (Bed 1)

Hosp. Mode = 2 Zenith IR Code (Bed 2)

028 - CH. OVERRIDE (Channel Override)

If set to 1, the user can select channels with either Channel Up/Down or by direct number 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.

(Continued on next page)

Detailed Descriptions of Installer Menu Items

030 - ACK MASK

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

031 - POLL RATE

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

032 - TIMING PULSE

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

035 - COMPPORT EN. (HDMI 1 Port Enable)

Enable/disables TV display panel HDMI 1 input jack. Set to 0 to disable, set to 1 to enable.

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.

046 - STRT AUX SRCE (Start Aux Source)

Sets the starting AUX source. At power up, TV will tune to starting Aux source if item 004 Start Channel is set to 0.

255 = Last Aux 1 = Composite Video/Audio
3 = HDMI

047 - AUX STATUS

Set to 1 for M.P.I. AUX source to be reported as a channel number instead of channel 0. Set to 0 to disable AUX identification change. Controls M.P.I. 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 Text 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.

070 - FOR. CH-TIME (Text Display Foreground Color)

Set according to Color Chart.

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

Notes: Applies only to 'Channel Not Available' message if item 073 is set to 1, enabled. If foreground

color and background color are the same, background will be transparent.

071 - BCK. CH-TIME (Text Display Background Color)

Set according to Color Chart.

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

Notes: Applies only to 'Channel Not Available' message if item 073 is set to 1, enabled. If foreground color and background color are the same, background will be transparent.

073 - CH NOT AVBLE (Channel Not Available)

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

075 - REVERT CH (Revert to Start Channel)

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

077 - QUICK SHUTOFF

Allows TV power Off event to be controlled by Channel Up/Down buttons on the Remote Control, TV Front Panel and Pillow Speaker. End user would push and hold channel button down for time required to have TV turn Off. Setting 0 = disabled. Value Range 0 - 17, each number represents 1/2 second. For example, if set to 4, TV should turn Off after end user pressed and held any channel button down for a few seconds.

078 - UPN MSB (UPN Most Significant Byte)

User programmable number, most significant byte readable by M.P.I. command. Note: Not linked to serial number.

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

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

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

User programmable number, most significant byte-2 readable by M.P.I. command. Not linked to serial number.

081 - UPN LSB (UPN Least Significant Byte)

User programmable number, least significant byte readable by M.P.I. command. Not linked to serial number.

(Continued on next page)

COMMERCIAL MODE SETUP

Detailed Descriptions of Installer Menu Items

082 - CHKSM ERROR (Checksum Error)

Enforces rigid M.P.I. checksum validation.
Set to 1 for validation.
Set to 0 to disable (does not check checksum on M.P.I. 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 M.P.I. 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.

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.

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, see settings below.

Note: Only applies if item 106 Aspect Ratio Lock is disabled, set to 0.

Set to 0 "Set By System".
Set to 1 for 4:3.
Set to 2 for 16:9 (Factory Default).
Set to 4 for Zoom 1
Set to 5 for Zoom 2

099 - BACK LIGHTING

Sets the TV screen brightness at power up, see settings below.

Default setting is 100.

1 - 100 Static Backlighting.

(1 = Dimmest picture, 100 = Brightest picture.)

101 - 200 Dynamic Backlighting.

(101 = Dimmest picture, 200 = Brightest picture.) If settings are above 200, the TV automatically controls backlighting depending upon the picture level of the current program.

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 XX-XX digital minor sub 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 96 Default Aspect 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 and press Enter to load presets for all of the Installer menu item settings.



WARNING: Setting this to 1 and pressing Enter will reload the factory defaults and clear the channel list including erasing any assigned Channel Icons and custom Channel Labels.

REFERENCE: DETAILED INFORMATION FOR MAKING A MASTER TV

IMPORTANT INSTALLER SETUP INFORMATION! PLEASE READ THE FOLLOWING...



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. If necessary, familiarize yourself with the TV Installer menu and how to make and save changes in the menu, before attempting to clone the TV Master setup.

You will also need an LG Installer remote control similar to the one shown in the front of this manual. The installer remote must have a “Source” button or its equivalent. The remote shown in this manual has a “INPUT” button -- this button serves the purpose of a Source button.

Finally, the TV’s clonable features need to be set up. This is a critical step. If the Master TV display panel’s

clonable features like adding channel icons or channel labels, digital font closed caption options etc., are not correctly added, then the cloned TVs will all have problems.

As the cloning procedure is being performed, specific steps need to be done at the indicated times to create a correct master TV setup and cloned target TVs. Be sure to do each task as indicated. If a procedure or step is left out or not performed completely, cloning may not work. At each step, pay attention to assure 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. Cloning is only possible when the signal source is an Analog channel, not a digital channel.

Making a Master TV

Detailed Instructions

The following describes the procedure for preparing a Master TV for cloning and the procedure for adding Channel Icons and/or Labels.

Note 1: Disconnect all Aux inputs. Under certain conditions, Auto Tuning is disabled if there is an Aux input active.

1. Enter the TV installer menu.
 - a. Reset the internal controller to factory default by accessing installer menu item 117 FACT DEFAULT, set it to 1 and press “ENTER”. The value will change back to 0 after the TV’s internal controller has been restored to factory default condition. This step will ensure that the TV channel memory will be the active channel list. If it is blinking rapidly, the TV channel map is in use.
 - b. Within the Installer menu, set the Installer menu items to the configuration required of your institution.
 - c. It is important to set the tuning band at this time, set Installer menu item 03 BAND/AFC. Default is 001 CATV.
 - d. Set Installer menu item 28 – CH OVERRIDE to 001 to allow access to Auto Tuning and Channel Edit options in the Channel Menu. Exit the Installer menu.
2. Access the Master TV menus and set the clonable options on the menus to the desired configuration. Refer to the **Clonable Menu Features** Chart in this manual.
3. Run Auto Tuning to find analog and digital channels.
4. Enter the Channel Edit menu and edit the channel lineup to include the Free-To-Guest Channels only.
5. Assign ICONs to the channels using the Channel Label Menu.

- Note:** You can add Channel ICONs typically network logos like ABC, NBC, PBS etc. in this step. Or, in Step 7, add Channel ICONs or labels for channels without Icons.
6. Transfer the TV setup: Enter the TV installer menu. Press ‘2’, ‘5’, ‘5’, ‘MENU’ to start the transfer of the TV’s setup to the TV internal controller. Once the transfer is complete, the system will exit the Installer menu. It should be blinking slowly (1 blink per second). Note: The maximum number of active channels and Aux sources that can be transferred is 140. Total channels numbering more than 140 will result in erratic TV operation.
 7. Edit/Add Channel ICONs and Channel Labels as needed. Enter Installer menu. With menu displayed, press 2-5-4 + MENU. See the following page for detailed instructions:
 - **Editing/Adding Channel ICON and Labels on Master TV**
 - **Changing a Channel’s ICON on Master TV**
 - **Changing/Adding Channel Labels on Master TV**
 - **Changing Source Labels on Master TV**
 8. Verify Master TV setup and feature configuration:
 - Did you add Channel ICONs?
 - Did you add Channel Labels?
 - Did you add Aux Source Labels?
 - Did you adjust all TV menu options as required?After verifying master setup, enter the TV Installer menu and set Installer menu item 28 CH OVERRIDE to 000. Press ENTER to remove and exit the Installer menu.

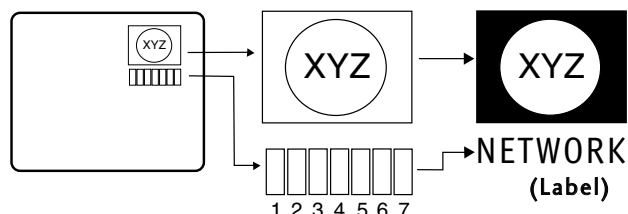
COMMERCIAL MODE SETUP

REFERENCE: PROCEDURES FOR ADDING CHANNEL LABEL ICONS/CUSTOM CHANNEL LABELS (2-5-4 + MENU MODE) Adding Channel Icons and Labels in the 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 7 characters to help in identifying the channel or network. At your option, channel labels can also be added in addition to a pre-assigned

(Icon)



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 by using the method described in item 6 on previous page, by cloning or by the use of the master remote control from the PPV provider.

Note: A blank letter space is available between 'Z' and '!'.

To Do Channel Editing/Labeling, proceed as follows

1. Enter TV Installer menu.
2. Once the installer menu appears, press '2', '5', '4', 'MENU'. This enters the channel label editing mode. Add your channel icons and channel labels in this menu, see below. (You can do this more than once.)
3. To exit 2-5-4+Menu when finished press "MENU".

Changing a Channel's ICON on Master TV

1. With Channel Up/Down, select the channel you want to change the Icon for.
2. With the Right or Left ADJ arrow, select the letter 'I' on the channel ID display.
3. With the Up or Down arrow, select the desired ICON you want to appear to identify the channel. (If you know the ICON number, enter the number followed by Enter / Select.)
4. Proceed with Changing/Adding Labels or go to the next channel.

Changing/Adding Channel Labels on Master TV

1. Channel Up/Down to select the desired channel.
2. Press the Right or Left ADJ arrow repeatedly until the numbers 1 to 7 show up. The number shows the position of the character that can be changed. Number 1 is the first character, number 2 the second character and so on.
3. With the Up or Down arrow, 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 Master TV

1. Press "INPUT" to select the desired Aux input source; Video 1, HDMI etc.
2. Use the Up or Down arrows to select the desired character for space 0.
3. Press the Right or Left arrow repeatedly to select number spaces 0, 1 etc. The number shows the position of the character that can be changed.
4. Press "INPUT" to select the next Aux source or proceed with Changing Icon or Changing/Adding Labels.

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.
- **0 - 9** - Use to enter the index number of the ICON, if known.
- **ENTER/SELECT** - Changes the ICON after the number has been entered.
- **INPUT** - Changes to the Aux input labeling menu. ("Source" on the remote shown in this manual is INPUT.)
- **MENU** - Exits 2-5-4+Menu mode.

REFERENCE: CLONABLE MENU FEATURES

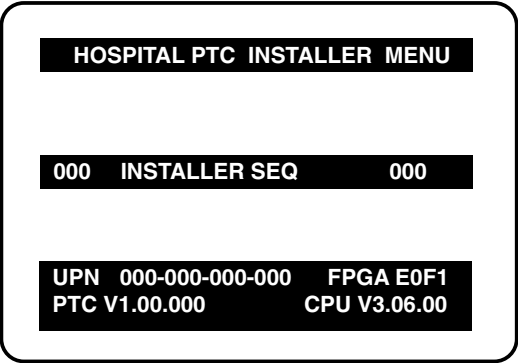
Clonable Menu Features		
Menu /Sub Menu Features Channel Menu Auto Tuning Manual Tuning Channel Edit Channel Label	Option Menu Language Captions Picture Menu Picture Mode	Audio Menu Auto Volume Clear Voice Installer Menu Item Settings Note: Some menu options will revert to their default settings after cloning.

■ **Note:** End user only has access to features that are available on End user pillow speaker, or remote control if provided by the institution.

REFERENCE: CHECKING SOFTWARE VERSION

Procedure for Checking Software Version

The software version of the TV may be checked by accessing the INSTALLER MENU. To do this, press the MENU button repeatedly until the menu display ceases to respond to menu key presses. Then, press "9", "8", "7", "6", "ENTER/SELECT". Press Enter again to remove Installer menu.



Typical Installer Menu

COMMERCIAL MODE SETUP

TV AUX INPUT CONFIGURATION

DIRECT ACCESS Tuning		TV		ENABLE				MPI DATA				START AUX SOURCE ASSIGNMENT
				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
131	91	Video1 (Rear)	CV/SVIDEO	39	REAR_AUX_EN	0x02	Rear Video (Aux)	1	Rear Video (Aux)	0 (VIDE0)	1	
133	93	HDMI1/DVI	DTV	35	COMPPOINT EN = 1	0x08	Front Computer	3	Front Computer	0 (VIDE0)	3	

POWER SAVING SETUP

Power Savings Setup

Installer Item 099 Backlighting: value set as shown below. (Default value is 200)

Item 099 Backlighting (Static)	Brightness	Power Consumption (Watts)	Power Savings Rating	Item 099 Backlighting (Dynamic)	Brightness	Power Consumption (Watts)	Power Savings Rating
100	150.4	46.8	0.00%	200	67.39	32.71	30.11%
90	133.7	44.44	5.04%	190	62.28	31.57	32.54%
80	122	41.7	10.90%	180	56.1	30.4	35.04%
70	107.2	39.22	16.20%	170	49.15	29.22	37.56%
60	93.63	36.76	21.45%	160	43.07	28.11	39.94%
50	79.8	34.33	26.65%	150	36.3	26.9	42.52%
40	65.1	31.69	32.29%	140	30.03	25.69	45.11%
30	49.01	29.02	37.99%	130	25.16	24.75	47.12%
20	34.85	26.48	43.42%	120	19.7	23.46	49.87%
10	22.64	23.98	48.76%	110	14.73	22.24	52.48%
1	12.56	21.63	53.78%	101	10.51	21.32	54.44%

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

APPENDIX

TROUBLESHOOTING

The operation does not work normally.	
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.
The video function does not work.	
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	■ Check HDMI cable over version 1.3. If the HDMI cables don't support HDMI version 1.3, it can cause flickers or no screen display. In this case use the latest cables that support HDMI version 1.3.

APPENDIX

The audio function does not work.

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 HDMI cable over version 1.3. ■ Check USB cable over version 2.0.

*This feature is not available for all models.

There is a problem in PC mode. (Only PC mode applied)

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	■ Run 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.

Power

No Power	■ See troubleshooting flow chart.
----------	---

Erratic Operation

Installer menu setup	■ Adjust Installer menu settings as required.
----------------------	---

Software Problems

Cannot direct enter channel number or "No Signal" appears	■ After 2-5-5 + MENU, only channels included in TV controller will appear. If channel is available it can be added to channel scan, rescan channels. If it is not available, the 'No Signal' message appears on the TV screen.
---	--

■ **Note:** For other problems not caused by the TV, refer to other devices' operating guides.

REFERENCE: LT2002 CLONING PROCEDURE

TROUBLESHOOTING



Warning: Do not use LT2002 while any PPV card is installed in TV or clone programmer will be damaged.

Reset Clone After Static Shock

After replacing exhausted batteries, or if the programmer behaves strangely after a static shock, 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 LT2002 programmer is designed to be used with TVs containing the 221-01006 and later processors. Use with earlier TV sets 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 quick setup instructions accompanying the LT2002 clone programmer. Use the printed menu illustrations on the quick setup sheet supplied with the Clone as an aid to making your programming choices. (Although the menus are not all displayed, the clone functions all operate normally.)

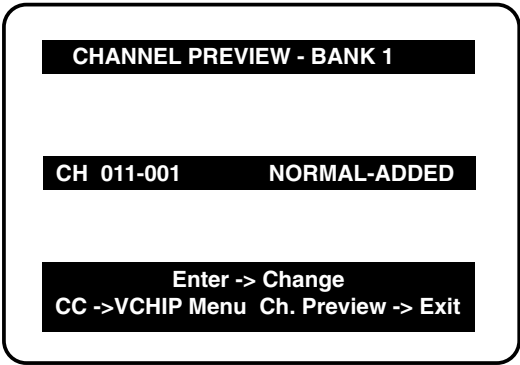
Clone Programmer Troubleshooting

Clone Programmer	
Clone copies Setup in less than 30 seconds	■ Press Reset on clone programmer, redo teach/learn. (Teach/Learn should take a minimum of 1 minute.)
Remote does not operate clone	■ Only use an LG Installer remote to operate clone programmer with TV.
LED does not blink	■ Connect M.P.I. cord properly, assure good connection. ■ TV must be powered On for clone to work. ■ Install 4 fresh AA high-quality alkaline batteries.
Clone menu hard to read	■ Connect TV to a reliable Analog channel signal source.
No time set	■ Set time on a TV, copy time to Clone Programmer.
Clone not working	■ Try a different LT2002 Clone programmer. ■ Reset Clone Programmer.
Clone Scans Channels more than once	■ Retry cloning again.

Master and Other TVs	
Cloning did not work	■ Wait until procedure complete message is displayed. ■ Cloning is only possible with identical model TVs. ■ Reread cloning pages to be sure all tasks were performed.
Clone time disappeared	■ Batteries must remain installed to retain time settings.
New Setup not present	■ Disconnect newly-cloned TV from power for 5 seconds.

- After cloning operations are complete, just unplug the LT2002 from the TV.
- If the TV does not display a picture on the TV (blank screen) after a few seconds, just change channels.

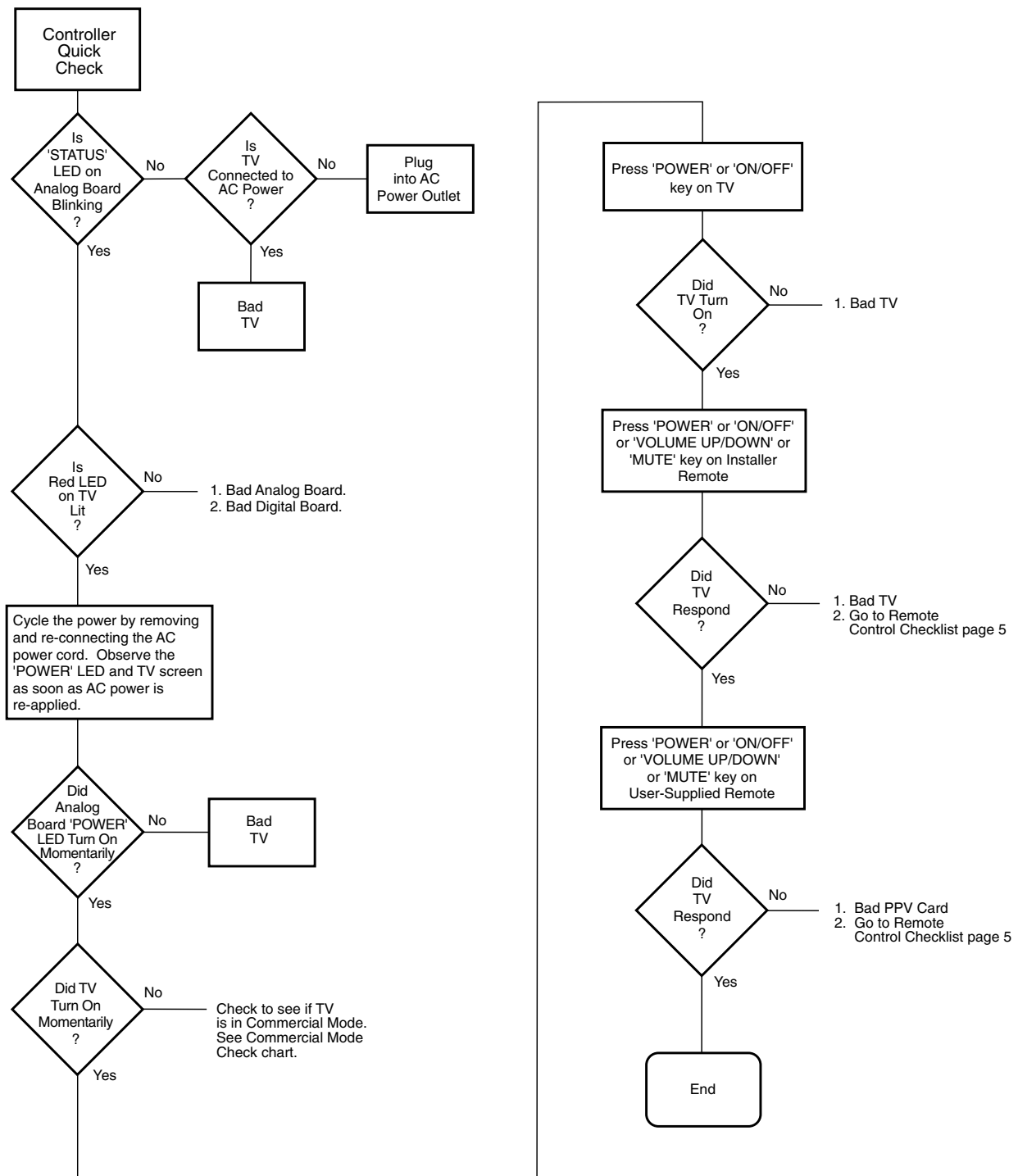
CHANNEL BANKS SETUP TROUBLESHOOTING



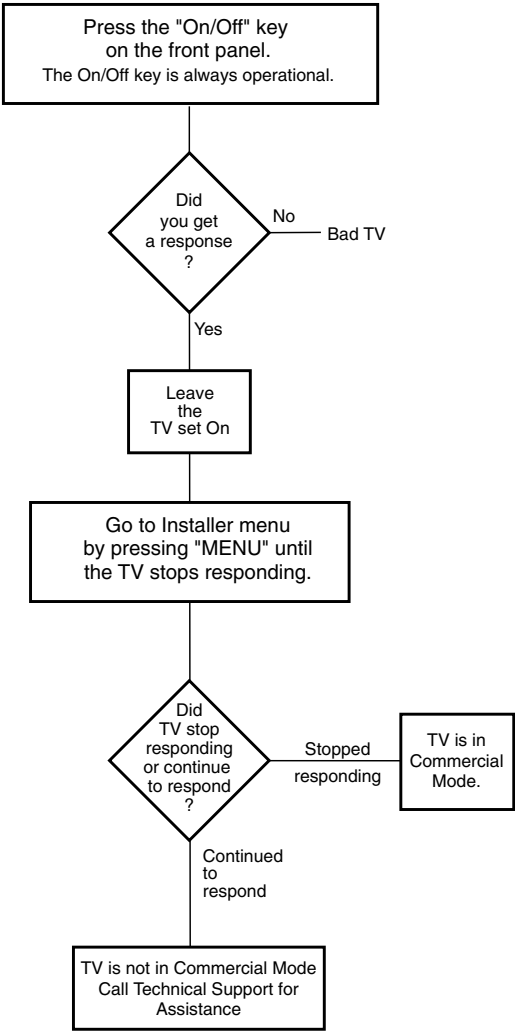
Channel Banks Setup Menu

There is a problem in Channel.	
Cannot change channel status in menu.	■ Installer menu item 028 Ch Override is set to 000. Set Ch Override to 001 to allow access for channel status change.
Channel Preview menu does not appear.	■ 2-5-5+ Menu procedure was not performed. Channel Banks setup menu will not be available until 2-5-5+ Menu procedure is done. And, item 028 Ch Override is set to 001 to allow access for channel status changes.
Channel is blanked in all channel banks.	■ Blanking a channel in one channel bank will make it blank in all channel banks.
Cannot tune in deleted channel on Ch Preview menu.	■ Select a channel bank where the deleted channel number is set to 'Normal Added'. Direct enter the deleted channel number. Change to the bank you want to activate the channel in. Select 'Normal Added' on the Ch Preview Channel Banks menu.
'Inactive TV' message appears and then TV turns Off.	■ TV is set up to display 'Inactive TV' message if all channels are 'Normal Delete' in Channel Bank 4. Select another channel bank (Bank 1, 2 or 3) which will return TV to normal operation.
Channel found in scan does not tune in with Channel Up/Down.	■ Channel was deleted in currently selected channel bank. If banks were set up, premium channels may only be available on another channel bank. Select the channel bank where the channel is set to 'Normal Added'. Or, direct enter channel number then go to banks menu and select 'Normal Added'.
If 'Bank' on Installer remote is pressed, TV shows Aux sources selection menu.	■ Item 027 Hospital Mode in Installer menu is set to 0. Set back to default '2' for Channel Banks to appear with Bank or Source key presses.

TROUBLESHOOTING FLOW CHART



COMMERCIAL MODE CHECK



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 sticking 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 two-wire 300 ohm antenna to a 75 ohm RF jack. They are usually about an inch long with two screws on one end and a round opening with a wire sticking out on the other end.

ANALOG TELEVISION

Standard television broadcasting format in 4:3 picture aspect ratio.

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.

CABLE

Cable service box. Refers to the descrambler box cable subscribers use to receive cable programming signals.

CATV

Programming provided by a cable service.

DIGITAL TELEVISION

High-resolution, cinema-quality television signals transmitted digitally.

DVI

Digital Video Interface
Accommodates analog and digital interfaces with a single connector.

COMPOSITE VIDEO

Typical video jack, uses one wire for transporting three-color video signals.

COMPONENT VIDEO

Uses three wires for transporting three-color video signals. The end result is usually better video quality.

DELETED

Lets you remove channels from the list that the end user can scroll through using CH (Channel) Up/Down.

HDMI

High-definition multi-media interface.

HDTV

High-definition television. Refers to television signals that have higher resolution than ordinary analog TV signals.

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.

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

See Note 1.

RGB (Red, Green, Blue)

Connection input or output port available for producing a video image using three separate colors: Red, Green, and Blue.

RS-232C

Serial communication port through which the display panel is controlled.

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

See Note 1.

XDS

Extended Data Service: Additional program information included on the signal provided at the discretion of the broadcaster.

Note 1

Refer to www.atsc.org for further information.

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

MODEL		22LG3DCH (22LG3DCH-UA)	26LG3DCH (26LG3DCH-UA)	32LG3DCH (32LG3DCH-UA)	32LG3DC (32LG3DC-UA)
Dimensions (Width x Height x Depth)	With stand	31.5 x 23.7 x 9.1 inches 801.8 x 604.2 x 232 mm			
	Without stand	20.7 x 15.2 x 3.2 inches 528 x 387.3 x 82.7 mm	26.1 x 17.6 x 3.1 inches 663.3 x 449.8 x 80.0 mm	31.5 x 21.4 x 4.2 inches 801.8 x 544.4 x 109 mm	31.5 x 21.4 x 4.2 inches 801.8 x 544.4 x 109 mm
Weight	With stand	29.5 pounds / 13.4 kg			
	Without stand	13.6 pounds / 6.2kg	18.9 pounds / 8.6 kg	26.2 pounds / 11.9 kg	26.2 pounds / 11.9 kg
Power requirement Television System Program Coverage External Antenna Impedance		AC120V ~ 50/60Hz	AC120V ~ 50/60Hz	AC120V ~ 50/60Hz	AC100-240V ~ 50/60Hz
		NTSC-M, VSB, 64 & 256 QAM VHF 2-13, UHF 14-69, CATV 1-135, DTV 2-69, CADTV 1-135 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.

IR CODES

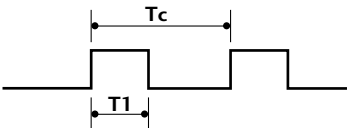
1. How to Connect

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

2. Remote Control IR Codes

■ Output waveform

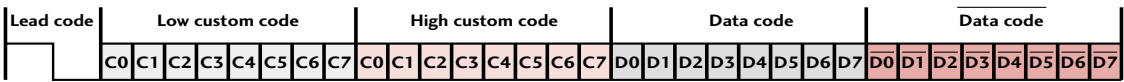
Single pulse, modulated with 37.917KHz signal at 455KHz



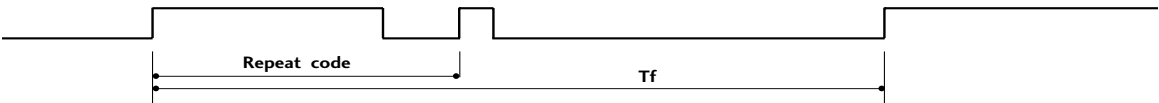
Carrier frequency
 $FCAR = 1/TC = fOSC/12$
Duty ratio = $T1/TC = 1/3$

■ Configuration of frame

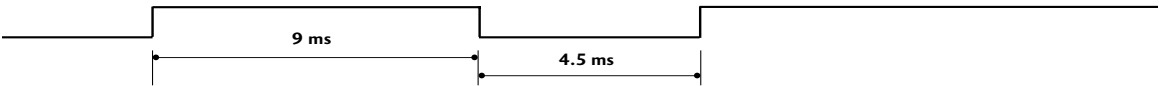
1st frame



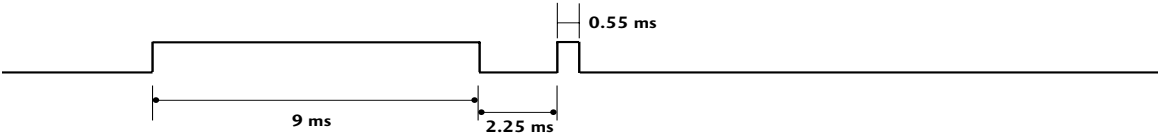
Repeat frame



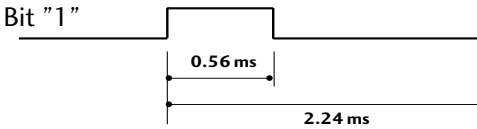
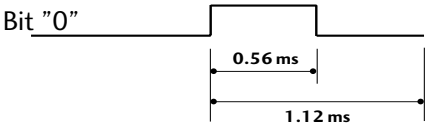
■ Lead code



■ Repeat code

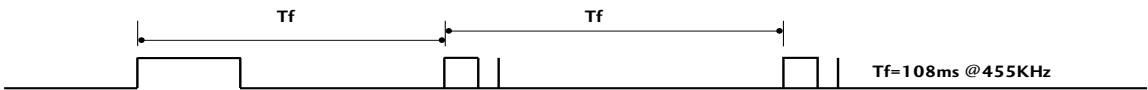


■ Bit description



■ 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	BF	COMPONENT	Discrete IR Code (COMPONENT Input Selection)
4D	PICTURE	Remote control Button	D5	RGB	Discrete IR Code (RGB Input Selection)
52	SOUND	Remote control Button	CE	HDMI1	Discrete IR Code (HDMI1 Input Selection)
0A	SAP	Remote control Button	76	Ratio 4:3	Discrete IR Code (Only 4:3 Mode)
79	RATIO	Remote control Button	77	Ratio 16:9	Discrete IR Code (Only 16:9 Mode)
10-19	Number Key 0-9	Remote control Button	AF	Ratio Zoom	Discrete IR Code (Only Zoom1 Mode)
4C	- (Dash)	Remote control Button	C4	POWER ON	Discrete IR Code (Only Power On)
1A	FLASHBK	Remote control Button	C5	POWER OFF	Discrete IR Code (Only Power Off)
02	VOL +	Remote control Button			
03	VOL -	Remote control Button			
00	CH +	Remote control Button			
01	CH -	Remote control Button			
0E	TIMER	Remote control Button			
39	CC	Remote control Button			
09	MUTE	Remote control Button			
CB	ADJUST	Remote control Button			
43	MENU	Remote control Button			
5B	RETURN	Remote control Button			
40	▲	Remote control Button			
41	▼	Remote control Button			
07	◀	Remote control Button			
06	▶	Remote control Button			
44	ENTER	Remote control Button			

LG Electronics Inc.