



45608

Home Theater Remote

with Z-Wave® Lighting Control

Manage your home
entertainment system and
lighting with one remote!

Controls

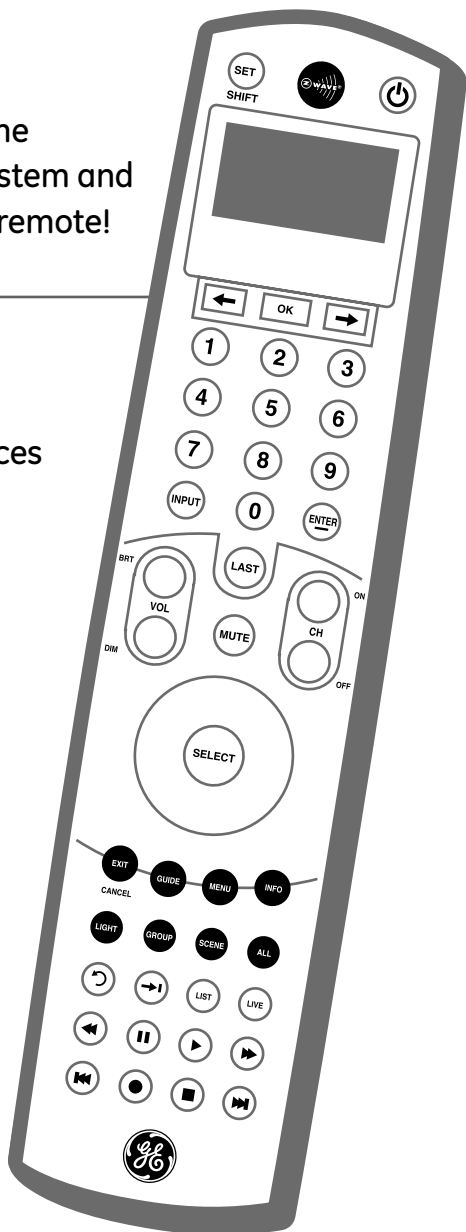
12

Audio/Video Devices

and up to

232

Z-Wave Devices



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Introduction

Thank you for purchasing the GE model 45608 Remote Control. This remote allows you to control up to 12 Audio/Video devices as well as your Z-Wave Home Lighting Control network.

A Z-Wave home control network can include up to 232 Z-Wave enabled devices. You can control up to 18 individual Z-Wave lights, 18 groups of lights and 18 scenes for task or mood lighting. Groups can include up to 232 Z-Wave devices and each scene can include up to 32 Z-Wave devices. Lights can be included in multiple groups. Scenes can include lights from different groups.

Key Features include:

- Easy to use LCD menu system
- Backlit LCD and keys
- Learning function for audio/video devices not in the IR code library
- Programmable Key Macros to perform multiple functions with the press of one button
- Volume Control Lock lets you assign volume & mute functions to a primary device like your stereo receiver
- Key Mover allows you to copy keys around the remote control or between A/V devices
- Timed events allow you to turn On/Off a Z-Wave light, group or scene at a programmed time.
- Control of Z-Wave enabled thermostats for your HVAC system.
- Z-Wave Light, Group & Scene labeling
- Supports Advanced Configuration for Z-Wave devices

For best results, please read all of the instructions before programming and using this remote. Keep this guide for future reference.

Audio/Video Key Chart

A. SET – Press & hold to enter setup mode. When in setup mode, press & release to back up one level in the setup menu or press & hold to cancel setup.

B. ARROWS – Scroll left or right to highlight desired menu item. Highlighted menu item in center of display is active.

C. OK – Press & release to select highlighted menu item

D. NUMBER KEYS – Dependent upon Audio/Video device being controlled. Examples: TV - channel selection; Receiver – input selection

E. LAST – Selects last channel viewed

F. VOLUME UP & DOWN – Press & hold to adjust volume

G. EXIT / CANCEL – Closes program guide or device menus

H. GUIDE – Activates On-screen program guide for active video

I. Z-WAVE KEY – This key cycles the remote between Z-Wave and A/V modes. In A/V mode, the green LED beneath the button flashes to indicate an IR command being transmitted.

J. POWER – Turns current device On/Off. This key may be programmed with a macro to turn multiple A/V devices on or off with the touch of one button. A macro overrides individual device control.

K. DASH – Used along with the number keys to enter digital TV channels. Example: channel 4-1 or 4-2

L. MUTE – Mutes volume on currently selected device or on primary device if Volume Control Lock is programmed

M. CHANNEL UP & DOWN – Changes channel on active A/V device

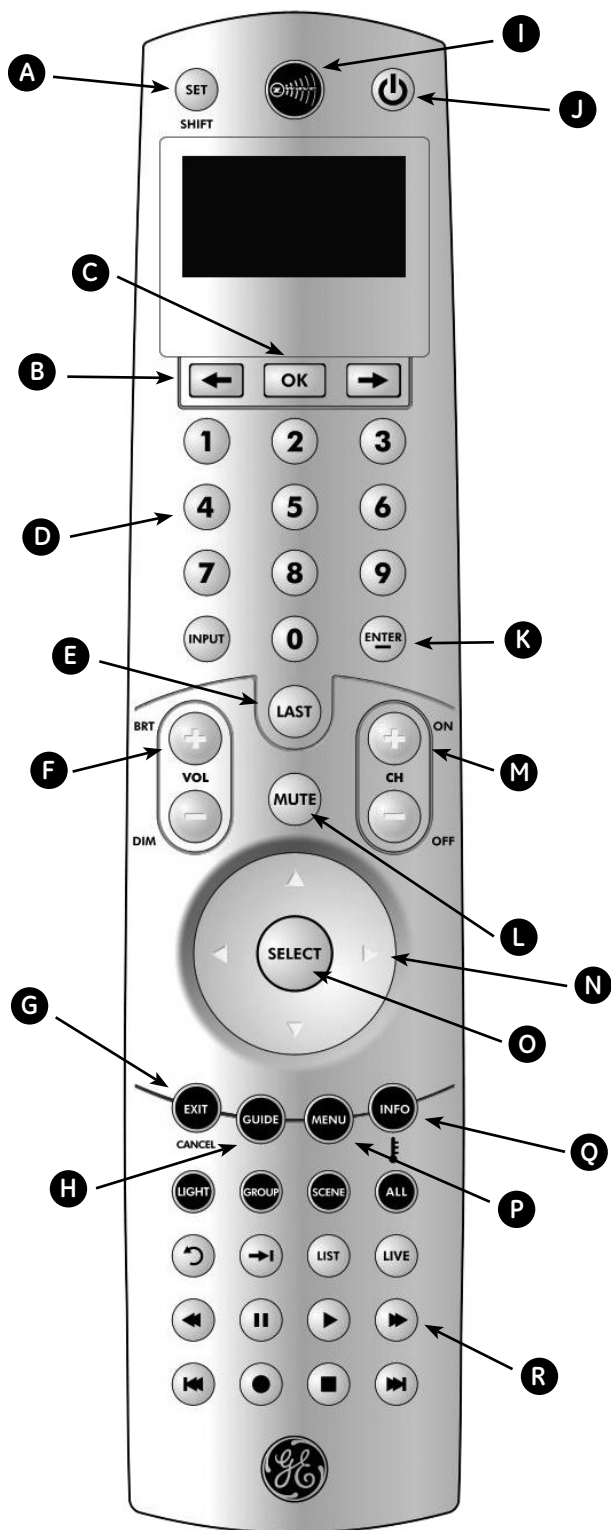
N. CURSOR (ARROW) KEYS – Left, Right, Up & Down keys for use in navigating on-screen Guides & Menus

O. SELECT – Press & release to select currently highlighted on-screen Guide or Menu item

P. MENU – Device specific functions for setup.

Q. INFO – Device specific. Displays information on current video source or program on TV screen

R. CONTROL KEYS – Device specific controls for the active A/V device



Batteries

Four “AAA” Alkaline batteries (not included) are required.

Battery Use and Safety

- Use only fresh batteries of the required size and recommended type.
- Do not mix old and new batteries or different types of batteries.
- If you do not plan to use the remote for an extended period, remove the batteries. They can leak chemicals that can destroy electronic parts.
- Dispose of old batteries promptly and properly. Do not burn or bury them.

To Install Batteries

1. Open the battery compartment cover (located on the back of the remote).
2. Note the + and - polarity symbols inside the battery compartment.
3. Insert the batteries, making sure their polarity matches the symbols in the compartment.
4. Replace the cover.

NOTE: *The LCD screen will display BATTERY LOW to indicate that the batteries need to be replaced. The remote retains all its user settings except for the day & time while replacing the batteries.*

Battery Conservation

If any key is pressed continuously for 30 seconds the remote will stop transmission to conserve battery life.

Automatic Time-Out

During programming, the remote will exit programming mode if 30 seconds elapses after the last key press.

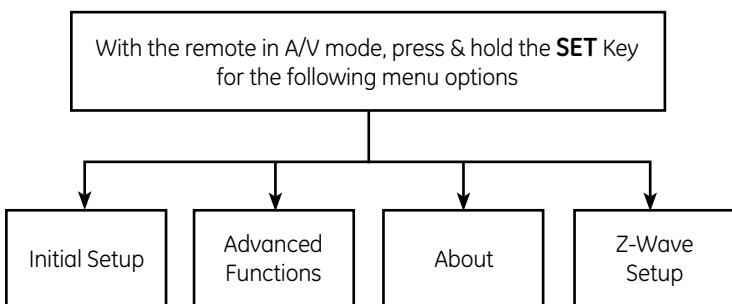
If a key is pressed longer than 60 seconds while scrolling through the menu screen, the remote will time-out.

Setup

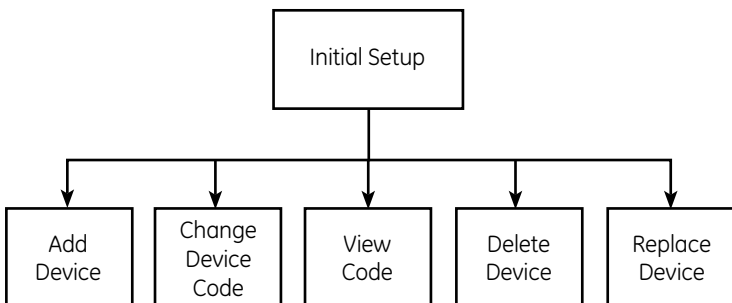
1. Make sure the remote is in A/V mode. (Press & release the large Z-Wave key at the top of the remote to cycle between A/V and Z-Wave modes.)
2. Press and hold the **SET** key to enter setup mode.
3. Use the **ARROW** keys to scroll through the menus and the **OK** key to select devices or actions.

4. When in setup mode:

- Press and release the **SET** key to back up one level in the menu.
- Press and hold the **SET** key to exit setup mode.



Initial Setup (Audio/Video Devices)



Note: Most devices can be added by entering its code or searching for its code as described in the following two sections. (Be sure the device you wish to add is turned on before adding or searching for its code.) You also have the option of using your device's original remote to teach commands to this remote. This is covered in the "Advanced Functions" section under the "Learn Function" heading.

Adding a Device by Entering Its Code

You can add a device by manually entering its manufacturer's code. See "Manufacturer's Codes" on page 45.

1. Press and hold **SET** until the remote displays **INITIAL SETUP**.
2. Press **OK**. The remote displays **ADD DEVICE**. Press **OK**.
3. The bottom line of the display lists **RECEIVER** as the first device you can add. Press **OK** or use the **ARROW** keys to scroll to a different device to add and then press **OK**.
4. Enter the four-digit code for your device. The LED blinks once for each digit entry. It blinks twice after you have entered the final digit.

NOTE: If an invalid code is entered, the LED emits one long blink, and the LCD displays INVALID.

5. The selected device turns off if the code was successful. You can also try pressing additional keys on the remote to test other functions.
6. If the code you entered functions properly for all keys tested, Press **OK** to save the code.
7. If the code you entered does not function properly, Press **SET** one time and repeat steps 2-6, trying the next available code from the manufacturer's code list.
8. If none of the codes listed for your brand/type of device function properly, you can try searching for its code (next section) or use the "Learn Function" as described on page 16.

Adding a Device by Searching for Its Code

1. Press and hold **SET** until the remote displays **INITIAL SETUP**. Press **OK**.
2. The remote displays **ADD DEVICE**. Press **OK**
3. The bottom line of the display lists **RECEIVER** as the first device you can add. Press **OK** or use the **ARROW** keys to scroll left or right, select a different device to add and then press **OK**.
4. The remote displays the device name on the top line and Code Setup on the next line.
5. Use the **ARROW** keys to slowly scroll through the manufacturer's codes for your device type (i.e., Receiver). When you have selected the correct code, the device will turn off. If you accidentally scroll past the correct code, you can use the other arrow key to go back.
6. Press **OK** to save the code.
7. If none of the codes work for your device, you are offered the option of using the "Learn Function" (see the instructions for learning in the "Advanced Functions" section of this manual). Press **OK** to learn or **SET** to go back one level in the menu.

NOTE: If you cannot find the working code or brand for your receiver, try the codes for Amplifier, and then Misc. Audio. Scroll left or right to search for the device when the remote displays ADD DEVICE.

Changing a Device Code

NOTE: All settings of the current device (Key Mover, Learning, and all other user-programmed features) will be retained.

1. From **INITIAL SETUP** press **OK**. The remote displays **ADD DEVICE**. Use the **ARROW** keys to scroll to **CHANGE DEVICE CODE**. Press **OK**.
2. The remote displays the device name in the center of the 2nd line. Use the **ARROW** keys to scroll to the desired device and press **OK**.
3. The four digit code can be entered using the number keys or you can use the **ARROW** keys to scroll through the codes for this type of device (see "Adding a Device by Searching for its Code" above)
4. If you manually entered the code with the number keys or found the correct code using the search method, press **OK** to save it.
5. If using the search method and none of the codes work for your device, you are offered the option of using the "Learn Function" (see the instructions for learning in the "Advanced Functions" section of this manual) Press **OK** to learn or **SET** to go back one level in the menu.

Deleting a Device

6. From **INITIAL SETUP** press **OK**. The remote displays **ADD DEVICE**. Use the **ARROW** keys and scroll to **DELETE DEVICE**. Press **OK**.
7. The remote displays the device name and its code (for example, CABLE BOX 1376). Use the **ARROW** keys to scroll to the other devices you have set up.
8. To delete the displayed device, press **OK**. The remote displays **ARE YOU SURE? IF SO PUSH OK**. Press **OK**.
9. The remote displays the name of the deleted device (for example, CABLE BOX 1376 Has Been Deleted).
10. Press **OK** to delete another device or **SET** to exit.

Viewing a Programmed Device Code

1. From **INITIAL SETUP** press **OK**. The remote displays **ADD DEVICE**. Use the **ARROW** keys to scroll to **VIEW CODE** and Press **OK**.
2. The first line of the LCD displays the long device name of the current device. The second line displays the abbreviated name of the current device in the middle.
3. The third line displays the 4-digit code number (for example 0010) programmed for the current device.

4. Use the **ARROW** keys to view codes of other devices you have set up.
5. After viewing the codes, press **OK** or **SET** to exit.

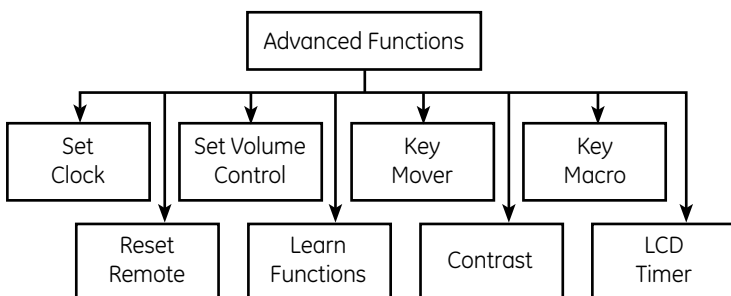
Replacing a Device

This replaces an existing device with a new device in your remote's programming. One example could be replacing your cable box with a satellite receiver.

NOTE: *The new device replaces and overwrites all settings of the current device (Key Mover, Learning, and all other user-programmed features). The one exception is with macros. The new device code replaces the old device code within the macro.*

1. From **INITIAL SETUP** press **OK**. The remote displays **ADD DEVICE**. Use the **ARROW** keys to scroll to **REPLACE DEVICE** and Press **OK**.
2. The LCD displays **REPLACE WHAT?** on line 1 and the current device type in the middle of line 2. Use the **ARROW** keys to scroll to the device to replace.
3. Press **OK** to select the device type to replace. The LCD displays **WITH WHAT DEVICE?** on line 1 and the current device (for example, RCV) on line 2.
4. Use the **ARROW** keys to scroll to the new device type you want to use.
5. When you have selected the replacement device, press **OK**.
6. The LCD displays the device code and its default ID. For example, for a cable box the LCD displays **CABLE BOX, CODE SETUP, 1376**. Press **OK** to complete the code setup and store the new device.

Advanced Functions (Audio/Video Devices)



To Access the Advanced Functions Menu:

1. With the remote in A/V mode, press and hold the **SET** key to enter setup.
2. Use the **ARROW** keys to scroll to **"ADVANCED FUNCTIONS"** and press **OK**.

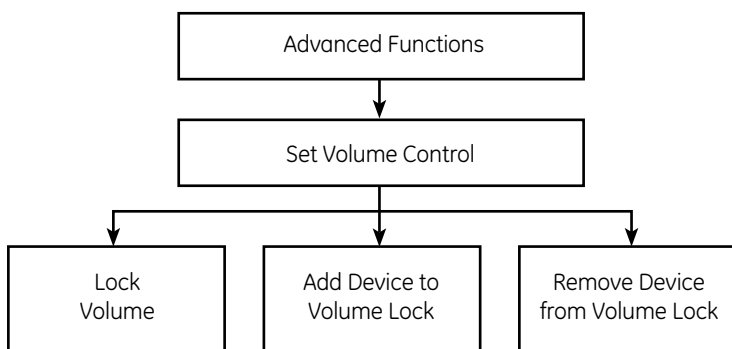
Set Clock (Day and Time Setup)

1. From **ADVANCED FUNCTIONS**, highlight **SET CLOCK** and Press **OK**.
2. The screen will display the day, hour, minute and AM/PM with the day highlighted.
 - a. Press the **CH + or CH -** key to change the day.
 - b. Use the right **ARROW** key to highlight the hour, minute and AM/PM and use the CH keys to adjust.
3. When you've completed setting the time press **OK**; the screen will display **SET CLOCK**.
4. Use the **ARROW** keys to highlight a different menu item or press **SET** to exit setup.

NOTE: *You will need to reprogram the Day & Time when the batteries are replaced.*

Set Volume Control (Volume Lock)

Volume Lock allows you to control the volume of a primary A/V device when another A/V device is active on the remote. For example, if you use your stereo receiver for the audio while watching TV or DVDs, you can set the remote to control the volume of your stereo regardless of which device (TV or DVD) the remote is set to control. By default, all your devices have independent volume control. You can perform Individual Volume Unlock on a selected device to set its volume control for independent operation.



Locking Volume Control to Other Devices

1. From the **INITIAL SETUP** screen, use the **ARROW** keys to highlight **ADVANCED FUNCTIONS** and Press **OK**.
2. The remote displays **SET CLOCK**.
3. Use the **ARROW** keys to scroll to **SET VOLUME CONTROL** and Press **OK**.

4. The remote displays **LOCK VOLUME**. Press **OK**.
5. The remote displays **USE < > TO SELECT VOLUME SOURCE THEN PRESS OK**.
6. Use the **ARROW** keys to select the device to be locked. The remote displays the name of the device and its code (for example, **LOCK VOLUME TO RECEIVER 1158**).
7. Press **OK**. The display changes to **VOLUME CONTROL IS NOW SET TO RECEIVER**.
8. The display automatically changes to **LOCK VOLUME** after a few seconds. Press **SET** to exit.

Adding a Device to Volume Lock

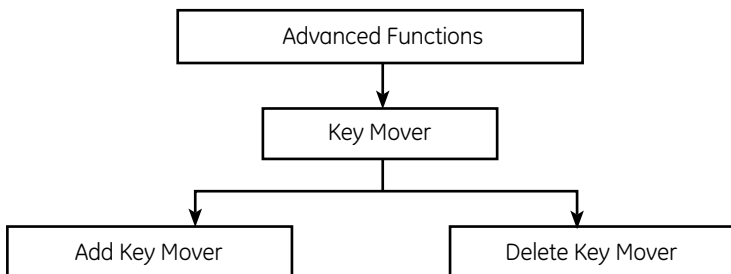
1. From **LOCK VOLUME**, use the **ARROW** keys to scroll to **ADD DEVICE TO VOLUME LOCK** and Press **OK**.
2. The remote displays **USE < > TO FIND DEVICE TO ADD THEN PUSH OK**. Use the **ARROW** keys to scroll to the device you want to lock. The remote now displays the name of the device being locked and the name of the locking device. For example, **LOCK TV2 TO RECEIVER**.
3. Press **OK**. The remote now displays **TV2 HAS BEEN ADDED TO VOLUME LOCK**.
4. The display automatically changes to **VOLUME LOCK** after a few seconds. Press **SET** to exit.

Removing a Device from Volume Lock

1. From **LOCK VOLUME**, use the **ARROW** keys to scroll to **REMOVE DEVICE FROM VOLUME LOCK** and Press **OK**.
2. The remote displays **USE < > TO SELECT FIND DEVICE TO REMOVE THEN PUSH OK**. Use the **ARROW** keys to select the device to remove. The remote now displays **REMOVE FROM VOLUME LOCK** and the abbreviated device name (TV2 for example).
3. Press **OK**. The remote's display changes to **TV2 HAS BEEN REMOVED FROM VOLUME LOCK**.
4. The display automatically changes to **REMOVE DEVICE FROM VOLUME LOCK** after a few seconds. Press **OK** to remove another device from Volume Lock, or press **SET** to exit.

Key Mover

Key Mover allows you to copy keys around the remote control, within a device, or from one device to another.



Copying a Key

1. From **ADVANCED FUNCTIONS**, use the **ARROW** keys to scroll to **KEY MOVER**. Press **OK**.
2. The remote displays **ADD KEY MOVER**. Press **OK**.
3. The remote displays **FIND SOURCE MODE & PUSH OK**. On the bottom line, the remote displays the source device (for example, **SATELLITE**). Scroll to the source device for the key you intend to move. Press **OK**.
4. The remote displays **SELECT SOURCE KEY TO COPY**. All keys except **SET**, Arrows, and Z-Wave are available for Key Mover.
5. Press the key you wish to copy. The remote displays **FIND DESTINATION MODE & PUSH OK**. Scroll to the destination device for the key you wish to copy. Press **OK**.
6. The remote displays **SELECT DESTINATION KEY & PUSH OK**. Any key except **SET**, **Z-Wave**, **Arrows** and **OK** is a valid destination key. Press the destination key and then Press **OK**.
7. The remote displays **Key Mover Saved**.
8. The remote displays **PUSH OK TO ADD ANOTHER PUSH SET TO EXIT**. Press **OK** to return to step 3 above or press **SET** to exit setup.

Deleting All Copied Keys

This deletes all Key Mover keys for a single mode (device).

1. From the **ADD KEY MOVER** screen, scroll to **DELETE KEY MOVER**. Press **OK**.
2. The remote displays **FIND MODE PUSH OK**. On the bottom line, the device name is displayed (for example, **TV**).
3. Scroll to the device you wish to delete all copied keys from. Press **OK**.
4. The remote displays **SELECT KEY TO DELETE OR OK TO DELETE ALL**. Press **OK**.

5. The remote displays **DELETING ALL PUSH OK TO CONFIRM**. Press **OK**.
6. The remote displays **ALL MOVED KEYS DELETED PUSH OK TO DELETE MORE**. Press **OK** to delete keys for a different device or **SET** to exit.

Deleting a Single Copied Key

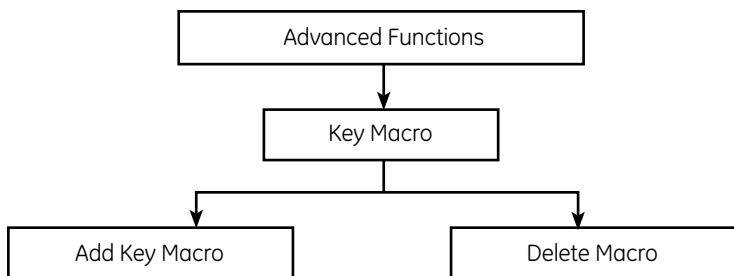
1. From the **ADD KEY MOVER** screen, scroll to **DELETE KEY MOVER**. Press **OK**.
2. The remote displays **FIND MODE PUSH OK**. On the bottom line, the device name is displayed (for example, **TV**).
3. Scroll to the device you wish to delete the copied keys from. Press **OK**.
4. The remote displays **SELECT KEY TO DELETE OR OK TO DELETE ALL**. Press the key to delete.
5. The remote displays **KEY DELETED PUSH OK TO DELETE ANOTHER**. Press **OK** to delete another copied key, or **SET** to exit.

Key Macros

Key Macros allow the user to program a series of keystrokes to a single button. For example, you can program a Key Macro on the **POWER** button that turns on and off all of your home entertainment equipment with a single press of the **POWER** button. The Key Macro function is not available in Z-Wave mode however; Z-Wave individual light, group or scene commands can be included in Audio/Video Key Macros. One example of this would be to change the TV's input to DVD, change the stereo receiver's input to DVD, turn on the DVD player and set room lights to low; all with one press of the macro key.

When using a macro, the remote transmits the device commands in sequence. The green LED (beneath the Z-Wave key) blinks once for each transmitted command. The remote must be aimed at the equipment during the entire macro sequence.

NOTE: Macro programming overrides the key's original function in all modes. However, you can access the key's original function by pressing and releasing SET, then the key where the macro is assigned. The key then sends its original function, not the macro.



Adding a Key Macro:

1. From **ADVANCED FUNCTIONS**, use the **ARROW** keys to scroll to **KEY MACRO**. Press **OK**.
2. The remote displays **ADD KEY MACRO**. Press **OK**.
3. The remote displays **SELECT MACRO KEY**. Select any key but Set, Z-Wave, OK or Arrows (scroll left & scroll right) to store your macro.
4. The remote displays **ENTER THE MACRO SEQUENCE** with the active device highlighted in the bottom line. Use the **ARROW** keys to highlight the device for each command.
5. Press the command key that you want to add to the macro.

Note: As soon as you press the first command key, the display changes to **PUSH OK FOR 3 SECONDS TO SAVE**. Do not press OK until you have finished entering all macro commands!

6. To add Z-Wave commands to your macro, press & release the Z-Wave key to change the remote to Z-wave mode. A small "Z" will be shown in the upper left corner of the display. Press the desired light, group or scene mode key, the desired number key and the On or Off (CH+ / CH-) key to add this command to the macro. Note: The display does not change to Z-Wave mode while doing this.
7. Press and release the Z-Wave key to return to A/V mode and finish programming your macro.
8. When you are finished entering commands for the macro, press and hold the **OK** key for three seconds to save your macro. The remote displays **MACRO SAVED** and returns to the **KEY MACRO** screen.

NOTE: Macros can include up to 30 commands. If you try to enter more than 30 keys into the macro, the remote displays **MEMORY FULL**.

Deleting a Key Macro

1. From **ADVANCED FUNCTIONS** scroll to **KEY MACRO**. Press **OK**.
2. The remote displays **ADD KEY MACRO**. Scroll to **DELETE MACRO**. Press **OK**.

3. The remote displays **SELECT MACRO KEY TO DELETE AND PUSH OK.**
4. Once you have pressed a valid macro key, the remote displays **MACRO DELETED CHOOSE ANOTHER OR OK TO EXIT.**
5. Repeat steps 2–4 above until you have finished deleting key macros. Press **SET** when finished to return to normal operation.

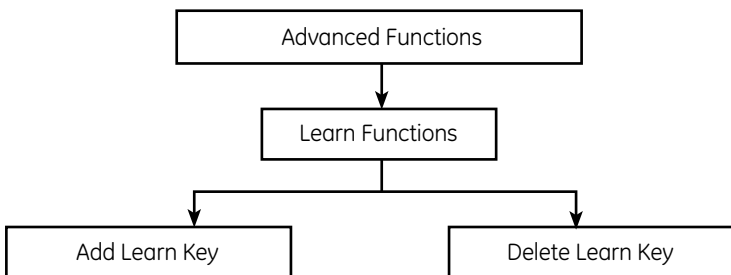
Learning

Your remote can learn approximately 50 functions from other IR remote controls if you cannot find your device code. *(The actual number of learnable functions will vary since each IR command requires a different amount of memory.)*

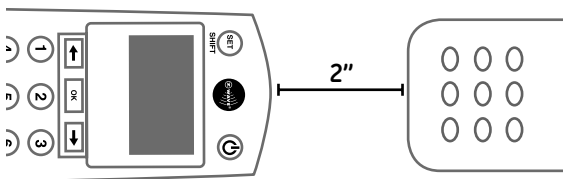
NOTE: Learning can not be done in Z-Wave mode.

NOTE: Make sure your original remote controls have fresh batteries before programming.

NOTE: You must add the device you want to learn first. If you cannot find a code that works with your device (for example, RECEIVER), enter a "dummy" code (any four-digit code) so that RCV is an available device.



1. From **ADVANCED FUNCTIONS** use the **ARROW** keys and scroll to **LEARN FUNCTIONS** and press **OK**.
2. The remote displays **ADD LEARN KEY**. Press **OK**.
3. The remote displays **FIND MODE TO LEARN AND PUSH OK**. The bottom line of the LCD displays the device type (for example, **SATELLITE**). Use the **ARROW** keys to scroll to the device you want the learned key associated with. Press **OK**.
4. The remote displays **ALIGN REMOTES PUSH OK**. Place the two remotes as shown in the diagram below and press **OK**.



5. The remote displays **SELECT THE KEY TO LEARN TO**. All keys except **SET**, **Z-Wave**, **OK**, or **Arrows** (scroll left & scroll right) are available for learning. Press the key you want to teach the command to.
6. The remote displays **WHEN BACKLIGHT TURNS OFF PUSH TEACHING KEY**. The backlight turns off. The display reads **LEARNING NOW! PRESS TEACHING KEY**. Press the teaching key on the original remote control.
7. If Learning is successful, then display and backlight turn back on. The remote displays **SUCCESS! PUSH OK TO LEARN PUSH SET TO EXIT**.
8. Press **OK** to learn another key or press **SET** to exit Learning mode. If you press **OK**, the remote returns to step 5 above and is ready to learn another key.

NOTE: If learning fails, the display reads LEARNING FAILED PUSH OK TO LEARN PUSH SET TO EXIT.

Possible causes for learning failure:

- Your remotes are too close to a UV source (i.e. in sun light, or close to fluorescent lighting)
- Your remotes are too far apart.
- The teaching remote is an RF (radio frequency) remote. Teaching remotes must be IR (infrared).
- The remotes' IR LEDs are not aligned.
- Batteries in one or both remotes may not have a sufficient charge

Deleting All Learned Keys

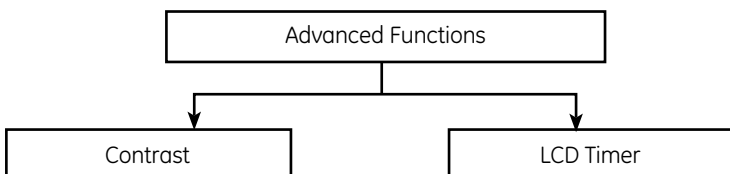
To delete all learned keys for a selected device, perform the steps below:

1. From **ADD LEARN KEY** use the **ARROW** keys to scroll to **DELETE LEARN KEY**. Press **OK**.
2. The remote displays **SELECT MODE THEN PUSH OK**. The device name is displayed on the bottom line of the display (for example, TV). Use the **ARROW** keys to cycle through the available device types. Press **OK**.
3. The remote displays **SELECT KEY TO DELETE OR PUSH OK TO DELETE ALL**.
4. Press **OK**. The remote displays **DELETING ALL PUSH OK TO CONFIRM**.
5. Press **OK**. The remote displays **ALL LEARNED KEYS DELETED. PUSH OK TO DELETE MORE**.
6. Press **SET** to exit

Deleting a Single Learned Key

To delete a single learned key, follow steps 1–3 above. Then perform the following steps:

1. Press the key containing the learned function to be deleted. The remote displays **KEY DELETED PUSH OK TO DELETE ANOTHER**.
2. Press **SET** to exit or **OK** to delete another learned key.



Setting the LCD Display's Contrast

1. From **ADVANCED FUNCTIONS**, scroll to **CONTRAST**. Press **OK**.
2. The LCD displays **CONTRAST SETUP**, with 10 blocks to show the **CONTRAST** setting. Use the **ARROW** keys to raise or lower the setting.
3. Press **OK** to save.

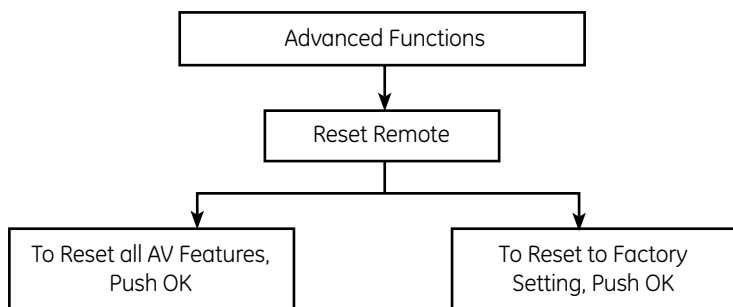
Adjusting the LCD Timer

You can adjust the LCD timer to control how long your display runs before it times out and goes blank. The timer can be adjusted in increments of 10, 20, or 30 seconds.

NOTE: *This does not affect backlight settings. The backlight runs for 10 seconds on your display, and 5 seconds on your keypad.*

1. From **ADVANCED FUNCTIONS**, scroll to **LCD TIMER**. Press **OK**.
2. The LCD displays **SET TO 20 SECONDS** (or the timer of the last active setting). Use the **ARROW** keys to adjust the LCD Time-out period.
3. Press **OK** to save. The LED blinks twice and the display returns to **LCD TIMER**.

Resetting the Remote



Resetting All Audio/Video Features

You can reset all the remote's programming, including Key Mover, Key Macro, Learning, and Volume Lock, except for device codes. To reset all programming, perform the following steps:

1. From **ADVANCED FUNCTIONS**, scroll to **RESET REMOTE**. Press **OK**.
2. The remote displays **TO RESET ALL AV FEATURES PUSH OK**. Press **OK**.
3. The remote displays **PUSH OK TO CONFIRM OR SET TO CANCEL**. Press **OK**.
4. The remote displays **RESET CONFIRMED**.

Restoring Audio/Video Programming to Factory Settings

***NOTE:** This will remove all devices you have programmed, so use caution when restoring factory settings.*

1. From **ADVANCED FUNCTIONS**, scroll to **RESET REMOTE**. Press **OK**.
2. When the remote displays **TO RESET ALL AV FEATURES PUSH OK**, scroll to **RESET TO FACTORY SETTING PUSH OK**. Press **OK**.
3. The remote displays **PUSH OK TO CONFIRM OR SET TO CANCEL**. Press **OK**.
4. The remote displays **THIS CLEARS ALL EVEN CODE SETUP ARE YOU SURE?** Press **OK**.
5. The remote displays **RESET CONFIRMED**. Your remote is now reset to its original factory programming.

Z-Wave Overview

Please note: The terms "Device", "Node" and "Light" all refer to an individual Z-Wave enabled device in your home control network and are interchangeable within the context of these instructions.

If this remote is used as the primary controller, you must use it to create your control network. You can use multiple remote controls with your Z-Wave lighting control network; however, only one remote will act as the primary controller. The primary controller must be used to add or delete devices (lights / nodes) from your network. All other remotes are considered secondary and can be used to create groups and/or scenes and control your lighting however secondary remotes cannot add or delete devices from your control network.

NOTE: This product can be operated in one Z-Wave network with Z-Wave certified devices from other manufacturers and/or other applications. The different listening nodes within the network can act as repeaters regardless of vendor.

! WARNING

RISK OF FIRE

RISK OF ELECTRICAL SHOCK

RISK OF BURNS

Not for use with Life Support Equipment!

Z-Wave enabled devices should never be used to supply power to or control the On/Off status of medical and/or life support equipment!

Controlling Appliances:

Exercise extreme caution when using Z-Wave devices to control appliances. Operation of the Z-Wave device may be in a different room than the controlled appliance, also an unintentional activation may occur if the wrong button on the remote is pressed. Z-Wave devices may automatically be powered on due to timed event programming. Depending upon the appliance, these unattended or unintentional operations could possibly result in a hazardous condition. For these reasons, we recommend the following:

1. Assign Z-Wave controlled appliances to device numbers 10 – 18 on the GE remote. The likelihood of unintentionally turning on the appliance will be reduced significantly because the "Shift" button will need to be pressed before pressing device numbers 10-18.
2. Z-Wave devices controlling appliances should be removed from "All" control setting. Instructions on how to do this are included in the manual for your GE remote.
3. Do Not include Z-Wave devices in Groups or Scenes if they control appliances.
4. Do Not use Z-Wave devices to control electric heaters or any other appliances which may present a hazardous condition due to unattended or unintentional or automatic power on control

Z-Wave Terminology

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

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

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

Light/Node/Device: Node is the technical term used to describe a Z-Wave device in your home control network. Please note that the terms "Node", "Device" and "Light" all refer to an individual Z-Wave enabled device and are interchangeable.

Group: Multiple Z-Wave devices can be turned ON or OFF with a single command when they are placed into a Group. One example would be grouping your porch light, exterior garage lights and patio lights together so that they could all be turned ON if you hear a strange sound in the middle of the night.

Scene: A scene lets you establish preset brightness levels for multiple Z-Wave controlled lights and then control them with one command. This is ideal for mood or task lighting. Scene 1 could be the family room lights set to dim for watching TV. Scene 2 could have the same lights set to a different brightness level for other activities like reading or entertaining.

Event: An event is something you want to happen at a specific time and day. This could be everyday, a specific day of the week, Monday through Friday, Saturday & Sunday only, or a one time occurrence. Events can be set up to control an individual device, a group or a scene.

Wireless Range

This device complies with the Z-Wave standard of open-air, line of sight transmission distances of 65 feet. Actual performance in a home depends on the number of walls between the remote controller and the destination device, the type of construction and the number of Z-Wave enabled devices installed in the control network. Every Z-Wave enabled device acts as a signal repeater and multiple devices result in more possible transmission routes which help eliminate "RF dead-spots".

Things to consider regarding RF range:

- Each wall or obstacle (i.e.: refrigerator, big screen TV, etc.) between the remote and the destination device will reduce the maximum range by approximately 25-30%.
- Brick, tile or concrete walls block more of the RF signal than walls made of wooden studs and plasterboard (drywall).
- Wall mounted Z-Wave devices installed in metal junction boxes will suffer a significant loss of range (approximately 20%) since the metal box blocks a large part of the RF signal.

Effects of Home Construction on Wireless Range Between Z-Wave Enabled Devices

Note: The distances shown in the table below are typical examples. Actual performance in your home will vary.

From the Remote (or repeating Z-Wave module) to destination device:		Type of Construction			
		Wood Frame w/Drywall		Brick, Tile or Concrete	
		Plastic J-Boxes*	Metal J-Boxes	Plastic J-Boxes*	Metal J-Boxes
Number of Walls or Obstacles	0**	100'	80'	100'	80'
	1	70'	56'	60'	48'
	2	49'	39'	36'	29'
	3	34'	27'	21'	17'

* For Plug-in Modules or In-Wall Devices Installed in Plastic Junction Boxes

** Line of Sight / no obstructions

Please Note: Z-Wave home control networks are designed to work properly alongside 802.11 wireless computer networks, Bluetooth and other 2.4GHz or 5.8GHz devices. Some baby cams, wireless video devices and older cordless phones using the 900MHz frequency range may cause interference and limit Z-Wave functionality. Many 900MHz products have a switch to select channel "A" or "B". You may find that one of these channels will cause less interference than the other.

Notes on Network Management

1. “Add a node, group or scene” can also be referred to as “include a node, group or scene.” “Remove a node, group or scene” can also be referred to as “Exclude a node, group or scene.”
2. If the screen displays **FAIL** during the setup or programming process, you have pressed an invalid key or the desired action has not been successfully completed. Please try again.

Important Notes on New Remotes

New remotes are, by default, primary remotes (controllers). This means that a new remote can:

- Create a new control network.
- Be added to an existing network as a secondary controller.
- Be added to an existing network as the new primary controller. In this case, the original remote is converted into a secondary controller.
- Delete nodes from an existing control network and reset them to their factory defaults. If devices in an existing network are deleted by a primary controller that is not part of that network, the entire network may suffer reliability and control problems.
 - The original remote will not be able to control those devices even though they are still listed in its device and routing tables.
 - Devices that normally receive routed (relayed) command signals through the deleted devices may fail to operate as expected.
 - A deleted device can be added back into the network with that network’s primary controller, however, the network’s controllers will indicate “failure” when attempting to use Group, Scene or All commands that include the deleted devices. In this situation, the only solution is to reset (delete) every device, reset the controllers and recreate the network.

Z-Wave Key Chart

A. SET – Press & hold to enter setup mode. When in setup mode, press & release to back up one level in the setup menu or press & hold to cancel setup.

B. SHIFT – For use in Z-Wave setup & operation modes. Press & release to shift number key from devices 1 – 9 to 10 – 18.

C. ARROWS – scroll left or right to highlight desired menu item.

D. OK – Press & release to select highlighted menu item

E. BRT & DIM (Volume Up & Down) – Light mode only - Use ARROW KEYS or number keys to select desired light (displayed in LCD) and then press & hold to adjust brightness of Z-Wave lights (Must be dimmable)

F. CANCEL (Exit) – Press & release to back up one menu level in Z-Wave programming mode or exit the Z-Wave “waiting” mode

MODE KEYS:

G. LIGHT – Use to program and/or control individual lights

H. GROUP – Use to program and/or turn multiple lights On or Off at the same time

I. SCENE – Use to program and/or control multiple lights with preset brightness levels.

J. ALL – Use to turn On/Off all Z-Wave lighting at the same time. Press & release “All” key, and then the On or Off key (Channel Up or Down)

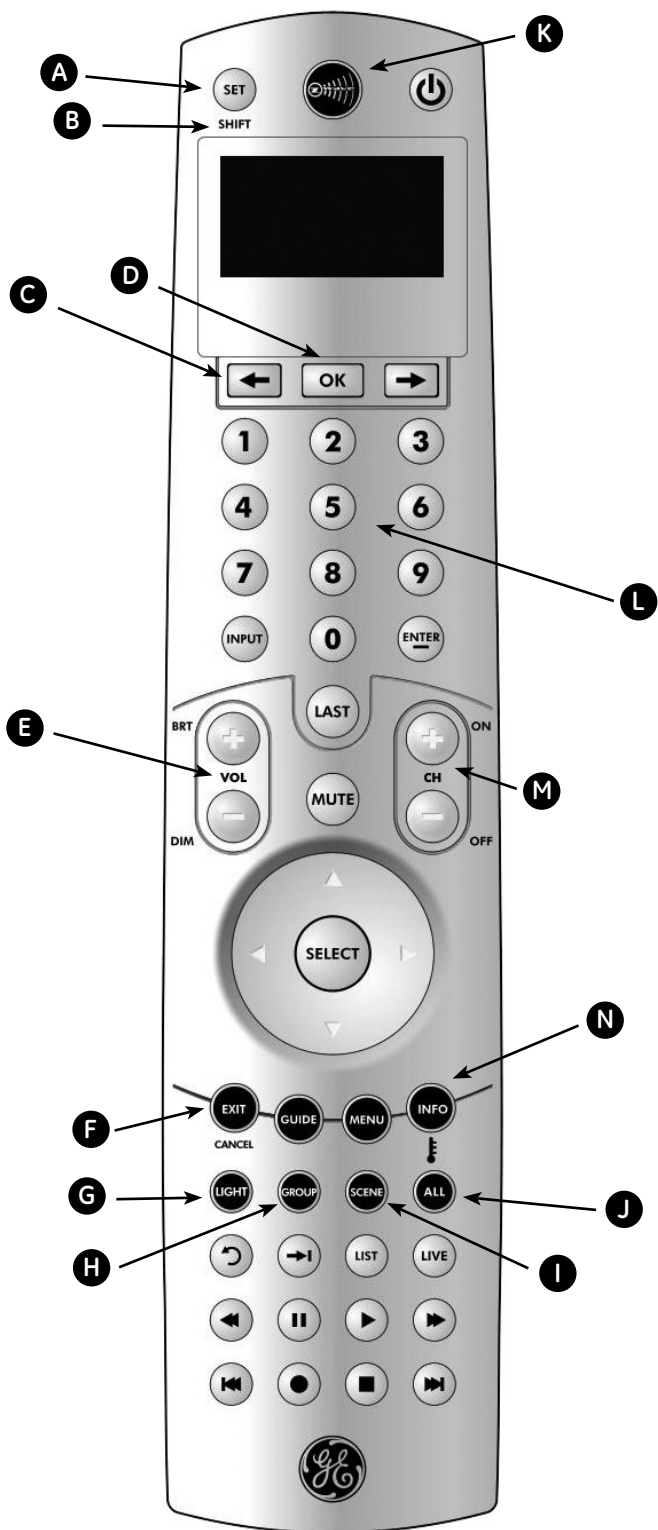
K. Z-WAVE KEY – This key cycles the remote between Z-Wave and A/V modes. In Z-Wave mode, the green LED beneath the button blinks to indicate the following:

1. Twice to indicate entering programming mode or a programming success.
2. Once (long blink) to indicate an invalid action during programming or a programming failure.

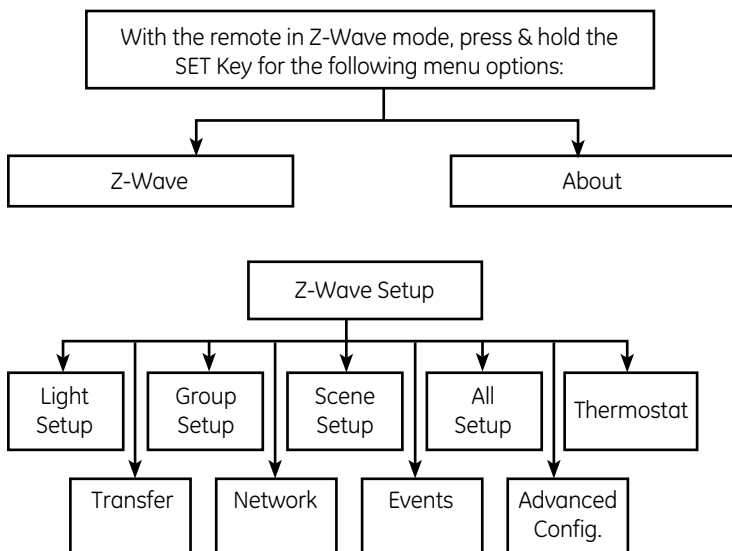
L. NUMBER KEYS – Use to select individual lights, groups or scenes. Press & release SHIFT to change number keys from devices 1 – 9 to 10 – 18.

M. ON & OFF (Channel Up & Down) – Select the desired mode and use ARROW KEYS or number keys to select desired light, group or scene (displayed in LCD) and then press & release to turn On or Off. Also used for All-On and All-Off functions in All mode

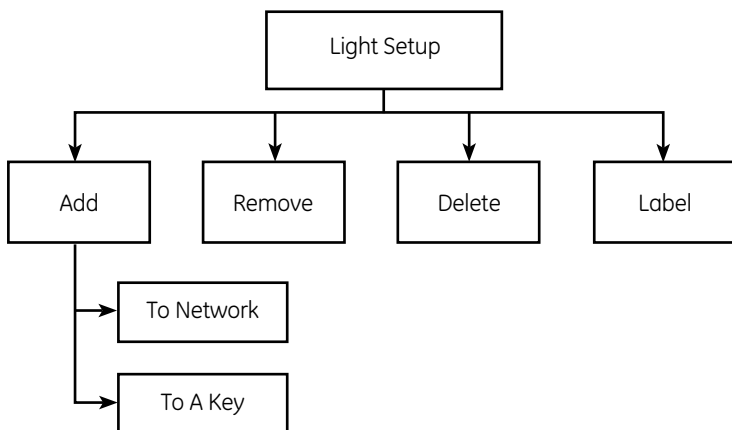
N. Thermostat symbol (Info Key) – Press & release to select Z-Wave thermostat



Z-Wave Setup



Devices / Lights / Nodes



Adding a Device (Node / Light) to the Network

In order to control the lights, they must be Z-Wave enabled and you must first add them to your home network. There are two ways to do this.

1. Add lights to your remote so that they can be controlled individually using the number keys (maximum of 18). Adding a device to your remote also adds it to your network. If the device number you are trying to add is already associated with another device, the previous information is lost.

2. Add devices to your home network (maximum of 232) without assigning them to a specific number key. These devices can only be controlled through the **GROUP, SCENE** or **ALL** commands.

Add a device without assigning it to a specific number key

1. Enter Z-Wave setup mode. **LIGHT SETUP** is the default option.
2. Press **OK**; the screen will display **ADD**
3. Press **OK**; the screen will display **TO NETWORK**
4. Press **OK**; the letter "W" will be displayed in the upper left hand corner and the green Z-Wave LED will begin blinking indicating the remote is waiting to add your device.
5. Press the button on the device so that it communicates with the remote.
6. When the screen displays **SUCCESSFUL** the device has been added to your network.
7. The device can now be added to Groups and/or Scenes.

Add a device and assign it to a specific number key

1. Enter Z-Wave setup mode and highlight **LIGHT SETUP**
2. Press **OK**; the screen will display **ADD**
3. Press **OK**; the screen will display **TO NETWORK**
4. Press the left arrow key once; the screen will display **TO A KEY**
5. Press **OK**; the screen will display **SEL DIGIT**
6. Press a digit (1-9) for the device location you wish to add. Press **SET (SHIFT)** and the digit (1-9) if you are adding devices 10 through 18. The screen will display the number you've chosen.
7. Press **OK**; the letter "W" will be displayed in the upper left hand corner and the Z-Wave light will begin blinking indicating the remote is waiting to connect to your device.
8. Press the button on the device so that it communicates with the remote.
9. When the screen displays **SUCCESSFUL** the device has been added to the selected key.
10. The device can now be added to Groups and/or Scenes.

Controlling an Individual Device (Node / Light)

You can control a light to turn on or off, or change its brightness level. The operation of a specific device varies by product. Refer to the manual for that device to learn its specific operation.

- In the **Z-WAVE** mode press the **LIGHT** key to put the remote into "Individual Light Control" mode. Use the **NUMBER** or **ARROW** keys to select the light you want to control. (Press and release **SHIFT** to control lights 10 through 18.)

Turning a Light On or Off

- To turn a light on, press and release the **CH +** key for less than one second. The screen will display **ON** above the selected Light/Node.
- To turn a light off, press and release the **CH -** key for less than one second. The screen will display **OFF** above the selected Light/Node.

Setting a Light's Brightness Level

- To brighten a light, press and hold the **VOL +** key for more than one second. The screen will display **BRIGHT UP** above the selected Light/Node. The light will continue to grow brighter until the key is released.
- To dim a light, press and hold the **VOL -** key for more than one second. The screen will display **BRIGHT DOWN** above the selected Light/Node. The light will continue to grow dimmer until the key is released.

Removing an Individual Device (Node / Light) From Your Remote

This only removes individual number key control. The device is still part of your home control network and can be controlled through the **GROUP**, **SCENE** and **ALL** commands.

1. Enter Z-Wave setup mode and highlight **LIGHT SETUP**
2. Press **OK**; the screen will display **ADD**
3. Press the right arrow key once; the screen will display **REMOVE**
4. Press **OK**; the screen will display **SEL DIGIT**
5. Press a digit (1-9) for the device location you wish to remove. Press **SHIFT** and the digit (1-9) if you are removing devices 10 through 18. The screen will display the number you've chosen.
6. Press **OK**. When the screen displays **SUCCESSFUL**, the device has been removed from the number key.

Deleting a Device (Node / Light) From Your Network

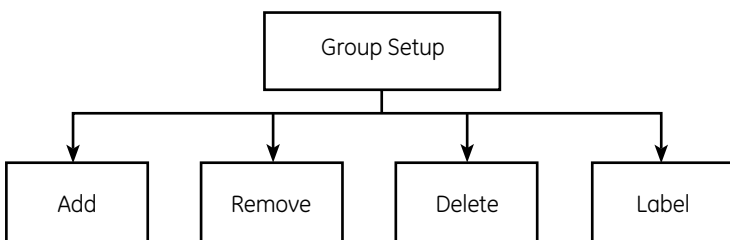
This completely removes the device from your home control network and resets the device to its factory default settings.

1. Enter Z-Wave setup mode and highlight **LIGHT SETUP**
2. Press **OK**; the screen will display **ADD**
3. Press the right arrow key twice; the screen will display **DELETE**
4. Press **OK**; the letter "W" will be displayed in the upper left hand corner and the Z-Wave light will begin blinking indicating the remote is waiting to delete your device.
5. Press the button on the device so that it communicates with the remote.

- When the screen displays **SUCCESSFUL**, the device has been deleted from your network and reset to its factory defaults.

Groups

You can create a collection of devices (lights / nodes) that you can turn On or Off as a group. You can create up to a maximum of 18 groups. A group can contain up to 232 devices.



Create a Group or Add a Device to a Group

- Enter Z-Wave setup mode and highlight **GROUP SETUP**
- Press **OK**; the screen will display **ADD**
- Press **OK**; the screen will display **SEL DIGIT**
- Press a digit (1-9) for the group you wish to add the device to. Press **SHIFT** and the digit (1-9) if you are adding a device to groups 10 through 18. The screen will display the group you've chosen.
- Press **OK**; the letter "W" will be displayed in the upper left hand corner and the Z-Wave light will begin blinking indicating the remote is waiting to connect to your device.
- Press the button on the device so that it communicates with the remote.
- When the screen displays **SUCCESSFUL** you have successfully added the Node/Light to a group.
- To add additional Node/Lights to your group repeat steps 1 thru 10.

To control a Group:

- When in Z-Wave mode press the **GROUP** key once to put the remote into "**GROUP Control**" mode.
- Press the digit key for the group you wish to control (1-9). Press **SHIFT** and the digit (1-9) if you are controlling groups 10 through 18. The screen will display the selected Group.
 - To turn a **GROUP** on, press and release the **CH +** key for less than one second. The screen will display **ON** above the selected **GROUP**.

- To turn a **GROUP** off, press and release the **CH** - key for less than one second. The screen will display **OFF** above the selected **GROUP**.

Removing a Device (Node / Light) From a Group:

This only removes the device from a specific group. The device is still part of your home control network and the group still exists (if there were more than one device in it to start).

1. Enter Z-Wave setup mode and highlight **GROUP SETUP**
2. Press **OK**; the screen will display **ADD**
3. Press the right arrow key once; the screen will display **REMOVE**
4. Press **OK**; the screen will display **SEL DIGIT**
5. Press a digit (1-9) for the group you wish to remove the device from. Press **SHIFT** and the digit (1-9) if you are removing a device from groups 10 through 18. The screen will display the group you've chosen.
6. Press **OK**; the letter "W" will be displayed in the upper left hand corner and the Z-Wave light will begin blinking indicating the remote is waiting to remove your device.
7. Press the button on the device so it communicates with the remote.
8. When the screen displays **SUCCESSFUL** you have successfully removed the Node/Light from the group.

Deleting a Group

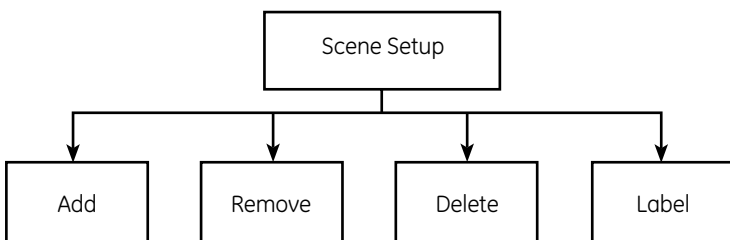
This only deletes the specific group. All of the devices are still part of your home control network.

1. Enter Z-Wave setup mode and highlight **GROUP SETUP**
2. Press **OK**; the screen will display **ADD**
3. Press the right arrow key twice; the screen will display **DELETE**
4. Press **OK**; the screen will display **SEL DIGIT**
5. Press a digit (1-9) for the group you wish to remove the device from. Press **SHIFT** and the digit (1-9) if you are removing a device from groups 10 through 18. The screen will display the group you've chosen.
6. Press **OK**; the screen will display **SUCCESSFUL** to indicate the group has been deleted.

Scenes

A scene is a single device or group of devices that can be preset to turn on to a previously specified setting (for example, brightness level). Scenes are ideal for task or mood lighting. You can set up a maximum of 18 scenes, containing up to 32 devices per scene.

Scenes can include lights from different groups.



Adding a Device (Node / Light) to a Scene

1. Enter Z-Wave setup mode and highlight **SCENE SETUP**
2. Press **OK**; the screen will display **ADD**
3. Press **OK**; the screen will display **SEL DIGIT**
4. Press a digit (1-9) for the scene you wish to add the device to. Press **SHIFT** and the digit (1-9) if you are adding devices to scenes 10 through 18. The screen will display the scene you've chosen.
5. Press **OK**; the letter "W" will be displayed in the upper left hand corner and the Z-Wave light will begin blinking indicating the remote is waiting to connect to your device.
6. Press and release the button on the device so it communicates with the remote.
7. When the screen displays **SUCCESSFUL** you have successfully added the Node/Light to a scene. Immediately following this the screen will display **TO ADJUST LEVEL PUSH OK TO SAVE**.
8. Within 30 seconds press and hold the button on the device to adjust the brightness level. Release the button at your desired setting, then press **OK** on the remote.
9. When the screen displays **SUCCESSFUL** you have successfully added the Node/Light to a scene at your desired setting.
10. To add additional Node/Lights to your scene repeat steps 1 thru 12.

To control a scene:

1. While in the Z-Wave mode press **SCENE** once to put the remote in **SCENE** mode.
2. Press the digit key for the scene you wish to control (1-9). Press **SHIFT** and the digit (1-9) if you are controlling scenes 10 through 18. The screen will display the scene you've chosen.
 - To turn a **SCENE** on, press and release the **CH +** key for less than one second. The screen will display **ON** above the selected **SCENE**.

- To turn a **SCENE** off, press and release the **CH -** key for less than one second. The screen will display **OFF** above the selected **SCENE**.

Removing a Device (Node / Light) From a Scene

This only removes the device from a specific scene. The device is still part of your home control network and the scene still exists (if there is more than one device in the scene).

1. Enter Z-Wave setup mode and highlight **SCENE SETUP**
2. Press **OK**; the screen will display **ADD**
3. Press the right arrow key once; the screen will display **REMOVE**.
4. Press **OK**; the screen will display **SEL DIGIT**
5. Press a digit (1-9) for the scene you wish to add the device to. Press **SHIFT** and the digit (1-9) if you are adding devices to scenes 10 through 18. The screen will display the scene you've chosen.
6. Press **OK**; the letter "W" will be displayed in the upper left hand corner and the Z-Wave light will begin blinking indicating the remote is waiting to remove your device.
7. Press the button on the device so it communicates with the remote.
8. When the screen displays **SUCCESSFUL** you have successfully removed the Node/Light from the scene.

Deleting a Scene

This only deletes the specific scene. All of the devices are still part of your home control network.

1. Enter Z-Wave setup mode and highlight **SCENE SETUP**
2. Press **OK**; the screen will display **ADD**
3. Press the right arrow key twice; the screen will display **DELETE**.
4. Press **OK**; the screen will display **SEL DIGIT**
5. Press a digit (1-9) for the scene you wish to add the device to. Press **SHIFT** and the digit (1-9) if you are adding devices to scenes 10 through 18. The screen will display the scene you've chosen.
6. Press **OK**; the screen will display **SUCCESSFUL** to indicate that the scene has been deleted.

Labels

Individual **LIGHTS**, **GROUPS** and **SCENES** can all be labeled to help identify their function or location in your home. The process is the same for all three.

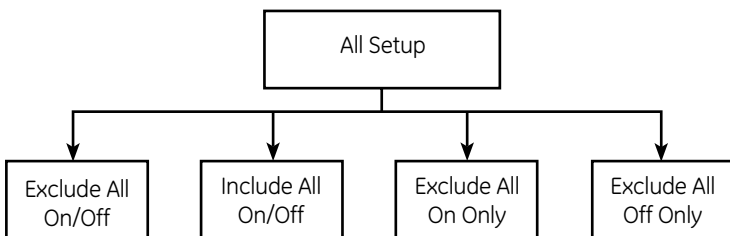
1. Enter Z-Wave setup mode and highlight **LIGHT SETUP, GROUP SETUP** or **SCENE SETUP**. Press **OK**.
2. Use the **ARROW** keys to scroll to **LABEL**.
3. Press **OK**; the screen will display **SEL DIGIT**
4. Press a digit (1-9) for the **LIGHT, GROUP** or **SCENE** you would like to label. Press **SHIFT** and the digit (1-9) if you are labeling for keys 10 through 18. The screen will display the key number in the mode you would like to label.
5. Press **OK**; the screen will display the current name of the device in the mode you've selected with the first letter or digit highlighted.
 - a. Use the right or left **ARROW KEYS** to scroll right or left.
 - b. Press the **CH +** key to move the letter or number forwards.
 - c. Press the **CH -** key to move the letter or number backwards.
6. When you've completed labeling the device press **OK**; the screen will display **SUCCESSFUL**.

All-On and All-Off Control

The factory default setting for GE Z-Wave lighting control devices is to be included in All-On and All-Off control. Other brands of Z-Wave enabled lighting control devices may have to be manually added to ALL control. If desired, specific devices can also be setup to ignore the All-On and All-Off commands.

Turn all devices on or off

1. While in the Z-Wave mode press **ALL** once. The screen will display **ALL**
2. Press the **CH +** key to turn all of the lights on. The display will briefly display **ON** below **ALL**.
3. Press the **CH -** key to turn all of the lights off. The display will briefly display **OFF** below **ALL**.
4. If the screen displays **FAIL** not all of the lights completely received and responded to the remotes command. In this event repeat steps 1 thru 3.



Adding or Excluding a Device To / From All Control

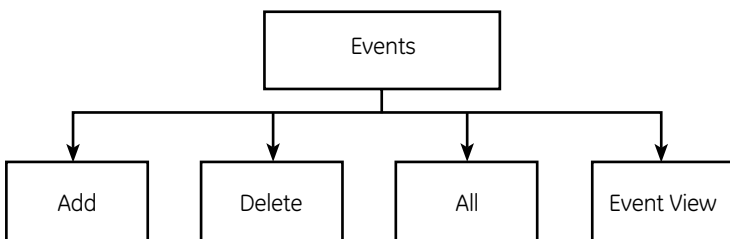
Menu options under **ALL SETUP** include **EXCLUDE ALL ON OFF**, **INCLUDE ALL ON OFF**, **EXCLUDE ALL ON ONLY** and **EXCLUDE ALL OFF ONLY**.

1. Enter Z-Wave setup mode and highlight **ALL SETUP**.
2. Press **OK**; the screen will display **EXCLUDE ALL/ON OFF**
3. Use the **ARROW** keys to scroll to the desired action.
4. Press **OK**; the letter "W" will be displayed in the upper left hand corner and the Z-Wave light will begin blinking indicating the remote is waiting to communicate with your device.
5. Press the button on the device so that it communicates with the remote.
6. When the screen displays **SUCCESSFUL** you have successfully completed the desired action.

Events

The GE 45608 LCD remote allows you to program automated events such as turning on or off lights at a predetermined time and day. An event can control an individual Light, a Group or a Scene.

***Note:** Prior to programming an Event, you must set the day and time.*



Adding an Event

1. Enter Z-Wave setup mode and highlight **EVENTS**.
2. Press **OK**; the screen will display **ADD**
3. Press **OK**; the screen will display **EVERYDAY**
4. From this screen you can use the right and left arrow keys to select the day or days you would like the event to occur. The selections are;
 - a. **EVERYDAY**(The event will occur everyday)
 - b. **MON – FRI** (The event will occur Monday thru Friday)
 - c. **SAT/SUN** (The event will only occur on Saturday and Sunday)
 - d. **ONETIME** (The event will only occur onetime)

- e. **SUNDAY** (The event will only occur on Sundays)
- f. **MONDAY** (The event will only occur on Mondays)
- g. **TUESDAY** (The event will only occur on Tuesdays)
- h. **WEDNESDAY** (The event will only occur on Wednesdays)
- i. **THURSDAY** (The event will only occur on Thursdays)
- j. **FRIDAY** (The event will only occur on Fridays)
- k. **SATURDAY** (The event will only occur on Saturdays)

Note: All events with the exception of "ONE TIME" will repeat on a weekly basis until deactivated or deleted.

5. After selecting the occurrence of the event press **OK**; the screen will display **SEL DIGIT**
6. Press a digit (1-9) for the key you wish to add the event to. Press **SHIFT** and the digit (1-9) if you are adding events to keys 10 through 18. The screen will display the event you've chosen. (Event 1 for example)
7. Press **OK**; the screen shows **NORMAL**. Press **OK** for exact timing or use the **ARROW** keys to change to **RANDOM**. The random option activates the event up to 15 minutes before or after the programmed time. Note: The random option is not available for one time events.
8. Press **OK**; the screen will display **EVENT TYPE - LIGHT 1**
9. Use the **ARROW** keys to scroll between event types. As you scroll the screen will display;
 - a. **LIGHT 1** (Controls the **LIGHT** set to key **#1**)
 - b. **GROUP 1** (Controls the **GROUP** set to key **#1**)
 - c. **SCENE 1** (Controls the **SCENE** set to key **#1**)
10. When you've scrolled to the event type you would like to control, use the **ARROW** keys to select what number **LIGHT**, **GROUP** or **SCENE** you would like to control.
11. After choosing the event type and number press **OK**; the screen will display the hour, minute and AM or PM with the hour highlighted above the words **ON TIME**.
12. To set the **ON TIME** of your event;
 - a. Use the right or left **ARROW** keys to scroll right or left.
 - b. Press the **CH +** key to move hour, minute, AM or PM forwards.
 - c. Press the **CH -** key to move the hour, minute, AM or PM backwards.
13. When you've set the **ON TIME**, press **OK**; the screen will display the hour, minute and AM or PM with the hour highlighted above the words **OFF TIME**.

14. To set the **OFF TIME** of your event;
 - a. Use the right or left **ARROW** keys to scroll right or left.
 - b. Press the **CH +** key to move hour, minute, AM or PM forwards.
 - c. Press the **CH -** key to move the hour, minute, AM or PM backwards.
15. When you've set the **OFF TIME**, press **OK**; the screen will display **SUCCESSFUL** indicating you successfully programmed your event.

Enabling or Disabling an Individual Event:

1. Enter Z-Wave setup mode and highlight **EVENTS**.
2. Press **OK**; the screen will display **ADD**.
3. Use the **ARROW** keys to scroll to **EVENT VIEW**. Press **OK**.
4. Use the **ARROW** keys to select the desired event. Press **OK**.
5. Use the **ARROW** keys to select **ENABLED** or **DISABLED**. Press **OK**.

Enabling or Disabling All Events:

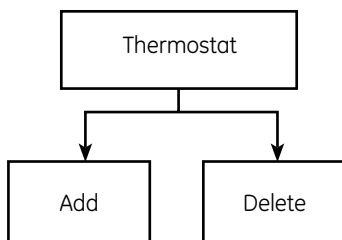
1. Enter Z-Wave setup mode and highlight **EVENTS**.
2. Press **OK**; the screen will display **ADD**.
3. Use the **ARROW** keys to scroll to **ALL**. Press **OK**.
4. Use the **ARROW** keys to select **ALL ON** or **ALL OFF**. Press **OK**.

Deleting an Event

1. Enter Z-Wave setup mode and highlight **EVENTS**.
2. Press **OK**; the screen will display **ADD**.
3. Use the **ARROW** keys to scroll to **DELETE**.
4. Press **OK**; the screen will display **SEL DIGIT**.
5. Use the number keys to select the event to be deleted. Press **OK**.
6. The screen will display **SUCCESSFUL** to indicate that the event has been deleted.

Thermostats

The GE 45608 LCD remote allows you to program and control multiple Z-Wave enabled Thermostats.



Adding a Thermostat:

1. Enter Z-Wave setup mode and highlight **THERMOSTAT**
2. Press **OK** and the screen will display **ADD**
3. Press **OK** and the screen will display **SETUP WAITING**
4. Press the button on the thermostat's Z-Wave interface
5. When the screen displays **SUCCESS**, you have successfully added the **THERMOSTAT** to your remote control.

Controlling a Thermostat:

The features and functions that can be controlled vary by manufacturer and you will need to review the user manual that was provided to determine capabilities of your **THERMOSTAT**. If supported by the thermostat, the 45608 LCD remote allows you to check room temperature, adjust HVAC system modes (Heat, Cool, Auto, Fan, etc.) and adjust temperature settings (**SETPOINT**).

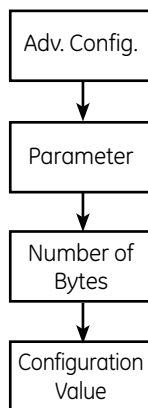
Note: Your HVAC system may have to be set to "HEAT or "COOL"" mode in order to remotely check and/or adjust the room temperature. "AUTO" mode may not provide this function.

Deleting a Thermostat:

1. Enter Z-Wave setup mode and highlight **THERMOSTAT**
2. Press **OK** and the screen will display **ADD**
3. Use either **ARROW** keys to scroll until the screen displays **DELETE**
4. Press **OK** and the screen will display **SETUP WAITING**
5. Press the button on the thermostat's Z-Wave interface
6. When the screen displays **SUCCESSFUL**, you have successfully deleted the thermostat.

Advanced Configuration

Some Z-Wave devices provide advanced capabilities available only through the use of a remote control like the GE 45608. One example is the GE 45606 in-wall dimmer which allows the end user to change whether the LED is illuminated when the light is On or when the light is Off. Please refer to the instructions of your Z-Wave device for available options and specific instructions on changing its advanced configuration.



To Change Advanced Configuration Settings:

1. Enter Z-Wave setup mode and highlight **ADV. CONFIG.**
2. Press **OK** and screen will display **PARAMETER 0**
3. Use either **ARROW** key to scroll until the display reads the proper parameter number (1 - 255) as indicated in the Z-Wave device's instructions
4. Press **OK** and the screen will read **NUMBER OF BYTES**
5. Use either **ARROW** key to scroll until the display reads the proper number of bytes (1, 2 or 4) as indicated in the Z-Wave device's instructions
6. Press **OK** and the screen will display read **CONFIGURATION VALUE 1 = 0**
7. Use either **ARROW** key to scroll until the display reads the proper value (0 - 255) as indicated in the Z-Wave device's instructions
8. Press **OK**
9. Press the button on the device.
10. The screen will display **SUCCESSFUL**

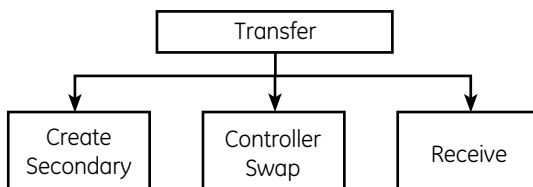
Copying information to or from the remote control:

Create Secondary, Controller Swap and Receive are all methods used in the process of replication.

Create Secondary Controller

A Primary controller must be used to add or delete devices from your network; however, secondary controllers can be created to enhance convenience (remotes in multiple locations like the kitchen, master bedroom and family room) and functionality (control of more than 18 individual lights, 18 groups or 18 scenes).

There are two ways to create a secondary controller. The first way is to copy all network and device information while the second is to copy just the network information. If the two remotes are identical (two of the GE 45608s for example), the first method creates an exact duplicate of all Z-Wave information including groups, scenes, labels, etc. The second method copies only the network and does not duplicate the groups, scenes, labels, etc.



To send device and network information to a secondary remote:

1. Enter Z-Wave setup mode and highlight **TRANSFER**
2. Press **OK**; the screen will display **CREATE SECONDARY**
3. Press **OK**; the screen will display **ALL**
4. Place the Secondary remote in **RECEIVE** mode. See the following section on “Receiving Network and Device Information” if the Secondary remote is a GE 45608 remote. If the Secondary remote is a different GE model or different brand, please refer to its instructions for details.
5. After the Secondary remote is in the **RECEIVE** mode press **OK** on the Primary remote; the screen will display **SENDING**. The Primary remote then transmits the network and device information to the new Secondary remote.
6. Both remotes should indicate a successful completion of the copying process.
 - a. The 45608’s screen will display **SUCCESSFUL**.
 - b. Other GE models or other brands will indicate success in various ways, depending on the remote’s capabilities. Please refer to its instructions for details.
7. Change individual devices, groups, scenes, etc. on the new secondary remote as needed.

To send only network information to a secondary remote:

1. Enter Z-Wave setup mode and highlight **TRANSFER**
2. Press **OK**; the screen will display **CREATE SECONDARY**
3. Press **OK**; the screen will display **ALL**
4. Press the right arrow key once; the screen will display **NETWORK ONLY**.
5. Place the Secondary remote in **RECEIVE** mode. See the following section on “Receiving Network and Device Information” if the Secondary remote is a GE 45608 remote. If the Secondary remote is a different GE model or different brand, please refer to its instructions for details.
6. After the Secondary remote is in the **RECEIVE** mode press **OK** on the Primary remote; the screen will display **SENDING**. The Primary remote then transmits the network and device information to the new Secondary remote.
7. Both remotes should indicate a successful completion of the copying process.
 - a. The 45608’s screen will display **SUCCESSFUL**.
 - b. Other GE models or other brands will indicate success in various ways, depending on the remote’s capabilities.

Please refer to its instructions for details.

8. Change individual devices, groups, scenes, etc. on the new secondary remote as needed.

Controller Swap (Transfer Primary)

You can transfer all of your remote's information to another remote, so it becomes the new Primary remote and the original remote becomes a secondary controller. You can do this in two ways: either transferring all information, or just transferring network information.

Transferring all Device, Network and Primary status to a new remote:

1. Enter Z-Wave setup mode and highlight **TRANSFER**
2. Press **OK**; the screen will display **CREATE SECONDARY**
3. Press the right **ARROW** key once; the screen will display **CONTROLLER SWAP**.
4. Press **OK**; the screen will display **ALL**
5. Place the Secondary remote in **RECEIVE** mode. See the following section on "Receiving Network and Device Information" if the Secondary remote is a GE 45608 remote. If the Secondary remote is a different GE model or different brand, please refer to its instructions for details.
6. After the Secondary remote is in the **RECEIVE** mode press **OK** on the Primary remote; the screen will display **SENDING**. The Primary remote then transmits the network and device information to the new Secondary remote.
7. Both remotes should indicate a successful completion of the copying process.
 - a. The 45608's screen will display **SUCCESSFUL**.
 - b. Other GE models or other brands will indicate success in various ways, depending on the remote's capabilities. Please refer to its instructions for details.

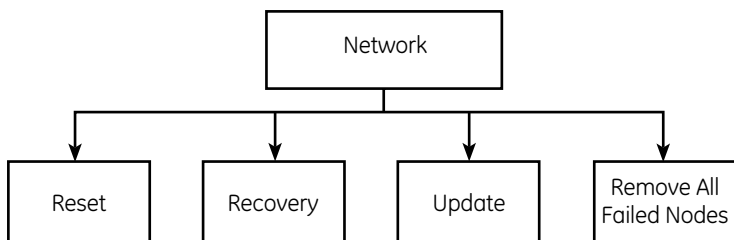
Transferring only Network and Primary status to a new remote:

1. Enter Z-Wave setup mode and highlight **TRANSFER**
2. Press **OK**; the screen will display **CREATE SECONDARY**
3. Press the right arrow key once; the screen will display **CONTROLLER SWAP**.
4. Press **OK**; the screen will display **ALL**
5. Press the right **ARROW** key once; the screen will display **NETWORK ONLY**.

6. Place the Secondary remote in **RECEIVE** mode. See the following section on “Receiving Network and Device Information” if the Secondary remote is a GE 45608 remote. If the Secondary remote is a different GE model or different brand, please refer to its instructions for details.
7. After the Secondary remote is in the **RECEIVE** mode press **OK** on the Primary remote; the screen will display **SENDING**. The Primary remote then transmits the network and device information to the new Secondary remote.
8. Both remotes should indicate a successful completion of the copying process.
 - a. The 45608’s screen will display **SUCCESSFUL**.
 - b. Other GE models or other brands will indicate success in various ways, depending on the remote’s capabilities. Please refer to its instructions for details.

Receiving Network and Device Information

1. Enter Z-Wave setup mode and highlight **TRANSFER**
2. Press **OK**; the screen will display **CREATE SECONDARY**
3. Use the **ARROW** keys to scroll to **RECEIVE**.
4. Press **OK**; the screen will display **RECEIVING**
5. Place the Primary remote in “Transmit” mode. See the previous section on “Creating a Secondary Controller” or “Controller Swap” if the Primary controller is a GE 45608 remote. If the Primary remote is a different GE model or different brand, please refer to its instructions for details.
6. After the Primary remote is in the “Transmit” mode, press **OK** on this remote; the screen will display **RECEIVING**. The Primary remote then transmits the network and device information to the new remote.
7. Both remotes should indicate a successful completion of the copying process.
 - a. The 45608’s screen will display **SUCCESSFUL**.
 - b. Other GE models or other brands will indicate success in various ways, depending on the remote’s capabilities. Please refer to its instructions for details.



Resetting Your Network

You can reset your network to clear all device and Z-Wave network information from the remote. This does not reset the Z-Wave devices to their factory default. Each device still needs to be deleted in order to reset them. Please refer to the section on “Deleting a Device (Node/Light) from Your Network” for details.

To reset your network:

1. Enter Z-Wave setup mode and scroll to **NETWORK**
2. Press **OK**; the screen will display **RESET**
3. Press **OK**; the screen will display **RESETTING**
4. When the screen displays **SUCCESSFUL** your remote has been reset.
5. Delete all individual devices to reset them to their factory defaults. This step must be completed in order to use the devices in a new network.

Recovering Network Information

This forces a re-discovery of all the devices in your network, verifies communications between devices and rebuilds the routing tables. The remote must be the Primary controller to perform this function. All secondary controllers should be updated using the “create secondary Controller” instructions after a successful network recovery. You must have at least 2 nodes in your network to perform a recovery.

To recover network information:

1. Enter Z-Wave setup mode and highlight **NETWORK**
2. Press **OK**; the screen will display **RESET**
3. Use the **ARROW** keys to scroll to **RECOVER**.
4. Press **OK**; the screen will display **RECOVERING**
5. When the screen displays **SUCCESSFUL** you have successfully recovered network information and rebuilt the routing tables

Network Update

This function only works if you have a Static Update Controller (SUC) in your network. An SUC is permanently installed in a specific location and helps maintain up-to-date “neighbor lists” and routing tables for your control network. This command sends a request to the SUC for the current network topology and ensures that the hand-held remote includes the latest network information.

Interoperability with Z-Wave™ Devices

A Z-Wave™ network can integrate devices of various classes, and these devices can be made by different manufacturers. Although every Z-Wave certified product is designed to work with all other Z-Wave certified products, your controller must include the appropriate device classifications in order to control non-lighting Z-wave devices. As an example, the GE 45600 basic remote is designed only for controlling Z-Wave devices using the lighting control classification. The GE 45601 remote with LCD readout can control other Z-Wave certified devices like thermostats as well as lighting.

FCC NOTICE

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

If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off or on, the user should:

- Relocate or reorient the TV or radio antenna
- Increase the separation between the device and the receiver.

Any changes or modifications to the equipment without JASCO's express consent will void the user's right to operate this equipment.

FCC ID: MG345608

Compliance with IC Rules and Regulations

IC: 6924A-45608

Jasco Products Company

Model: 45608

Object is subject to the following two conditions:

1. This device may not cause interference, and
2. This device must accept any interference, including interference that may cause undesired operation of the device.”

WARRANTY

JASCO Products warrants this product to be free from manufacturing defects for a period of two years from the original date of consumer purchase. This warranty is limited to the repair or replacement of this product only and does not extend to consequential or incidental damage to other products that may be used with this product. This warranty is in lieu of all other warranties, expressed or implied. Some states do not allow limitations on how long an implied warranty lasts or permit the exclusion or limitation of incidental or consequential damage, so the above limitations may not apply to you. This warranty gives you specific rights, and you may also have other rights which vary from state to state. Please contact Customer Service at 800-654-8483 (option 4) between 7:30AM – 5:00PM CST or via our website (www.jascoproducts.com) if the unit should prove defective within the warranty period.

JASCO Products Company
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Oklahoma City, OK 73114

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Made in China

Setup Codes for Compatible Brands of Audio/Video Devices

Códigos de Programación de Audio/Video de Marcas Compatibles

For Home Automation Automatzación del Hogar

Frigidaire	1333	Security System.....	0167
GE.....	0240	Universal	0167
Marmitek	0167	Universal X10.....	0167
One For All.....	0167	Whirlpool.....	1332
RadioShack.....	0240	X10.....	0167
Russound.....	1232, 1233		

For Audio - Receiver Receptores de Audio

ADC	0531	Onkyo	0842, 1298, 1320, 1531
Aiwa.....	1405, 0121, 1388, 1641	Optimus	1023, 0014, 0121,
Alco	1390	.....	0531, 0670, 1074
AMC.....	1077	Oritron.....	1366
Anam.....	1609, 1074	Panasonic	1308, 1518, 1288,
Arcam.....	1189	.....	1316, 1548, 1633, 1763, 1764
Audiotronic	1189	Philips	1189, 1269, 0891, 1266
Audiovox	1390	Pioneer.....	1023, 0014, 0150,
B & K	0701, 0840	.....	0531, 0630, 1384
Bose.....	1229, 1253, 1933	Polk Audio	1289
Capetronic.....	0531	Proscan	1254
Carver.....	1189, 0121, 1289	RadioShack.....	1609
Curtis Mathes.....	0014	RCA	1023, 1609, 1254, 0531,
Denon.....	1360, 0121, 1142, 1306	.....	1074, 1390, 1511
Emerson.....	0531	Realistic	1609, 0121
Fisher.....	1801	Rio	1869
Harman/Kardon	0110, 0891,	Samsung	1295, 1304, 1500
.....	1289, 1304, 1306	Sansui.....	1189
Hitachi	1801	Sanyo	1469, 1801
Insignia.....	1077	Sherwood	1077, 1653
Integra	0842, 1298, 1320	Sonic Blue	1869
JBL	0110, 1306	Sony.....	1058, 1441, 1258, 1759,
JVC.....	1058, 1374, 1495	.....	1622, 1558, 1658, 1758, 1858
Kawasaki.....	1390	Soundesign.....	0670
Kenwood.....	1313, 1570	Stereophonics	1023
KLH	1390, 1428	Sunfire.....	1313
Koss.....	1366	Teac.....	1074, 1390, 1528
LG.....	1293	Technics.....	1308, 1518, 1633
Magnavox.....	1189, 1269, 0531,	Thorens	1189
.....	1266, 1514	Toshiba.....	0842
Marantz ...	1189, 1269, 0891, 1289	Venturer.....	1390
McIntosh	1289	Wards.....	0014
Micromega	1189	Yamaha	1023, 0176, 1176,
Myryad.....	1189	.....	1276, 1331, 1375
Nakamichi.....	1313	Zenith	1293

For Audio - Amplifier Amplificadores de Audio

Adcom	1100	Mark Levinson	1483
Bel Canto Design	1583	McIntosh	0251
Bose.....	0674	NEC	0264
Carver.....	0892	Parasound.....	1934
Classe	1461	Philips	0892
Halcro	1934	Polk Audio	0892
Harman/Kardon	0892	Primare.....	1395
JVC.....	0331	Shure.....	0264
Left Coast	0892	Sony.....	1126
Lexicon.....	1802	Victor.....	0331
Marantz	0892	Yamaha	0354, 0133

For Audio - CD Reproductores de CDs

DKK	0000	RadioShack.....	0000, 0180
Fisher.....	0000	RCA	1062
Harman/Kardon	0100	Realistic	0000, 0180
Inkel.....	0180	Sansui.....	0000
Integra	0101	Sanyo	0000
JVC.....	0072	Sharp.....	0180
Kenwood	0000	Sherwood	0180
Marantz	0180	Sony.....	0490, 0000, 0100,
Memorex.....	0000	.....	1364, 0185
Miro	0000	Symphonic	0180
Modulaire.....	0000, 0180	Teac.....	0490, 0180
Onkyo	1327, 0101	Victor.....	0072
Optimus.....	0000	Yamaha	0490, 0036, 1292
Panasonic	0388, 0752	Yorx	0000
Pioneer.....	1062, 1087		

For Audio - Cassette Deck Reproductores de Audiocasete

Aiwa.....	0029	Philips	0029
Carver.....	0029	Pioneer	0027
Denon.....	0076	Polk Audio	0029
Grundig	0029	RCA	0027
Harman/Kardon	0182, 0029	Sansui.....	0029
JVC.....	0244	Sony.....	0243, 0170, 0291
Magnavox.....	0029	Wards.....	0027
Marantz	0029	Yamaha	0097
Optimus.....	0027		

For Audio - Accessory Accesorios de Audio

Aiwa.....	0159	DLO	1155
Altec Lansing	0607, 1056	Imerge	1491
Apple.....	1115, 1644	iPort.....	2042
D-Link	1522	Marantz	1491

For Audio - Accessory, cont.**Accesorios de Audio, cont.**

NaviPod	1644	Sonance.....	2042
Netgear	1785	Sony.....	0159
Roku.....	1828	SSI.....	1522
Slim Devices.....	1844	Yamaha	1809, 1810

For Cable Set Top Box**Convertidores de Cable**

A-Mark	0008, 0144	Nova Vision.....	0008
ABC	0237, 0003, 0008	Novaplex.....	0008
Accuphase	0003	Pace.....	1877, 0877, 0237, 0008
Acorn.....	0237	Panasonic	0000, 0008, 0144, 0107
Action	0237	Paragon	0000, 0008, 0525
Active	0237	Penney	0000
Archer.....	0237	Philips	1305, 0317
BCC	0276	Pioneer....	1877, 0877, 0144, 0533
British Telecom	0003	Pulsar	0000
Century.....	0008	Quasar	0000
Digeo.....	1187	Regal.....	0276
Director.....	0476	Runco	0000
Fosgate	0276	Samsung	0003, 0144
GE.....	0144	Scientific Atlanta.....	1877, 0877, 0477, 0237, 0003, 0000, 0008
General Instrument ...	0476, 0810, 0276, 0003	Sony.....	1006
Gibraltar.....	0003	Sprucer.....	0144
GoldStar.....	0144	Starcom	0003
Hitachi	0003, 0008	Supercable	0276
Insight.....	0476, 0810	Torx	0003
Jerrold....	0476, 0810, 0276, 0003	Toshiba.....	0000
Memorex	0000	United Cable.....	0276, 0003
Mitsubishi	0003	US Electronics ...	0276, 0003, 0008
Motorola.....	1376, 0476, 0810, 0276, 1187	Videoway.....	0000
		Zenith	0000, 0525

For Satellite Set Top Box**Receptores de Satélite**

Bell ExpressVu	0775	Funai.....	1377
Chaparral.....	0216	GE.....	0392, 0566
DirecTV.....	1377, 0392, 0566, 0639, 1639, 1142, 0247, 0749, 1749, 0724, 0819, 1856, 1076, 1392, 1442, 1609, 1640	GOI.....	0775, 1775
Dish Network System ..	1505, 1005, 0775, 1775	Hitachi	0749, 0819
Dishpro....	1505, 1005, 0775, 1775	Houston.....	0775
Echostar....	1505, 1005, 0775, 1775	HTS.....	0775, 1775
Expressvu	0775, 1775	Hughes Network Systems....	1142, 0749, 1749, 1442
		JVC.....	0775, 1775
		Magnavox.....	0724, 0722
		Memorex	0724

For Satellite Set Top Box, cont.

Mitsubishi	0749
Motorola.....	0856
Optimus.....	0724
Panasonic	0247, 0701
Paysat.....	0724
Philips	1142, 0749, 1749, 0775, 0724, 0819, 1076, 0722, 1442
Pioneer.....	1142, 1442
Proscan	0392, 0566
RadioShack.....	0566, 0775
RCA	0392, 0566, 1142, 0775, 0855, 0143, 1392, 1442

Convertidores de Cable, cont.

Samsung	1377, 1142, 1276, 1442, 1609
SKY.....	0856
Sony.....	0639, 1639, 1640
Thomson	0392, 0566
Tivo.....	1142, 1442
Toshiba.....	0749, 1749, 1285
UltimateTV	1392, 1640
Uniden	0724, 0722
Zenith	0856, 1856

For Video - Laser Disk Player

Carver.....	0064, 0194
Denon.....	0059, 0172
Harman/Kardon	0194
Magnavox.....	0064, 0194, 0217
Marantz	0064, 0194
Mitsubishi	0059
NAD.....	0059
Optimus.....	0059
Panasonic	0204
Philips	0064, 0194

Reproductores Laser Disk (LD)

Pioneer.....	0059
Polk Audio	0194
Quasar	0204
Sony.....	0193, 0201
Technics.....	0204
Theta Digital.....	0194
Toshiba.....	0059
Wards.....	0059
Yamaha	0217

For Video - DVD Reproductores DVD

3D LAB	0503, 0539
Accurian.....	0675
Akai	0695, 0899
Alba	0672
Alco	0790
Apex Digital.....	0533, 0672
Audiovox	0790
Blue Parade	0571
Blue Sky	0695
Broksonic.....	0695
California Audio Labs	0490
Centrex.....	0672
Citizen.....	0695
Clairtone	0571
Creative	0503, 0539
CyberHome.....	0816
Denon.....	0490, 0634
Digitrex.....	0672
Disney.....	0675

Dual.....	0675
DVD2000	0521
Emerson.....	0591, 0675
Enterprise	0591
Entivo	0503, 0539
Funai.....	0675
GE.....	0522
Go Video.....	0573, 1075
Goodmans	0790
Gradiente.....	0490
Grundig	0539
Hitachi	0573, 0664
Hiteker	0672
Integra	0571, 0627
JMB	0695
JVC.....	0558, 0623, 0867, 1164
Kawasaki.....	0790
Kenwood.....	0490, 0534
KLH	0790

For Video - DVD, cont.**Reproductores DVD, cont.**

Kloss	0533	Realistic	0571
Lasonic	0627	Reoc	0752
Lecson	1533	Rotel	0623
LG	0591	Sampo	0752
Magnasonic	0675	Samsung	0490, 0573, 0820, 0899, 1075
Magnavox	0503, 0539, 0646, 0675	Sansui	0695
Marantz	0503, 0539, 0675	Sanyo	0675, 0695
McIntosh	1533	Schwaiger	0752
Memorex	0695	Sharp	0630, 0675, 0752
Microsoft	0522	Shinonic	0533
Minato	0752	Sonic Blue	0573
Mitsubishi	1521, 0521	Sony	0533, 1533, 0864, 1033, 1431
Onkyo	0503, 0627	Sylvania	0675
Optimus	0571	Symphonic	0675
Palsonic	0672	Teac	0571, 0790, 0809
Panasonic	0503, 0490, 0571, 0703, 1362, 1462, 1762	Technics	0490, 0703
Philco	0675	Theta Digital	0571
Philips	0503, 0539, 0646, 0675, 0854, 1260, 1354	Thomson	0522
Pioneer	0525, 0571, 0631	Toshiba	0503, 0573, 0539, 0695, 1045, 1154
Polk Audio	0539	Universum	0591
Presidian	0675	Urban Concepts	0503, 0539
Proceed	0672	Venturer	0790
Proscan	0522	Xbox	0522
RadioShack	0571	Yamaha	0490, 0539, 0545
RCA	0522, 0571, 0790, 0822, 1132	Zenith	0503, 0591

For Video - VCR**Reproductores VCR**

A-Mark	0000	Criterion	0000
ABS	1972	Crosley	0035, 0081, 0000
Admiral	0060	Curtis Mathes	0060, 0035, 0000
Adventura	0000	CyberPower	1972
Aiwa	0000	Daewoo	0045
Alienware	1972	Dell	1972
American High	0035, 0081	Denon	0081, 0042
Amstrad	0000	DirecTV	0739
Astra	0035	Dual	0000
Avis	0000	Dynatech	0000
Bell & Howell	0035, 0000	Electrohome	0060, 0000
Broksonic	1479	Emerex	0032
Canon	0035	Emerson	0000, 1479
Carver	0035, 0081	Fisher	0000
Citizen	0035, 0000	Fuji	0035, 0033
Colortyme	0060, 0035, 0045	Fujitsu	0000
Colt	0000	Funai	0000

For Video - VCR, cont.**Reproductores VCR, cont.**

Garrard.....	0000	Mitsubishi	0060, 0000, 0042,
Gateway.....	1972	.....	0067, 0807
GE.....	0060, 0035, 0000, 0807, 1060	Motorola.....	0035
Gemini	0060	MTC	0000
Genexxa.....	0000	MTX	0000
Go Video.....	0614	Multitech	0000
GoldStar.....	0035, 0000, 1237	NEC	0067
Goodmans	0081, 0000	Niveus Media	1972
Gradiente.....	0000	Northgate	1972
Granada.....	0081, 0042	Olympus.....	0035
Grundig	0081	Optimus	1062, 0035, 0000
Harley Davidson	0000	Orion	0000, 1479
Harman/Kardon	0081	Panama	0035
Hewlett Packard	1972	Panasonic	1062, 0035, 0000,
HI-Q.....	0035, 0000	.....	0225, 0614, 0616
Hitachi	0035, 0045, 0000, 0042	Penney ...	0035, 0081, 0000, 0042,
Howard Computers.....	1972	.....	0067, 1237
HP.....	1972	Pentax.....	0042
Hughes Network Systems.....		Philco.....	0035, 0081, 0000
.....	0042, 0739	Philips	0035, 0081, 0045, 0000,
Humax	0739	.....	0616, 0618, 0739
Hush	1972	Pioneer.....	0081, 0042, 0067
Hytek.....	0000	Polk Audio	0081
iBUYPOWER	1972	Proscan	0060, 1060
Jensen	0067	Protec	0000
JVC.....	0067	Quartz.....	0035
Kenwood	0067	Quasar	0035
Kodak	0035	RadioShack.....	0035, 0000
KTV.....	0000	RCA	0060, 0035, 0045, 0000,
Linksys	1972	.....	0042, 0807, 0880, 1060
Lloyd's.....	0000	Realistic	0035, 0000
Loewe	0081	ReplayTV	0614, 0616
Logik	0000	Ricavision.....	1972
LXI.....	0000, 0042, 0067	Samsung	0060, 0045, 0000,
Magnasonic	0000	.....	0739, 1014
Magnavox.....	0035, 0081, 0000,	Sansui.....	0000, 0067, 1479
.....	0618, 1781	Sanyo	0000
Marantz	0035, 0081	Scott	0045
Matsushita	0035, 0081	Sears.....	0060, 0035, 0033, 0045,
Media Center PC.....	1972	.....	0000, 0042, 0067, 1237
MEI.....	0035	Sharp.....	0032, 0000, 0807
Memorex	0035, 0000, 1237	Shintom	0000
MGA.....	0060	Signature.....	0060, 0035, 0000
Microsoft	1972	Sonic Blue	0614, 0616
Mind.....	1972	Sony.....	0035, 0032, 0033, 0000,
Minolta	0042	.....	0067, 0636, 1232, 1972

For Video - VCR, cont. Reproductores VCR, cont.

Soundmaster	0000	TMK	0000
Stack 9	1972	Toshiba.....	.0045, 0000, 0845, 1972, 1996
STS	0042	Touch	1972
SV2000	0000	Ultra.....	0045
SVA.....	0000	Vector.....	0045
Sylvania ...	0035, 0081, 0000, 1781	Victor.....	0067
Symphonic	0000	Video Concepts	0045
Systemax.....	1972	Videosonic.....	0000
Tagar Systems.....	1972	Viewsonic	1972
Tandy	0000	Villain.....	0000
Tatung	0081, 0000, 0067	Voodoo.....	1972
Teac.....	0000, 0067	Wards	.0060, 0035, 0081, 0033, 0045, 0000, 0042
Technics.....	0035, 0000	White Westinghouse.....	0000
Teknika.....	0035, 0000	XR-1000	0035, 0000
Thomas	0000	Zenith	0033, 000
Thomson	0060		
Tivo.....	0618, 0636, 0739, 1996		

For Video - Accessory Accesorios de Video

ABS.....	1272	Mind.....	1272
Alienware.....	1272	Niveus Media	1272
CyberPower	1272	Northgate	1272
D-Link	1554	Ricavision.....	1272
Gateway.....	1272	Sony.....	1272, 1324, 1364
Hewlett Packard	1272, 1267	Stack 9	1272
Howard Computers.....	1272	Systemax.....	1272
HP.....	1272, 1267	Tagar Systems.....	1272
Hush	1272	Toshiba.....	1272
iBUYPower	1272	Touch	1272
Linksys	1272, 1365	Viewsonic	1272
Media Center PC.....	1272	Voodoo.....	1272
Microsoft	1272		

For Television Televisores

A-Mark	0047, 0054	Alleron.....	0030
Accuscan.....	0047	Ambassador.....	0150
Action	0030	America Action	0180
Admiral.....	.0047, 0054, 0017, 0051, 0093, 0463, 0180	American High.....	0000, 0060
Advent	0761	Amstrad.....	0171
Adventuri.....	0000	Amtron	0000, 0180
Agna	0150	Anam.....	0180
Aiko	0092	AOC	0180, 0030
Akai	.0060, 0812, 0702, 0030, 0145	Apex Digital.....	0156, 0765
		Audinac	0180
		Audiovox	0451, 0180, 0092

For Television, cont. Televisores, cont.

Aventura	0171	Electroband	0000
Baysonic	0180	Electrograph.....	1755
Beaumark	0017, 0178, 0030	Electrohome.....	0154, 0000, 0463,
Belcor	0030	.....	0150, 0178, 0030
Bell & Howell.	0054, 0154, 0093	Emerald	0178
Bradford.....	0180	Emerson.....	0047, 0154, 0451,
Brockwood	0178, 0030	0236, 0463, 0180, 0150, 0178, 0171	
Broksonic.....	0236, 0463, 0180	Envision	0030
Candle.....	0030	ESA.....	0812, 0171
Capehart ..	0017, 0178, 0030, 0092	Fisher.....	0054, 0154, 0000
Carnivale	0030	Fortress	0093
Carver.....	0054	Fujitsu	0683, 0809
Celebrity.....	0000	Funai.....	0000, 0180, 0171
Celera	0765	Futuretech.....	0180
Changhong.....	0156, 0765	Gateway.....	1756, 1755
Cineral.....	0451, 0092	GE.	1447, 0047, 0000, 0051,
Citek.....	0047	0451, 0060, 0178, 0030, 1347	
Citizen.....	0054, 0000, 0451, 0463,	Gemini	0047
.....	0180, 0060, 0030, 0171, 0092	Gibraltar.....	0017, 0000, 0030
Clarion	0180	GoldStar...	0047, 0054, 0178, 0030
Classic.....	0030, 0092	Gradiente.....	0053
Colortyme	0047, 0054, 0017,	Grundig	0683
.....	0060, 0178, 0030	Grundy	0180
Commercial Solutions..	1447, 0047	Grunpy	0180
Conic.....	0178	Hallmark	0236, 0180, 0178
Contec	0180	Harley Davidson	0000, 0180,
Craig	0180, 0171	.....	0060, 0178, 0030
Crosley	0054, 0000, 0180,	Harman/Kardon	0054
.....	0030, 0171	Harvard	0180
Crown	0093, 0180	Havermy	0093
Curtis Mathes.....	0047, 0054,	Heathkit	0017
0154, 0000, 0051, 0451, 0093, 0180,		Hello Kitty	0451
0060, 0702, 0178, 0030, 0145, 0166,		Hitachi ...	0047, 0054, 0017, 0000,
.....	1347	.....	0051, 1145, 0145
CXC	0180	Ima.....	0236, 0180, 0178
Daewoo	0451, 0178, 0092,	Infinity.....	0054
.....	1756, 1755	Insignia.....	0171
Dayton	0092	Inteq	0017, 0145
Daytron	0178, 0030, 0092	JBL.....	0054
Dell.....	1178	JCB.....	0000
Denon.....	0145	Jensen	0761
Dumont	0017, 0180, 0178	JIL.....	0030
Durabrand.....	0463, 0180, 0178,	Jutan.....	0030
.....	0171	JVC.....	0054, 0053, 0030, 0650,
Dwin	0093		0731, 1253
Dynex	1463	Kamp.....	0017, 0180
Eaton.....	0060	Kawasho	0030

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KEC.....	0180, 0060	Orion	0017, 0236, 0463, 0180,
Kenwood	0180, 0030		0178, 1463
KLH	0156, 0180, 0765	Pace.....	0092
Kloss	0030	Panasonic	0054, 0000, 0156,
Konka	0180	.....	0250, 0051, 0236, 0030, 0650
KTV.....	0463, 0180, 0030	Paxonic.....	0060, 0030
Lark	0154	PCE.....	0156, 0060
LG.....	0054, 1265, 0060, 0178,	Penney ...	0047, 0000, 0156, 0250,
.....	0030, 0856, 1178	.....	0051, 0060, 0178, 0030, 1347
Lloyd's.....	0236, 0180, 0030	Philco.....	0054, 0463, 0030, 0145
Logik	0236, 0180	Philips	1454, 0054, 0030, 0171,
LXI..	0047, 0054, 0017, 0154, 0000,	.....	0690, 1254
0156, 0051, 0093, 0060, 0053, 0178,	.....	Pilot	0051, 0060, 0178, 0030
.....	0030, 0171, 0166	Pioneer.....	0166, 0679
Magnasonic	0054, 0000, 0156,	Polaroid	0765
.....	0093, 0030, 0092	Portland	0451, 0092
Magnavox.....	0047, 1454, 0054,	Precision.....	0236, 0180
0154, 0000, 0250, 0051, 0180, 0060,	.....	Prima.....	0761
.....	0030, 0171, 0092, 1254, 1755	Prism.....	0250, 0051
Majestic	0017	Proscan	1447, 0047, 1347
Marantz	1454, 0054, 0030	Proton.....	0178
Matsushita	0250, 0051, 0650	Pulsar	0017, 0092
Maxent.....	1756, 1755	Pulser	0178, 0092
Megatron.....	0047, 0178, 0145	Quartz.....	0150, 0178
Memorex.....	0154, 0463, 0180,	Quasar	0250, 0051, 0650
.....	0150, 0178, 0030	Rabbit.....	0047
MGA.....	0150, 0178, 0030	RadioShack.....	0047, 0154, 0180,
MGN Technology	0178	.....	0150, 0178, 0030
Micro Genius.....	0150	RCA	1447, 0047, 0054, 0000,
Midland.....	0047, 0017, 0051	0051, 0093, 0178, 0090, 0679, 1047,	.....
Mitsubishi ..	0154, 0093, 1250, 0150,	.....	1347, 1547
.....	0178, 0030, 0836	Realistic ..	0047, 0154, 0180, 0150,
Motorola...	0054, 0051, 0093, 0150	.....	0178, 0030
MTC	0180, 0060, 0030, 0092	Runco	0017, 0060, 0030
Multitech	0180	Sampo	0047, 0030, 1756, 1755
NAD.....	0156, 0178, 0166, 1156	Samsung ..	0047, 0054, 0017, 0154,
NEC	0047, 0178, 0030, 1704	0060, 0812, 0702, 0178, 0030, 1060	.....
NetTV	1755	Sanky	0060, 0030
Nikko	0178, 0030, 0092	Sansui.....	0463, 0060, 0030
Nikkodo	0178, 0030, 0092	Sanyo	0047, 0054, 0154, 0000,
Nishi.....	0030	Sanyo	0463, 0171, 1755
NTC	0092	Saville	0060
Nyon	0000	Scotch.....	0178
Onwa.....	0180	Scott	0236, 0180, 0178, 0030
Optimus...	0154, 0250, 0093, 0180,	Sears.....	0047, 0054, 0017, 0154,
.....	0150, 0178, 0030, 0166, 0650	0000, 0156, 0051, 0093, 0060, 0053,	
Optonica	0093		0178, 0030, 0171, 0166
		Sharp.....	0054, 0093, 0180

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Sheng Chia	0093	TNCi	0017
Shivaki	0178	Tocom	0156
Siemens	0145	Toshiba	0154, 1256, 0156, 0150, 1265, 0060, 1145, 0145, 0166, 0650, 0845, 1156, 1656, 1704
Signature	0047, 0093, 0030	Totevision	0051
Simpson	0178, 0030	Toyomenka	0178
Singer	0060, 0092	Truetone	0250, 0051
Solar Drape	0000	TVS	0463
Sony	0017, 0154, 1100, 0000, 0150, 0053	Ultra	0092
Soundesign	0180, 0178	Universal	0047
Spectravision	0156, 0178	V	1756, 0885, 1755
Squareview	0171	Vector Research	0030
SR2000	0154, 0171	Victor	0053
SSS	0180	Vidikron	0054
Starlite	0236, 0180	Vidtech	0178
Superscan	0093	Viewsonic	0885, 1755
Supreme	0000	Viking	0060
SV2000	0054	Vizio ..	1756, 0885, 1755, 0178, 1265
Sylvania ...	0047, 0054, 0154, 0000, 0051, 0178, 0030, 0171, 0092	Wards	0047, 0054, 0017, 0154, 0000, 0051, 0093, 0236, 0178, 0030, 0166, 1156
Symphonic	0000, 0180, 0178, 0171	Waycon	0156
Tandy	0093	Welton	0178
Tatung	0000, 0051, 1756	Westinghouse ...	0000, 0451, 0885
Teac	0154	White Westinghouse ...	0451, 0236, 0463
Technics	0054, 0250, 0051	World	0451, 0236, 0463, 0180
Technovox	0030	XR-1000	0154, 0180, 0171
Techwood	0250, 0051, 0060	Yamaha	0030
Teknika ...	0054, 0463, 0180, 0150, 0060, 0178, 0092	Yorx	0030
Telecolor	0017	Zenith	0047, 0017, 0000, 0093, 0463, 1265, 0812, 0178, 0030, 1145, 0145, 0171, 0092
Telefunken	0702		
Thomas	0047, 0178		
Thomson	1447, 0047		
TMK	0236, 0180, 0178		