LG

32LC50C	32LX50C	37LC50CB
32LC50CB	32LX50CS	42LB50C
32LC50CS	37LC50DC	42LC50C

Integrated TVs

Setup & Operation Guide
for
Commercial Mode

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

Experienced Installer

Master TV Setup
page 6

Cloning Information
pages 7-8-9

Installer Overview

This is the commercial mode setup guide only. For all other information refer to the separately-supplied TV Owner's Manual (Users guide).

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 as required. If necessary, familiarize yourself with the TV Installer menu and how to make and save changes 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 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 adding channel icons or channel labels are not done properly, then the cloned TV TVs will all have problems. Refer to the Owner's Manual for other TV features: Video, Audio etc.

LT2002 Clone Programmer

As the cloning procedure is being performed, specific steps need to be done at the indicated times to achieve the desired result. Be sure to do each cloning task as indicated. If a procedure or step is left out or not performed correctly, then the TV setup will be wrong and cloning may not work. At each step, pay attention to assure the TV screen shows the proper message(s) 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.
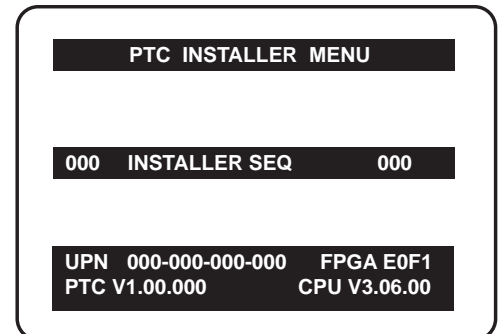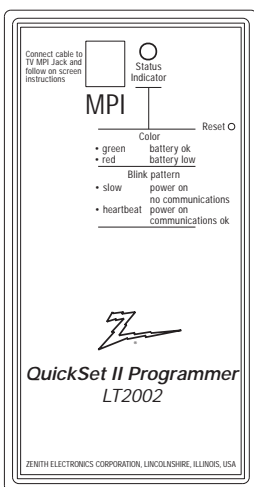
Typical Installer Menu
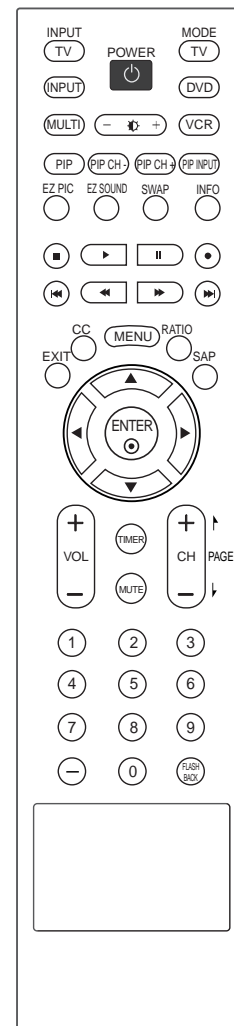
Use this page as a reference to find pages or sections to go to and set up the TV features.
Go to page 6 to begin the Commercial Mode Master TV setup.

1. Connect TV to RF signal source.
2. Customize TV features and set up other operational controls in the Installer's menu.
3. Copy the Master TV setup into the clone programmer.
4. Transfer the Master TV setup from the clone programmer to identical TVs.

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 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 supplied with the TV.
- For any additional information, contact your LG representative.

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

For Customer Support/Service please call:

1-888-865-3026

www.lgcommercial.com

Typical Installer Multi-Brand Remote Control
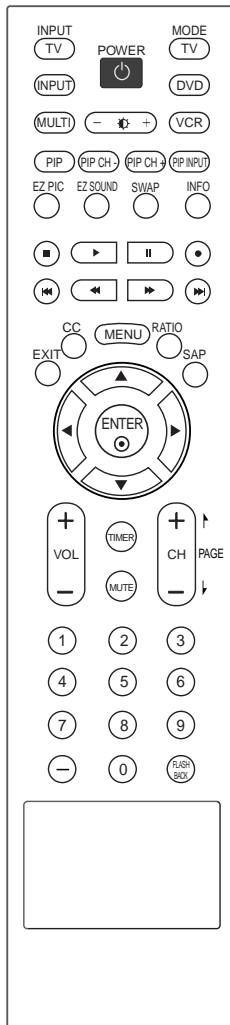
LG Multi-brand Remote Control

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

Notes: This remote is supplied with the TV. This typical LG multi-brand remote control is shown for reference.

See next page for typical key functions in TV mode.

Follow the instructions provided on page 10 to access the Installer menus.
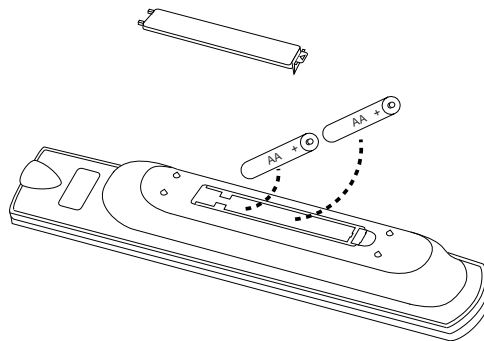
Installing Batteries in Installer Remote Control
- Remove the battery compartment cover on the back side by pressing the arrow tab forward and lifting. Install batteries matching correct polarity as shown (+ with + and - with -).
- Install two high-quality alkaline 1.5V AA batteries. Never mix old or used batteries with new ones. Replace cover.

Remote Control Key Functions. To put remote into TV operating mode, select TV with the MODE key.
Notes: *This remote is supplied with the TV. This typical LG multi-brand remote control is shown for reference. Follow the instructions provided on the next page to access the Installer menus.*

TV INPUT/INPUT
Select available input sources.

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

MULTI
Selects RGB, HDMI,DVI, HDMI2 and Component Input sources.

− ☼ + Adjusts picture brightness.

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.

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

VOLUME UP/DOWN
Increases/decreases the sound level.

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

MUTE
Switches the sound on or off.

CHANNEL UP/DOWN/PAGE
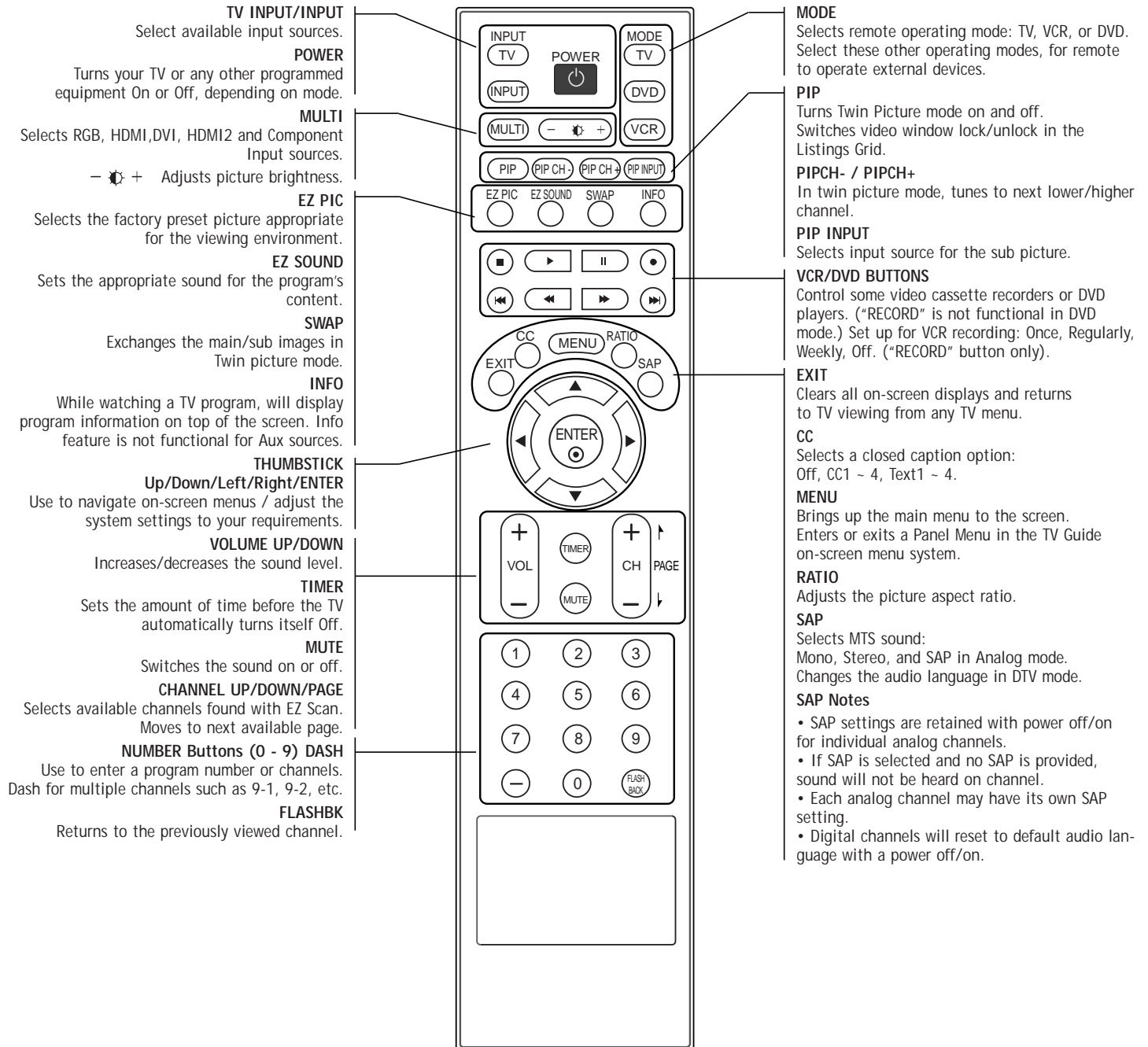Selects available channels found with EZ Scan. Moves to next available page.

NUMBER Buttons (0 - 9) DASH
Use to enter a program number or channels. Dash for multiple channels such as 9-1, 9-2, etc.

FLASHBK
Returns to the previously viewed channel.

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

PIP
Turns Twin Picture mode on and off. Switches video window lock/unlock in the Listings Grid.

PIPCH- / PIPCH+
In twin picture mode, tunes to next lower/higher channel.

PIP INPUT
Selects input source for the sub picture.

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).

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

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

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

RATIO
Adjusts the picture aspect ratio.

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

SAP Notes

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

Commercial Mode Setup for Master TV

This page provides an overview of the TV configuration. See the pages listed below 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, EZ Scan (Channel search) is disabled if there is an Aux input active.

Overview: Commercial Mode Setup Procedure

1. Set Installer Menu Items
(Enter Installer Menu, see page 10 for detailed instructions.)

a. Set Installer menu item **117 FACT DEFAULT**, to **001** and press **ENTER**. (This clears all installer menu items, custom settings, channel labels/icons and reloads the factory default settings.)

b. Set Item **003 BAND/AFC**.
- **Broadcast**: set to **000**.
- **CATV**: set to **001**.
- **HRC**: set to **002**
- **IRC**: set to **003**

c. Set item **028 CH OVERIDE** to **001**. This allows access to EZ Scan, Manual Scan and Channel Edit options in the Setup Menu.

d. Set other particular installer items that affect your TV programming network. See pages 10 - 15.

e. 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 Owners Manual)
(Audio, Lock, Time menus etc. See TV Clonable options list on page 16.)

3. Run EZ Scan
(Search for all available channels.) Go to the Setup menu and access the EZ Scan option, follow onscreen instructions.
a. Edit Channel Scan. In the Setup Menu, access the Channel Edit menu.
- Add/Delete channels manual scan menu per your system requirements. Note: Physical channel numbers are used to indicate Virtual channels.
- Add familiar Channel Icons like ABC, CBS, NBC etc. to the channel onscreen display. Add identifiable labels for the end user to readily know what common networks are available. In the Setup menu, select the Channel Label option, follow instructions on the bottom of the screen.
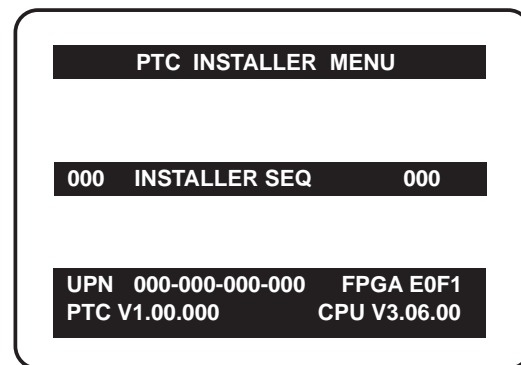
4. Transfer TV Setup to Controller Box: 2-5-5 + Menu
After the TV channel scan has been edited and channel label icons added, enter the Installer menu. Once in the Installer menu, press 2-5-5 and MENU on the remote. This transfers the TV setup to the internal controller box.

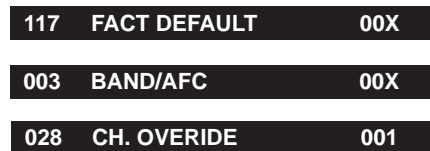**5. Perform Adding Custom Channel Labels: 2-5-4 + Menu Mode**
Enter Installer menu, press 2-5-4 and Menu. Add your own custom labels to channel onscreen displays. (See page 17.) To remove menu press **MENU**.
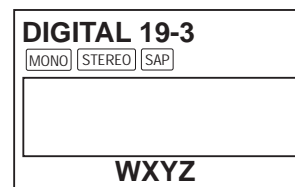
Verify TV Setup
At this point, verify that the channel lineup, channel icons and custom labels are correct. Make sure the TV features are set per your requirements. Set item **028 Ch Overide** to **000** to lock the channel scan. After the preceding has been completed, the Master TV setup is ready to be copied to the LT2002 Clone Programmer, see next page.

PTC INSTALLER MENU	
000 INSTALLER SEQ	000

UPN 000-000-000-000   FPGA E0F1
PTC V1.00.000   CPU V3.06.00

TV Installer Menu

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

Set these Installer Menu Items

DIGITAL 19-3
MONO STEREO SAP

WXYZ

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

028 CH. OVERIDE	000

After TV setup has been verified,
set item 028 Ch Overide back to 000.

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

Antenna or CATV

Ferrite Core (TDK, ZCAT 2035-0930)

Connect cable to TV MPI jack and follow on screen instructions

Status Indicator

MPI

Reset

Color
• green   battery ok
• red   battery low

Blink pattern
• slow   power on
             no communications
• heartbeat power on
             communications ok

QuickSet II Programmer
LT2002

ZENITH ELECTRONICS CORPORATION, LINCOLNSHIRE, ILLINOIS USA

Clone Programmer

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.

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

Master TV

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 <u>Analog</u> channel and connected to power. (See above.)
- Teaching and Learning is only possible between identical model devices. (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 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 TV display panel. After learning is complete, to another identical TV TV display panel to "teach" it the master setup.
- See the Clone Troubleshooting section to resolve problems.

Turn to the next page to continue Cloning 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
```
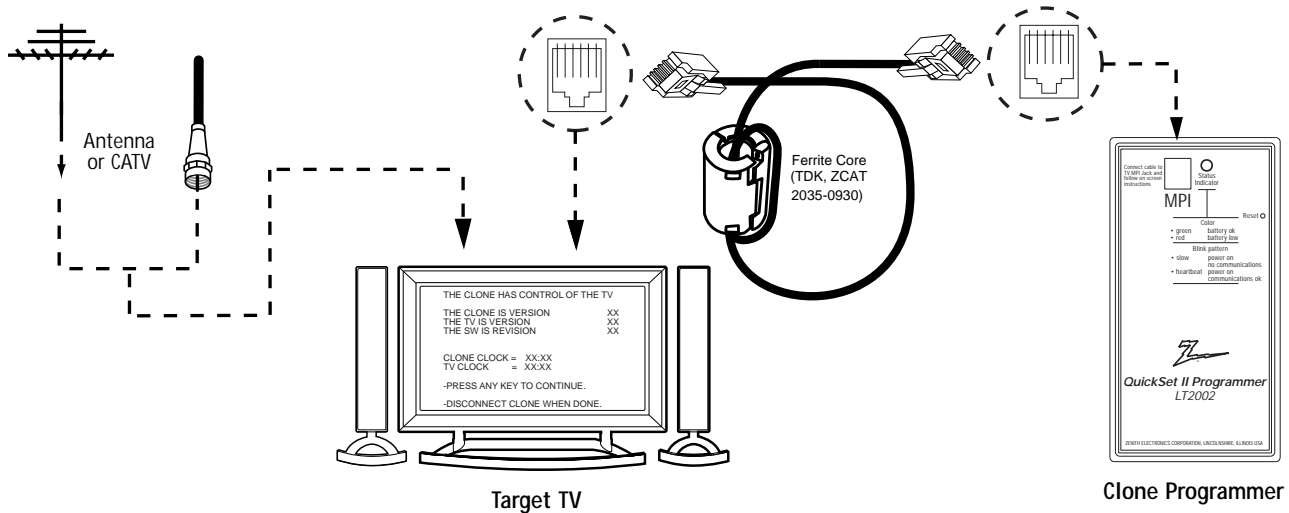
This menu should appear after any key is pressed on the Installer remote.

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.*

Teaching the Master Setup to Another TV

Connections for the LT2002 to Teach another TV the Master Setup

Antenna
or CATV

Ferrite Core
(TDK, ZCAT
2035-0930)

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.

Connect cable to
TV MPI Jack and
follow on screen
instructions

Status
Indicator

MPI   Reset

Color
• green   battery ok
• red   battery low
Blink pattern
• slow   power on
            no communications
• heartbeat power on
            communications ok

QuickSet II Programmer
LT2002

ZENITH ELECTRONICS CORPORATION, LINCOLNSHIRE, ILLINOIS USA

Target TV

Clone Programmer

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

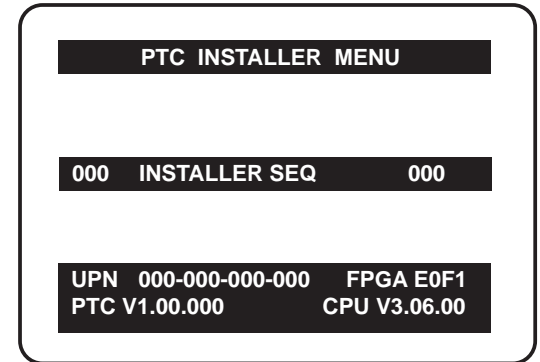This display will appear after Teaching is complete.

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, then 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 menu also disappears automatically.)*

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.

```
┌─────────────────────────────────────┐
│       PTC  INSTALLER  MENU          │
│                                      │
│   000    INSTALLER SEQ        000   │
│                                      │
│   UPN  000-000-000-000    FPGA E0F1 │
│   PTC V1.00.000           CPU V3.06.00 │
└─────────────────────────────────────┘
```

Typical Installer Menu

Using the Installer's Menu

Items 000 ~ 117 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.

Installer Menu Items 000 through 117

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	0~125, 126, 127, 255	255	Channel at turn-on (Set 255 to return to 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	0	Set to 1 to disable menu navigation keys on display panel.
015	SLEEP TIMER	0 / 1	1	Set to 1 to enable Sleep Timer.
016	EN TIMER	0 / 1	0	Set to 1 to enable On/Off Timers.
017	ALARM	0 / 1	1	Set to 1 to enable Alarm.
021	V-CHIP	0 / 1	1	Set to 1 to enable V-Chip functions.
022	MAX BLK HRS	0 ~ 99	12	Sets number of V-Chip (Parental Control) blocking hours.
023	CAPTION LOCK	0 / 1	0	Set to 1 to retain caption setting at power Off.
028	CH. OVERIDE	0 / 1	1	If set to 0, limits direct access to favorite channels.
029	OLD OCV	0 / 1	0	Set to 1 to change M.P.I. operation to OCV.
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.
034	CAMPORT EN	0 / 1	1	Set to 1 to enable Video 2 input.

Installer Menu Items 035 through 118

Menu Item	Function	Value Range	Default Value	Brief Description of Function and Comments
035	COMPPORT EN.	0 / 2	1	Set to 0 to disable HDMI 1. Set to 1 for DTV, set to 2 for PC.
038	YPrPb EN.	0 / 1	1	Set to 1 to enable display panel Component Video input jacks.
039	REAR AUX EN	0 / 1	1	Set to 1 to enable display panel Video 1 input jack.
040	AUTO CAMPORT	0 / 1	1	Set to 1 to automatically switch to Camport.
046	STRT AUX SRCE	Note 1	255	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 TV memory channel list.
075	REVERT CH	0 / 1	0	If set to 1 and loss of M.P.I. communication occurs, TV tunes to Start Channel.
078	UPN MSB	0 ~ 255	0	User programmable number, most significant byte.
079	UPN MSB-1	0 ~ 255	0	User programmable number, most significant byte - 1.
080	UPN MSB-2	0 ~ 255	0	User programmable number, most significant byte - 2.
081	UPN LSB	0 ~ 255	0	User programmable number, least significant byte.
082	CHKSM ERROR	0 / 1	1	Enforces rigid 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.
087	REAR RGB EN.	0, 1, 2, 17, 18	2	Set to 0 to disable RGB1. Set to 1 to enable for RGB DTV mode. Set to 2 to enable for RGB PC. Set to 17 for one time auto configuration in DTV mode. Set to 18 for one time auto configuration in PC mode.
088	EN NOISE MUTE	0 / 1	1	If set to 1, mutes audio if no signal is present.
090	KEY LOCK	0 / 1	0	If set to 1, keyboard is locked out, IR is still functional.
091	YPrPb2 EN.	0 / 2	1	Set to 0 to disable HDMI 2. Set to 1 for DTV, set to 2 for PC.
093	RJP AVAILABLE	0, 1, 2, 5, 6	0	Set to 0 to disable. Set to 1, 2, 5 or 6 for HDMI or DVI mode. (See detailed descriptions)
094	SAP MENU EN	0 / 1	1	Set to 0 to disable feature on Function menu. Set to 1 to enable feature on Function menu.
096	DEF. ASP. RATIO	0 ~ 5	2	Sets default aspect ratio at power up. See detailed descriptions and item 106.
099	BACK LIGHTING	1 ~ 100 101 ~ 200	100	Sets the power saving mode by controlling the brightness of the picture.
102	ATSC BAND	0 ~ 4	4	Selects ATSC band.
103	ATSC TUNE MODE	0 / 1	1	Default 01 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.

Note 1: Dependent on item 093 RJP Available setting.

Installer Menu

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 ~ 7, with 1 ~ 7 representing the hours that the unit will remain On, unless there has been activity from either the control panel or remote control.

002 - AC ON (AC Power Switchable)
If set to 1, 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 EZ SCAN (Auto Program), select the appropriate Band setting here and add the channels using the Channel Edit option in the Setup 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:

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

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.

011 - KEY DEFEAT (Keyboard Defeat)
If set to 1, key defeat prevents the end user from accessing the on-screen menus with the display 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.

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 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.

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 user; no programming restrictions can be set.

022 - MAX BLK HRS (Maximum Block Hours) *
Sets hours from 0 to 99 for the maximum V-Chip (Parental Control) block hours. Default setting is for 12 blocking hours.

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

028 - CH. OVERIDE (Channel Override)
If set to 1, the user can select channels with either Channel up/down or by direct keypad entry. If set to 0, only those channels that are entered for scanning can be selected.

029 - OLD OCV (On Command Video™)
Set to 1 for operation with systems from On Command Corporation.

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.

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

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.

034 - CAMPORT EN. (Camera Port Enable)
Set to 1 to enable Video 2 input on display panel. If set to 0, Video 2 input on display panel is not functional.
NOTE: S-Video overrides Video jack.

035 - COMPPORT EN. (Computer Port Enable)
Enable/disables display panel HDMI1 input jack. Set to 0 to disable, set to 1 to enable DTV mode, set to 2 for PC mode.
NOTE: The setting above is ignored if Installer item 093 RJP AVAIL-ABLE, is set to 1.

038 - YPrPb EN. (Rear Component Video Enable)
Set to 1 to enable display panel rear Component Video input jacks. Set to 0 to disable display panel rear Component Video input jacks.

039 - REAR AUX EN. (Rear Aux Enable)
Set to 1 to enable display panel rear AUX (Video 1) input. Set to 0 to disable display panel rear AUX (Video 1) input. Note: S-Video overrides Video.

040 - AUTO CAMPORT
Set to 1 to automatically switch to Camport when equipment is connected to front Video input. Set to 0 to disable front Video automatic source selection.
NOTE: If set to 1, 093 RJP Available is automatically set to 0.

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.
If item 093 RJP Available is set to 0 and item
040 Auto Camport is set to 0:

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

If item 093 RJP Available is set at 1:

2 = Video 2	5 = HDMI 2	6 = Component

If item 040 Auto Camport is set to 1:

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

Installer Menu

Detailed Descriptions of Installer Menu Items

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

070 - FOR. CH-TIME (Channel-Time Display Foreground Color)
Set according to Color Chart.

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

NOTE: If foreground and background color are the same, menu background is transparent.

071 - BCK. CH-TIME (Channel-Time Display Background Color)
Set according to Color Chart.

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

NOTE: If foreground and background color are the same, menu background is 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 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.

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.

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.

087 - REAR RGB EN. (Rear RGB Enable)
Controls access to rear RGB input on TV.
Set to 0 to disable RGB input.
Set to 1 to enable RGB in DTV mode.
Set to 2 to enable RGB in PC mode.
If set to 1 or 2, auto configuration is performed when RGB is selected or input change is detected.
Set to 17 to enable RGB in DTV mode.
Set to 18 to enable RGB in PC mode.
If set to 17 or 18, auto configuration is done one time after a power cycle.

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, display panel keyboard is locked out, not available to end user. IR receiver remains functional.

091 - YPrPb2 EN. (HDMI2 Enable)
Set to 0 to disable display panel HDMI2 input.
Set to 1 to enable DTV mode. Set to 2 to enable PC mode.

093 - RJP AVAILABLE (Remote Jack Pack Available)
0 = Remote jack pack is not available or disabled.
1 = Series 100 RJP, HDMI Mode
Enables RJP when an HDMI cable is inserted into RJP. Video is from HDMI. Audio stream is expected from HDMI source. If no audio is present, no audio will be heard.
2 = Series 100 RJP, DVI Mode
Enables RJP when an HDMI cable is inserted into RJP. Video is from HDMI however, Audio is from selected audio source, based on the RJP's audio hierarchical priority.
5 = Series 200 RJP, HDMI Mode
Enables RJP when an HDMI cable is inserted into RJP. VIdeo is from HDMI. Audio stream is expected from HDMI source. If no audio is present, no audio will be heard.
6 = Series 200 RJP, DVI Mode
Enables RJP when an HDMI cable is inserted into RJP. Video is from HDMI however, Audio is from selected audio source, based on the RJP's audio hierarchical priority.
Notes:
• See Reference section, RJP Mode Configuration page.
• If set to 1, 2, 5 or 6, item 040 Auto Camport is automatically set to 0.
Settings 1, 2, 5 and 6 allow the lodge staff to customize each TV's RJP setup based on customer requirements.

094 - SAP MENU EN (2nd Audio Program)
Set to 1 to enable SAP feature on Function menu, if Function menu is available.
Set to 0 to disable SAP feature on Function menu, if Function menu is available.

096 - DEF. ASP. RATIO (Default Aspect Ratio)
Selects default aspect ratio at power up, see settings below.

Set to 0 "Set By System".
Set to 1 for 4:3.
Set to 2 for 16:9 (Factory Default).
Set to 3 for Horizon
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 power saving mode is disabled.
1 - 100 Static Backlighting.
(1 = Dimmest picture, 100 = Brightest picture.)
101 - 200 Dynamic Backlighting.
(101 = Dimmest picture, 200 = Brightest picture.) 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 minor starting channel at power up: 0=NTSC. If not 0, number selected is the 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 to load presets to all of the previous item settings.
WARNING: Setting this to 1 will reload the factory defaults and clear the channel list including erasing any assigned Channel Icons and Custom Channel Labels.

Reference: Clonable Menu Features

Clonable Menu Features

Menu /Sub Menu Features

Setup
SET ID

Audio
Audio Language
EZ SoundRite
EZ sound
Balance
Treble
Bass
Front Surround
TV Speaker
BBE

Time
Auto Clock
Auto Off

Option
Aspect Ratio
Caption
Caption Mode
DTV Captions Style - Style
DTV Captions Style - Size
DTV Captions Style - Font
DTV Captions Style - Text Color
DTV Captions Style - Text Opacity
DTV Captions Style - BG Color
DTV Captions Style - BG Opacity
DTV Captions Style - Edge Type
DTV Captions Style - Edge Color
Language
Cinema
ISM Method
Low Power

Lock
Movie Rating
TV Rating – Children Age
TV Rating – Children Fantasy
　　　　　　　Violence
TV Rating – General Age
TV Rating – General Dialogue
TV Rating – General Language
TV Rating – General Sex
TV Rating – General Violence

Note: Video Menu and other feature settings are not clonable on all TVs. End user has access to EZ Picture, EZ Sound and Ratio on user remote control.

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. You may also add labels for the Aux input sources to clearly identify the devices that are connected to the Aux inputs.

(Icon)

XYZ

XYZ

NETWORK
(Label)

1 2 3 4 5 6 7
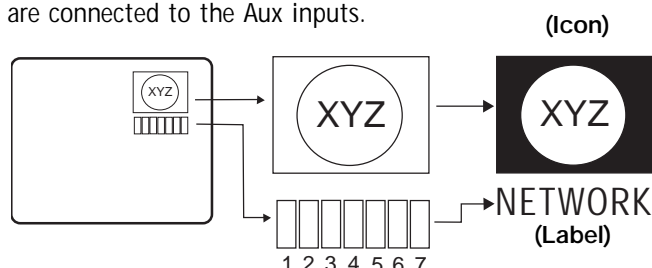
Editing and adding the labels can only be done if there are channels entered into the TV's channel map either by using the method described in item 6 (page 18), by cloning or by the use of the master remote control from the PPV provider.

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 the menu when done 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, Component, S-Video etc.
2. Press the Right or Left arrow repeatedly until the numbers 0 to 9 shows up. The number shows the position of the character that can be changed.
3. Use the Up or Down arrows to select the desired character.
4. Press "INPUT" for 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 the Aux input label. ("Source" on the remote shown in this manual is INPUT.)
- **MENU** - Exits the editing process.

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, underline before attempting to clone the TV Master TV 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 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 achieve the desired result. 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, EZ Channel Scan is disabled if there is an Aux input active.
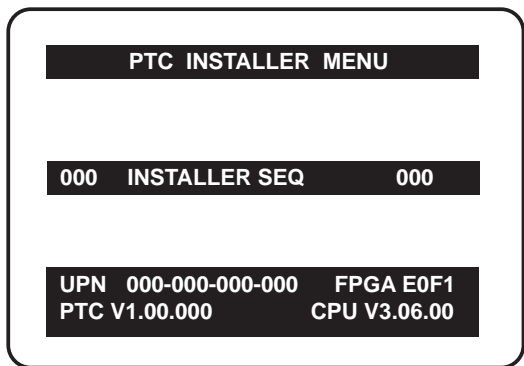
Note 2: Under certain conditions, changes to the input mode of the RGB inputs will not take effect until the power is cycled (TV is turned Off and On). To avoid confusion, disconnect all RGB inputs before entering the Installer menu.

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. Check the Status LED. If it is blinking rapidly then 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, see Installer menu item 03 BAND/AFC.

   d. Set Installer menu item 28 – CH OVERIDE to 001 to allow access to the EZ Channel Scan and Surf List/Ch. Edit features in the SETUP 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 on page 16 in this manual.

3. Run EZ Channel Scan 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. Once the transfer is complete, the system will exit the Installer menu. Check the Status LED inside the TV. It should be blinking slowly (1 blink per second).
7. Edit/Add Channel ICONs and Channel Labels as needed. Enter Installer menu. With menu displayed, press 2-5-4 + MENU. See page 17 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 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 OVERIDE to 000. Press ENTER to remove and exit the Installer menu.

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".

```
        PTC  INSTALLER  MENU


  000    INSTALLER SEQ         000


  UPN   000-000-000-000      FPGA E0F1
  PTC V1.00.000              CPU V3.06.00
```

Typical Installer Menu

TV Camport Auto Sense Operation

The CAMPORT Auto Sense function is enabled when:
1. Installer Menu Item 34, CAMPORT EN is set to 1 AND
2. Installer Menu Item 40, AUTO CAMPORT is enabled (1).

Selectable= Can be accessed with INPUT key, direct access, etc.
Auto Sense= Switches to this input when connector is inserted.
The camport (Front Video) has the highest priority and will override any commands including tuning to the Start Channel.

CAMPORT (Front Video) Functionality Control

Item 34 CAMPORT EN	Item 40 AUTO CAMPORT	Front Video Operation
0	0	Disabled
0	1	Disabled
1	0	Selectable
1	1	Auto Sense

CAMPORT Operation (Stand-Alone)

When Camport Auto Sense is enabled as above, the TV's source will switch to the front video whenever a plug is inserted into any of the front panel video inputs (either composite Video or S-Video).

When the plug is removed, the TV will switch back to the previous channel or input source that the TV was using before the plug was inserted. However, if any direct access to an RF channel or Aux channel is requested while the camport is active, then, when the camport plug is removed, the TV will switch to the last requested channel. Source changes using any Source Keys (INPUT) are ignored. Channel Up/Channel Down and Flashback Commands are not direct access tuning commands and they are also ignored.

Previous State Before Inserting CAMPORT	Operation While CAMPORT Is Active	State Upon Removal Of CAMPORT
Aux or RF Channel	None	Previous Aux or RF Channel
Aux or RF Channel	Direct Access	Last Requested RF or Aux Channel
Aux or RF Channel	Ch Up/Down, Flashback and TV/AV Keys	Previous Aux or RF Channel

CAMPORT Operation (PPV)

The operation will be similar to that of the Stand-Alone mode. However, the PPV providers may send different commands to the TV for the same user commands. For instance, some providers will always send a direct tune command when it receives a channel up/down or a flashback command while other PPV providers will just send a key command.

Previous State Before Inserting CAMPORT	Operation While CAMPORT Is Active	State Upon Removal Of CAMPORT
Aux or RF Channel	None	Previous Aux or RF Channel
Aux or RF Channel	Direct Access	Last Requested RF or Aux Channel
Aux or RF Channel	Ch Up/Down, Flashback and TV/AV Keys	Last Requested Channel if PPV translates it to direct access tuning command. Otherwise, goes to Previous Aux or RF Channel

206-4071

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	Labeling	Value	Labeling		
130	90	Video2 (Side)	CV/SVIDEO	34	CAMPORT_EN	0x01	Video Front (Camport)	0	Video Front (Camport)	0 (VIDE0)	2
131	91	Video1 (Rear)	CV/SVIDEO	39	REAR_AUX_EN	0x02	Rear Video (Aux)	1	Rear Video (Aux)	0 (VIDE0)	1
132	92	HDMI2	DTV	91	YPrPb2 EN = 1	0x04	S-Video Rear	2	S-Video Rear	0 (VIDE0)	5
			PC	91	YPrPb2 EN = 2	0x04	S-Video Rear	2	S-Video Rear	2 (COMPUTER)	5
133	93	HDMI1/DVI	DTV	35	COMPPORT EN = 1	0x08	Front Computer	3	Front Computer	0 (VIDE0)	3
			PC	35	COMPPORT EN = 2	0x08	Front Computer	3	Front Computer	2 (COMPUTER)	3
134	94	RGB	DTV	87	REAR RGB EN = 1	0x10	SVGA Rear Computer	4	SVGA Rear Computer	0 (VIDE0)	4
			PC	87	REAR RGB EN = 2	0x10	SVGA Rear Computer	4	SVGA Rear Computer	2 (COMPUTER)	4
136	96	Component		38	YPrPb EN	0x40	Y/UV Component	6	Rear Y/PrPb Component video	0 (VIDE0)	6

Troubleshooting

Some quick and easy tips to resolving problems

Symptoms	Possible Cause(s)	Possible Solution(s)	See Page(s)
Software Problems			
Cannot direct enter channel number or "No Signal" appears.	Channel not included in channel scan in TV controller.	After 2-5-5 + MENU, only channels included in TV controller will appear. If channel is available it can be added to channel scan. If it is not available, the 'No Signal' message appears on the TV screen.	6

Troubleshooting

Some quick and easy tips to resolving problems

Symptoms	Possible Cause(s)	Possible Solution(s)	See Page(s)

Power

No Power.	See troubleshooting flow chart.		24

Display Panel Picture

No Picture.	• Display panel is turned off.	-Turn TV on.	
		-Power failure?	
	• Antenna/Cable not connected.	-Connect Antenna/Cable signal to TV.	(See Owners manual)
	• Connections incorrect.	-Check connections on TV.	(See Owners manual)
	• M.P.I. not connected.	-If applicable, connect M.P.I. cable to M.P.I. device.	
	• Encrypted program.	-Try another channel.	
	• Wrong tuning band.	-Adjust Installer menu settings.	10 ~ 15

Erratic Operation

Installer menu setup.	• Wrong Installer menu settings.	-Adjust Installer menu settings as required.	10 ~ 15

Remote Control

Remote doesn't work.	• Remote not in TV mode.	-Use Mode key to select TV; puts remote into TV mode.	5
	• Not aimed at IR remote sensor.	-Point remote at TV's IR receiver on TV.	
	• Remote too far from IR sensor.	-Move remote closer to TV's IR receiver or darken room.	
	• IR path to TV's receiver obstructed.	-Remove obstructions.	
	• Weak batteries.	-Replace batteries.	4
	• Wrong battery polarity.	-Check that "+" and "-" match in battery compartment.	5
	• Too much light in room.	-Dim room light.	
	• Wrong Installer remote control.	-Requires compatible Installer remote, contact your LG dealer.	2

Picture Reception

Normal picture, poor	• Audio muted.	-Press MUTE or use Volume Up key to increase sound level.	5
or no sound.	• Broadcast problem.	-Try a different channel.	5

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

⚠ 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

Problem	Possible Cause(s)	Possible Solution(s)
Clone Programmer		
Clone copies Setup in less than 30 seconds	• Not enough time to copy entire TV setup.	- Press Reset on clone programmer, redo teach/learn. (Teach/Learn should take a minimum of 1 minute.)
Remote does not operate clone.	• Wrong Installer remote.	- Only use an LG Installer remote to operate clone programmer with TV.
LED does not blink.	• M.P.I. cord not connected. • TV not turned on. • Weak batteries.	- 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.	• Weak signal.	- Connect TV to a reliable Analog channel signal source.
No time set.	• Time not available.	- Set time on a TV, copy time to Clone Programmer.
Clone not working.	• Clone programmer problem.	- Try a different LT2002 Clone programmer. - Reset Clone Programmer.
Clone Scans Channels more than once.	• Clone should only scan channels once.	- Retry cloning again.
Master and Other TVs		
Cloning did not work.	• Procedure interrupted. • Different TV models. • Step(s) omitted or not performed.	- Wait until procedure complete message is displayed. - Cloning is only possible with identical model TVs. - Reread pages 7-8-9 to be sure all tasks were performed.
Clone time disappeared.	• Batteries were removed.	- Batteries must remain installed to retain time settings.
New Setup not present.	• TV not reset.	- Disconnect newly-cloned unit 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.

Troubleshooting Flow Chart

206-4071

```
┌──────────────┐
│  Controller  │
│    Quick     │
│    Check     │
└──────┬───────┘
       │
      ◇ Is 'STATUS' LED on Analog Board Blinking ? ──No──→ ◇ Is TV Connected to AC Power ? ──No──→ ┌──────────────┐
      │                                                    │                                       │  Plug into   │
     Yes                                                  Yes                                      │   AC Power   │
      │                                                    │                                       │    Outlet    │
      │                                            ┌───────┴──────┐                                └──────────────┘
      │                                            │     Bad      │
      │                                            │      TV      │
      │                                            └──────────────┘
      │
     ◇ Is Red LED on TV Lit ? ──No──→ 1. Bad Analog Board.
      │                                2. Bad Digital Board.
     Yes
      │
┌──────────────────────────────┐
│ Cycle the power by removing   │
│ and re-connecting the AC      │
│ power cord.  Observe the      │
│ 'POWER' LED and TV screen     │
│ as soon as AC power is        │
│ re-applied.                   │
└──────────────┬───────────────┘
      │
     ◇ Did Analog Board 'POWER' LED Turn On Momentarily ? ──No──→ ┌──────┐
      │                                                            │ Bad  │
     Yes                                                           │  TV  │
      │                                                            └──────┘
      │
     ◇ Did TV Turn On Momentarily ? ──No──→ Check to see if TV is in Commercial Mode. See Commercial Mode Check chart.
      │
     Yes
```

```
┌──────────────────────────────┐
│ Press 'POWER' or 'ON/OFF'     │
│ key on TV                     │
└──────────────┬───────────────┘
      │
     ◇ Did TV Turn On ? ──No──→ 1. Bad TV
      │
     Yes
      │
┌──────────────────────────────┐
│ Press 'POWER' or 'ON/OFF'     │
│ or 'VOLUME UP/DOWN' or        │
│ 'MUTE' key on Installer       │
│ Remote                        │
└──────────────┬───────────────┘
      │
     ◇ Did TV Respond ? ──No──→ 1. Bad TV
      │                         2. Go to Remote Control Checklist page 5
     Yes
      │
┌──────────────────────────────┐
│ Press 'POWER' or 'ON/OFF'     │
│ or 'VOLUME UP/DOWN'           │
│ or 'MUTE' key on              │
│ User-Supplied Remote          │
└──────────────┬───────────────┘
      │
     ◇ Did TV Respond ? ──No──→ 1. Bad PPV Card
      │                         2. Go to Remote Control Checklist page 5
     Yes
      │
  ┌──────────┐
  │   End    │
  └──────────┘
```

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Press the "On/Off" key
on the front panel.
The On/Off key is always operational.

Did
you get
a response
?

No
Bad TV

Yes

Leave
the
TV set On

Go to Installer menu
by pressing "MENU" until
the TV stops responding.

Did
TV stop
responding
or continue
to respond
?

Stopped
responding

TV is in
Commercial
Mode.

Continued
to
respond

TV is not in Commercial Mode
Call Technical Support for
Assistance

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Reference: RJP Mode Configuration

RJP - Series 100					
Video Action	**Audio Action**	**RJP Mode = HDMI**		**RJP Mode = DVI**	
		Video Selected	**Audio Selected**	**Video Selected**	**Audio Selected**
HDMI In	HDMI In	HDMI	HDMI	HDMI	TV
HDMI In	L/R In	HDMI	L/R	HDMI	L/R
RGB In	L/R In	RGB	L/R	RGB	L/R
RGB In	No Input	RGB	TV	RGB	TV
CV In	L/R In	CV	L/R	CV	L/R
CV In	No Input	CV	TV	CV	TV
No Input	L/R In	TV	L/R	TV	L/R
No Input	No Input	TV	TV	TV	TV

RJP - Series 200					
Video Action	**Audio Action**	**RJP Mode = HDMI**		**RJP Mode = DVI**	
		Video Selected	**Audio Selected**	**Video Selected**	**Audio Selected**
HDMI In	HDMI In	HDMI	HDMI	HDMI	TV
HDMI In	L/R In	HDMI	L/R	HDMI	L/R
RGB In	L/R In	RGB on HDMI	L/R	RGB on HDMI	L/R
RGB In	No Input	RGB on HDMI	TV	RGB on HDMI	TV
CV In	L/R In	CV on HDMI	L/R	CV on HDMI	L/R
CV In	No Input	CV on HDMI	TV	CV on HDMI	TV
No Input	L/R In	TV	L/R	TV	L/R
No Input	No Input	TV	TV	TV	TV

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-232
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.

⦿LG

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