

**Gentex HomeLink Mirror  
INSTALLATION  
Instructions**

Tools Required for Proper Installation:

**Safety Glasses, DC Voltmeter  
Flashlight, Pliers, Phillips Screwdriver  
Power Drill, Torx Driver #15**

**These instructions are provided with the Gentex HomeLink mirror installation kit available through WembleySells.com and are intended to be used only with that kit. The wire chart included in these instructions is designed for the wire colors used on WembleySells wire harnesses. Using these instructions for harnesses purchased anywhere other than from WembleySells may give undesired results.**

**Thank You,  
WembleySells**

**1.0 INSTALLATION PRECAUTIONS/NOTES:**

**\*\* Warning \*\***

**\*\* Improper Removal of original mirror could damage windshield \*\*  
Installation should be done by a professional installer.**

- Do not use excessive force when removing OE mirror from windshield. The windshield button may separate from the windshield or the windshield may break.
- Do not use excessive force if removal of OE mirror button is necessary.
- Do not route wiring over sharp metal edges or allow to be pinched behind trim to avoid causing an electrical short or break in the wire.
- Manufacturer/distributor not responsible for installation-related damage to vehicle.  
For installation situations that installer is not familiar with, a qualified installation technician or mechanic should be consulted for assistance.
- Use wire ties to hold wires away from hot engine and critical parts such as brake and steering systems.

## **2.0 PREPARATION FOR ROUTING THE WIRING HARNESS (Inside the Driver's Side Area)**

**2.1** Remove the "A" pillar (windshield post) trim molding, upper windshield trim molding (if applicable), and kick panel trim.

### **3.0 REMOVE ORIGINAL EQUIPMENT (OEM) REARVIEW MIRROR CAUTION: DO NOT USE EXCESSIVE FORCE WHEN REMOVING MIRROR FROM WINDSHIELD. THE WINDSHIELD BUTTON MAY SEPARATE FROM THE WINDSHIELD OR THE WINDSHIELD MAY BREAK.**

**3.1** Screw mount mirror removal procedure. Note that there are several versions of mirror mount systems. If unfamiliar with mirror removal, seek professional assistance.

- Using a Philips screwdriver or a #15 torx bit, loosen the screw in the base of the mirror.
- After loosening screw, gently lift upward to slide mirror off of mirror mount.

**3.2** Wedge mount mirror removal procedure: (Common Method for screwless mount).

- Using a small 1/8" (4 mm) flat-blade screwdriver, insert the flat end into the opening at the bottom of the mirror mount at the windshield.
- Slide the screwdriver into the center of the mirror mount until resistance is felt.
- Gently apply a small amount of additional upward force to lift away locking spring in the mount.
- While still applying upward pressure with the screwdriver, grasp the mirror bracket and wiggle side to side.
- Lift mirror up toward the headliner and off the windshield mount button.

**3.3** Camlock Mirror Removal procedure: (Common Method)

- Grasp the base of the mirror.
- Rotate 90 degrees left or right.
- Slide mirror downward toward dash to remove.

## **4.0 INSTALL NEW INTERIOR MIRROR**

**4.1** Wedge Mount Mirror Installation:

- Slide the mirror bracket over the mirror button on the windshield.
- Rock mirror side to side to aid installation until mirror fits tightly onto mirror button.
- Use #15 Torx screwdriver to tighten locking screw through hole in center of compass pod below mirror mount.

NOTE: If your Gentex Mirror does not fit the button on your windshield, it is possible that you need a foreign vehicle adapter. It may also be possible that the mirror button will have to be replaced with one that is compatible with the Gentex mirror, i.e. Fords built prior to 1996. If you need information concerning an adapter or a mirror button kit, please contact your Gentex mirror retailer.

## **5.0 ROUTING OF THE POWER WIRING**

### **WARNING**

**\*\* Improperly connecting power wires could damage Mirror and Vehicle \*\***

**5.1** From the bottom of the driver's side dash, near the post location, feed the wiring up along the side of the dash to the opening near the base of the windshield. Pull the

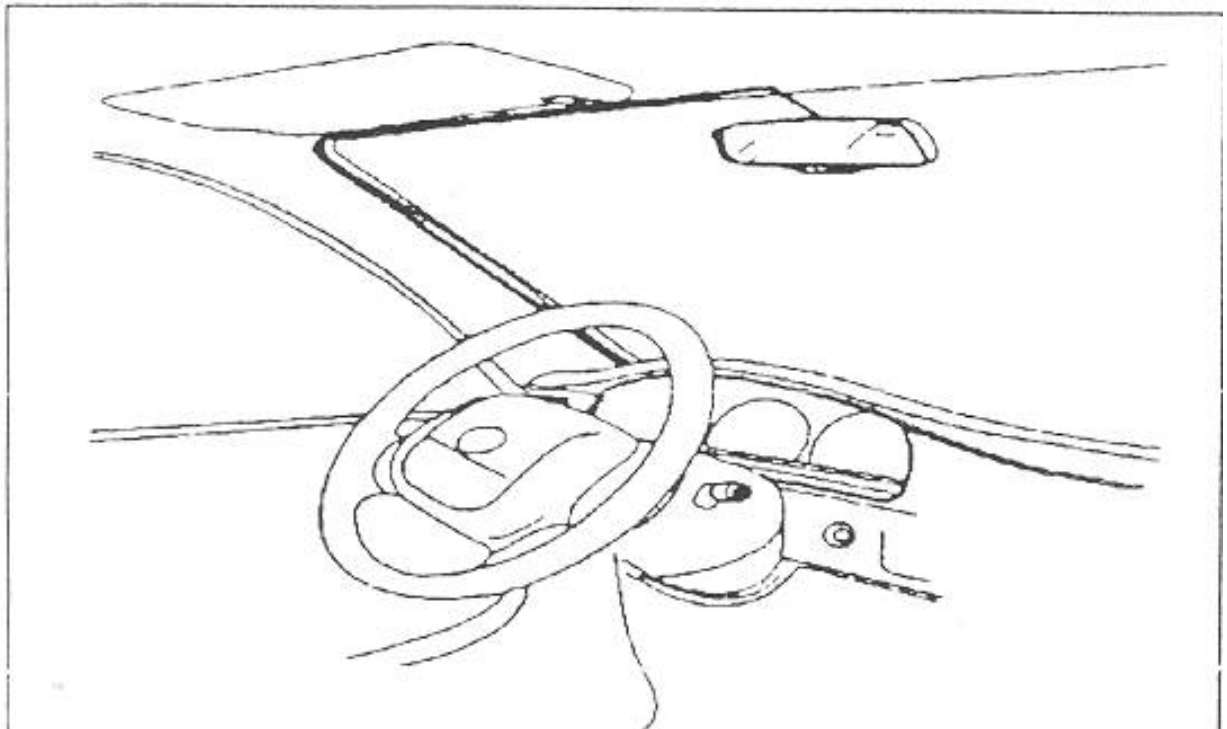
wiring up far enough to reach the mirror location.

**5.2** Plug in the wiring connector to its mirror counterpart. Route the wiring straight up to the headliner.

**5.3** Gently pull down the front edge of the headliner and tuck the wiring up under the edge of the headliner.

**5.4** Continue tucking the wiring under the headliner along the top of the windshield working your way over to the driver's side "A" pillar. Dress the wiring along the "A" pillar down to the dash opening.

NOTE: It will probably be necessary to tape or wire tie these wires in place, or wire tie them to the existing factory harness.



## Wire Chart

Wire Color	Connection	
<b>Black with ¼" lug</b>	Vehicle Ground	< Ground for all mirror functions
<b>Red</b>	+ 12V switched by ignition	< AutoDim / Compass Power
<b>Yellow</b>	+ 12V constant power(battery)	< HomeLink / Map Light Power
<b>Brown</b>	- 12V Switched dome light circuit	< Map Light Trigger
<b>White</b>	+ 12V Reverse Lamp	< Reverse Auto Dim Disable Trigger
<b>Black 2 wires</b>	Temperature Sensor: 2 wires terminating into a 2-pin connector may be provided for connection to the under-hood wiring harness that runs through the firewall to a Temperature Sensor if the mirror has a temperature display.	
<b>Black 2 wires</b>		

## **6.0 GROUND WIRE CONNECTION (BLACK WIRE)**

**6.1** Locate an existing bolt or screw that is in contact with the vehicles metal body in the area of the driver's step well.

**6.2** Route the mirror ground wire (black) to the ground point.

**6.3** Remove the bolt or screw from the ground point and install the ring terminal over the ground bolt/screw. Scrape off paint from mounting surface, if necessary, to obtain a solid connection.

**6.4** Reinstall and tighten the fastener.

## **7.0 12 VOLT (POSITIVE) SWITCHED WIRE CONNECTION (RED WIRE)**

**7.1** Using a multi-meter, check for a wire exiting the fuse block that tests for positive 12 volts when the vehicle is running and 0 volts when the vehicle is off. The power must turn off when the ignition is in the OFF position.

**7.2** Route the RED wire to the ignition controlled wire found in step 7.1.

NOTE: If mirror remains on at all times, it could eventually drain the car's battery.

**7.3** Using a butt connector, scotch lock or t-tap connector, connect the red ignition wire at this time.

## **8.0 12 VOLT (POSITIVE) BATTERY WIRE CONNECTION (YELLOW WIRE)**

**Note:** If you have a HomeLink mirror you may want to connect this Yellow wire to the same power source as the Red ignition switched wire found in step 7.1 for security reasons. This will prevent the HomeLink transmitter from operating while the vehicle is off. If your vehicle is parked outside of the garage someone could use the HomeLink transmitter on the mirror to gain access to your garage if the HomeLink transmitter is connected to an always on power source.

**8.1** Using a multi-meter, check for a wire at the fuse block that tests for positive 12 volts when the vehicle is both running and off. The power must be present when the ignition is in the OFF position.

**8.2** Route the YELLOW wire to the constant power source found in step 8.1.

**8.3** Using a butt connector, scotch lock or t-tap connector, connect the red ignition wire at this time.

## **9.0 12 VOLT (NEGATIVE) MAP LIGHT TRIGGER (BROWN WIRE)**

(Some Map Light Mirrors only, GNTX-341 with Mood Lights, GENK42 and Scion TC mirrors do not use this wire)

NOTE: Some mirrors with map lights also have a Map Light Trigger feature that will turn the map lights on when the vehicles dome light is on. If the wire harness that came with your mirror includes a Brown wire your mirror has this functionality. If your harness does not contain a Brown wire please skip this step. The mirrors map light(s) are operated with the map light switch on the mirror. This brown wire will also turn the mirror map lights on when the vehicles dome light is on. Use of this wire is at your discretion. Connecting the map light trigger wire is optional, choosing not to connect it will not prevent the map light(s) from working using the map light button on the mirror.

There are two types of dome light circuits used in automobiles. Car manufacturers use different methods to turn the dome lights on. Some cars use a dome light circuit that switches Ground (Type A) to turn the dome light on. Others switch + 12 volts (Type B) to turn the dome light on. If your vehicle uses the switched Ground dome circuit (Type A) you can connect the Brown mirror harness wire to the switched Ground door jam switch wire to turn the map lights on with your dome light. If your vehicle switches + 12 volts (Type B) to activate the dome light you can still use the negative map light trigger wire but you will need to purchase and connect a small relay (Radio Shack Catalog # 275-226 or equivalent) to turn the mirrors map lights on with your dome light. This relay will use the switched + 12 volt

dome light circuit in your vehicle to provide Ground through a relay to the map light trigger wire when the vehicle door is open. A wiring diagram is provided below.

**Type A.** Switched Ground Dome Light Circuit - All General Motors, most Chrysler, and some Ford vehicles use a circuit that puts a constant + 12 volts to the dome light. When the door is opened, the door jam switch provides a path to ground and the dome light comes on. In this case the wire at the door switch will have + 12 volts when the door is closed and 0 volts when the door is open.

**Type B.** Switched Positive Dome Light Circuit - Most full size Ford and some Chrysler vehicles use a circuit that has two wires at the door jam switch. When the door is closed, there is + 12 volts on one wire but not the other. When the door is open, there is + 12 volts on both wires.

**9.1** Determine which type of dome light circuit your vehicle has using steps 9.1a and 9.1b.

**9.1a** Using a multi-meter, check for a wire at the door jam switch that tests for + 12 volts when the door is open and the dome light is on and tests for no voltage when the door is closed and the dome light is off. This is the Type B dome circuit, proceed to step 9.2 (Type B switched positive connection)

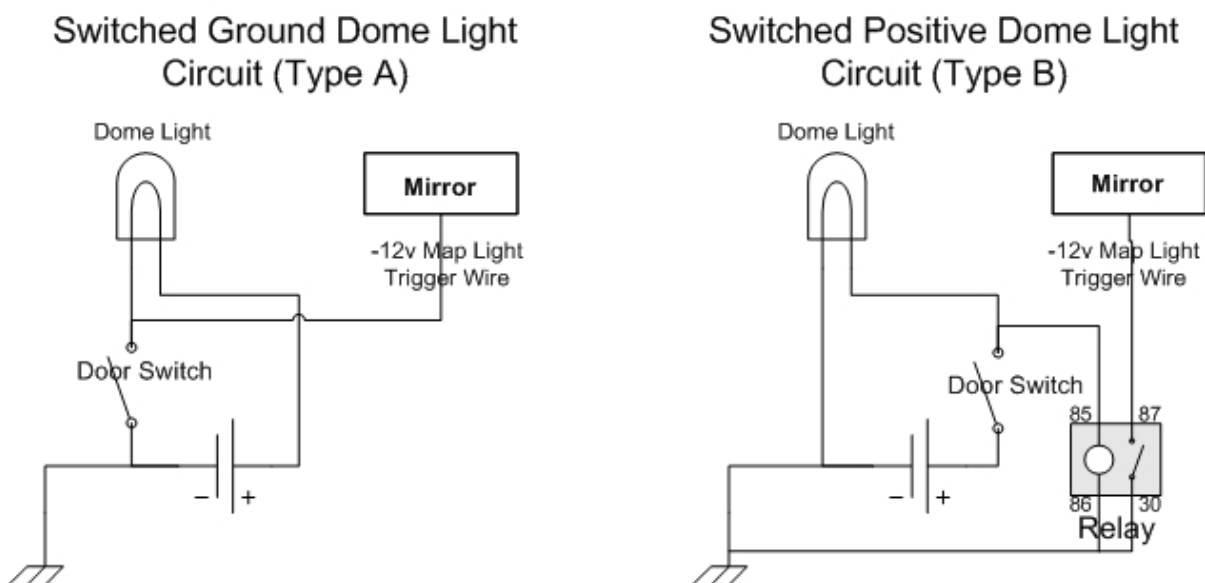
**9.1b** Using a multi-meter, check for a wire at the door jam switch that tests for + 12 volts when the door is closed and the dome light is off and tests for 0 volts and a short to ground when the door is open and the dome light is on. This is the Type A dome circuit, proceed to step 9.4 (Type A switched negative connection)

**9.2** (Type B switched positive connection) You will need to purchase a SPST 12 volt relay (Radio Shack catalog # 275-226 or equivalent) to have the map light(s) on this mirror come on with the dome light.

**9.3** Connect relay pins 86 and 30 of the relay to a Ground source, you can connect these 2 pins to the same Ground source found in step 6.0 that the Black wire is connected to. Connect relay pin 85 to the switched + 12 volt door jam wire found in step 9.1a. Connect the Brown mirror harness wire to relay pin 87. You have completed the Type B dome light circuit connection. Skip steps 9.4 and 9.5 and proceed to step 10.

**9.4** (Type A switched negative connection) Route the Brown wire to the switched Ground door jam dome light circuit wire found in step 9.1b.

**9.5** Using a butt connector, or t-tap connector, connect the Brown wire to the dome light circuit wire found in step 9.1b. You have completed the Type A dome light circuit connection, proceed step 10.



## 10.0 12 VOLT (POSITIVE) REVERSE LAMP CONNECTION (WHITE WIRE)

NOTE: This is an optional wire and may not be included in all wire harnesses. Use of this wire is at your discretion. When the vehicle is in reverse, this wire will disable the Auto Dimming feature for better visibility.

If your harness does not contain a White wire please skip this step.

**10.1** Using a multi-meter, check for a wire at fuse block or in the driver's step well area that tests for positive 12 Volts when the vehicle is in reverse.

**10.2** Route the white wire to the +12 volt reverse wire found in step 10.1.

**10.3** Using a butt connector, scotch lock or t-tap connector, connect the White wire to the reverse circuit wire at this time.

## 11.0 ROUTING THE TEMPERATURE HARNESS (inside the engine compartment) (Temperature mirrors only)

**11.1** Open the hood of the vehicle.

**11.2** Locate the temperature sensor portion of the harness; the section covered in wire loom.

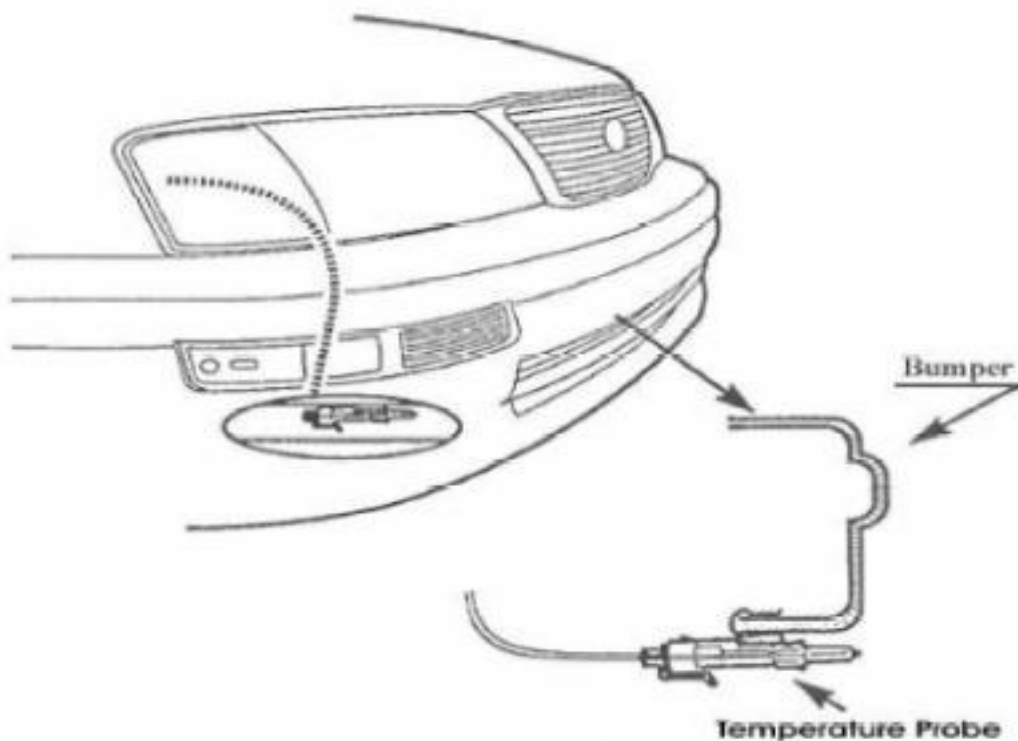
**11.3** Locate a grommet in the firewall near the interior harness location and remove it.

NOTE: If a grommet is not available, drill a 9/16" hole in a safe and convenient place to feed the 2-pin connector through. Take care not to cause damage to objects in the vehicle when drilling.

**11.4** Locate the temperature probe harness and lay it out with the 2-pin connector toward the firewall. Pass this connector through the hole or grommet access to just inside the passenger compartment.

NOTE: It is important that the 2-pin connector be inside the vehicle to prevent moisture from coming in contact with it.

**11.5** Route the rest of the harness towards the front of the vehicle over the fender well to an area in front of the radiator.



NOTE: The preferred location for the temperature probe is in the center of the grille or some place where it will be in free air in front, or to the side, of the radiator. Down near the bumper may also be used. Avoid locating it inside or in front of the wheel well, engine compartment, or too close to the headlamps. Try to keep the height no higher than the center of the radiator, and no lower than 8" above the pavement. Always try to keep the temperature probe in the center of the vehicle: never locate it outside of the frame rails.

**11.6** Locate the temperature sensor probe.

**11.7** Plug the probe on the connector making sure that the moisture seal seats inside the probe collar.

**11.8** Attach the temperature sensor probe to the vehicle. Do not install it pointing toward the rear of the car or pointing downward, as water may get past the connector seal. Pull the excess temperature sensor harness back into the engine compartment.

**11.9** Use the wire ties to secure the temperature sensor harness.

NOTE: Take care to route away from the accelerator and brake area so that the harness does not in any way interfere with their operation.

**11.10** Find the grommet that was removed in order to feed the temperature sensor harness through the firewall. Using a knife, carefully slit the grommet and slide the wires into the grommet and reinstall the grommet back into its original position in the firewall.

**11.11** If you have not already plugged the temperature sensor harness into the main power harness mating plug, do so at this time.

## **12.0 SECURING WIRE HARNESS**

**12.1** Now that all wires from the power harness have been installed, they will need to be secured with wire ties.

Under hood - be sure to keep wires away from moving parts such as steering and brake mechanisms. Keep away from extremely hot engine components.  
Interior - wire tie all wires out of the way, making sure to avoid steering and brake components.

## **13.0 TESTING**

### **Test the Auto Dimming Feature:**

**13.1** Turn the ignition switch to ON.

**13.2** With the vehicle in a fairly well lit area, perform the following:

- Push the I, On or Auto switch to turn the Auto Dimming feature On. Auto dimming is enabled when green LED is on.
- Cover the forward-looking photocell located on the back side of the mirror (a dark cloth or towel will work).
- After a few seconds, the mirror will begin to darken (the time may vary with ambient light levels). Shine a flashlight on the rearward facing photocell if necessary.
- Remove the cover from the forward photocell and the mirror will begin to clear.

### **Test the HomeLink Feature (if installed)**

**13.3** Push all of the HomeLink buttons on the front of the mirror one at a time. Each of these buttons will illuminate the indicator LED Red.

### **Test the Map Light Feature (if installed)**

**13.4** Push the Map Light button(s) on the front of the mirror. The map light(s) should cycle on and off with each press of the Map Light button.

Mirror testing is now complete.

# Operating your Mirror

## To Operate the Auto-Dimming Feature

Push in the Auto, Mirror or I button to turn the Auto-Dimming on or off. The Green LED will illuminate to indicate the mirror is ready to dim. Some mirrors have an Off or 0 Button to turn the Auto-Dimming feature off.

## To Operate the Lighting Feature if installed

1. To toggle the Map Light On or Off, press the Map Light Button.

**Note:** The remainder of the Light Feature section is for the GENK42 Mood Light Only: The lights on the GENK42 and Scion TC Mood Light mirrors can only be controlled with the buttons on the front of the mirror, they can not be controlled by voltage on the brown wire that may have been included in your harness. These lights operate differently depending on ambient lighting conditions. In the bright lighting conditions (daytime) the lights function as Map Lights only. In low lighting conditions the lights will function as Map lights or Mood lights. The instructions below are only for the Night time Mood light function.

2. Verify the vehicle is in a dark area and the ignition key is on.
3. Press and hold the Light button. The initial mode will be bright white maplights. To set the ambient lighting features, continue to hold the map light button and then release it when the desired color is displayed.
  - Soft amber will appear after 3 seconds
  - Soft blue will appear after 6 seconds
  - Soft white will appear after 9 seconds
  - Soft amber will appear again after 12 seconds to initiate Color Rotation of amber-blue-amber-white.
  - Continue holding the button for 15 seconds and the lights will turn off seconds.
4. From any mode (including off) push the Light button for Maplights. From maplights mode, push the Light button to return to the previous mode.

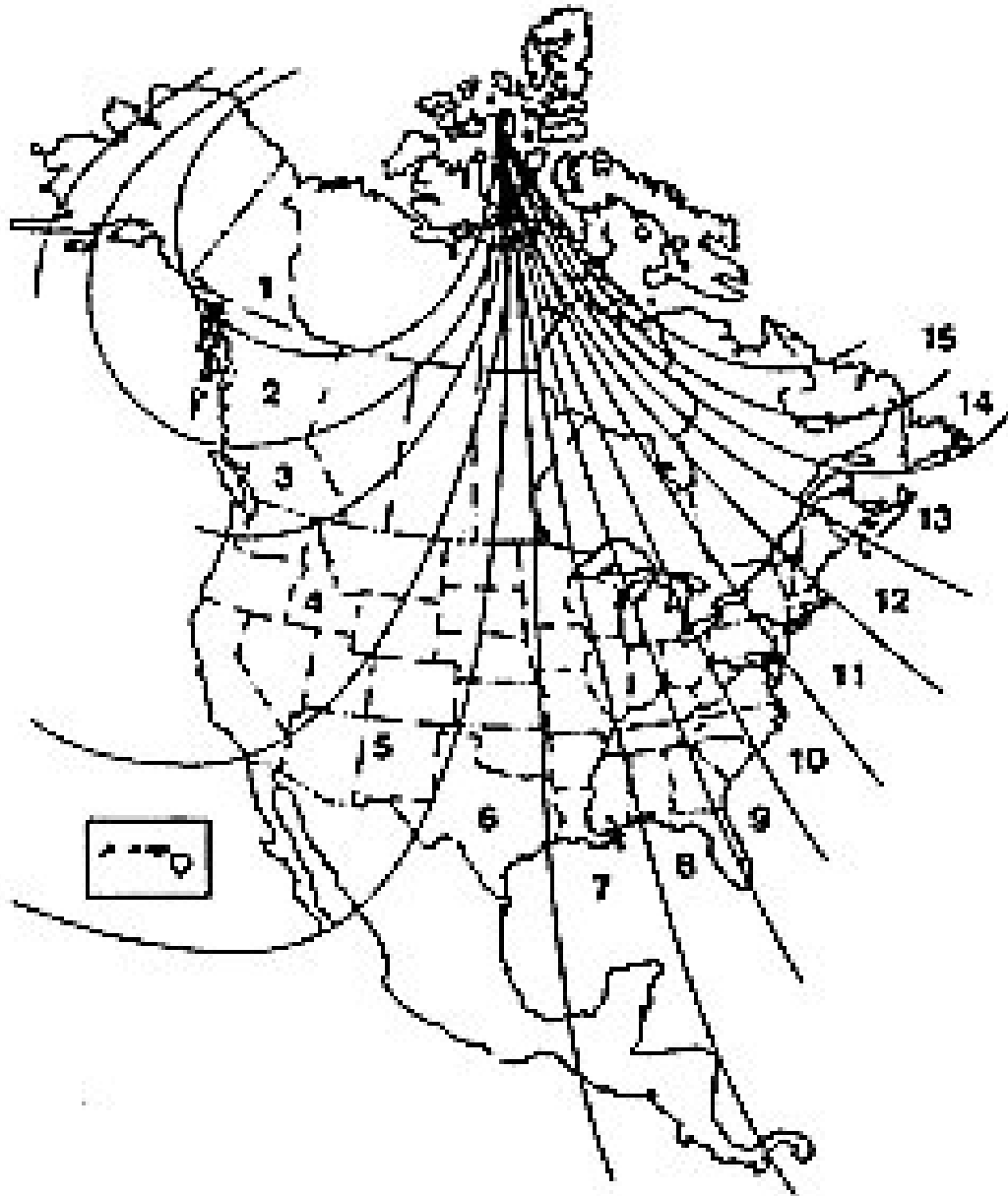
## To Operate the Temperature Feature if installed

1. Push in Temp switch to display outside temperature, and to toggle Temp On/Off.
2. Push Temp switch for 3 seconds until display blinks F or C. Release, then toggle Temp switch to select F or C. After 5 seconds of no switch activity the display will return to normal temperature reading.

## To Operate the Compass Feature if installed

1. Push the Compass display button. The visual display is now in the compass mode and the vehicle's directional heading will be displayed.
2. Pushing the Compass button again will turn off the visual display.
3. To adjust for Compass Variance:
  - a. Press the Compass button for more than 3 seconds. The current zone number will appear in the display.
  - b. Find your current location and variance zone number on the zone map.
  - c. Press the Compass button until the new zone number appears in the display. After you stop pressing the button in, the display will show a compass direction within a few seconds.
4. To Calibrate the compass, Press and hold the Compass button for 10 seconds until the display shows a "C". Now, calibrate the compass by driving the vehicle in 2 to 3 complete circles – 360 degrees – at less than 5 MPH. The compass should begin to display the heading before the 3<sup>rd</sup> circle is complete.

## Compass Zone Map



### **Cleaning the Mirror**

When cleaning the mirror, use a paper towel or similar material dampened with glass cleaner. Do Not spray glass cleaner directly on the mirror as that may cause the liquid cleaner to enter the mirror housing and damage the mirror.



## Programming Guide

The Homelink® Wireless Control System provides a convenient way to replace up to three hand-held radio-frequency (RF) transmitters used to activate devices such as gate operators, garage door openers, entry door locks, security systems, even home lighting. Additional Homelink® information can be found at: [www.Homelink.com](http://www.Homelink.com) or by calling **1-800-355-3515**.

### **Precautions!**

Before programming Homelink® to a garage door opener or gate operator, make sure that people and objects are out of the way of the device to prevent potential harm or damage. When programming a garage door opener, it is advised to park outside of the garage. Do not use Homelink® with any garage door opener that lacks safety stop and reverse features as required by U.S. federal safety standards (this includes any garage door opener model manufactured before April 1, 1982). A garage door that cannot detect an object - signaling the door to stop and reverse - does not meet current U.S. federal safety standards. For more information, contact Homelink® at: **www.Homelink.com** or by calling: **1-800-355-3515**.

Retain the original transmitter of the RF device you are programming for use in other vehicles as well as for future Homelink® programming. It is also suggested that upon the sale of the vehicle, the programmed Homelink® buttons be erased for security purposes. Refer to “Programming” (step #1 only) or, for assistance, contact Homelink® at: [www.Homelink.com](http://www.Homelink.com) or by calling: **1-800-355-3515**.

### **Programming Homelink®**

**Note:** Some vehicles may require the ignition switch to be turned to the second (or “accessories”) position for programming and/or operation of Homelink®. It is also recommended that a new battery be placed in the hand-held transmitter of the device being programmed to Homelink® for quicker training and accurate transmission of the radio-frequency signal.

1. Press and hold the two outer Homelink® buttons - releasing only when the indicator light begins to flash (after 20 seconds). **Do not** hold the buttons for longer than 30 seconds and **do not** repeat step one to program a second and/or third hand-held transmitter to the remaining two Homelink® buttons.
2. Position the end of your hand-held transmitter 1–3 inches (5–14 cm) away from the Homelink® buttons while keeping the indicator light in view.
3. Simultaneously press and hold both the Homelink® and hand-held transmitter button. **Do not release the buttons until step 4 has been completed.**

(**Note:** Some gate operators and garage door openers may require you to replace this Programming Step 3 with procedures noted in the “Gate Operator and Canadian Programming” section.)

### **Programming (cont’d.)**

4. The indicator light will flash slowly and then rapidly after Homelink® successfully receives the frequency signal from the hand-held transmitter. Release both buttons.
5. Press and hold the just-trained Homelink® button and observe the indicator light.

If the indicator light **stays on constantly, programming is complete** and your device should activate when the Homelink® button is pressed and released.

**Note:** To program the *remaining two* Homelink® buttons, begin with “Programming” - *step two*. **Do not repeat step one.**

If the indicator light blinks **rapidly for two seconds and then turns to a constant light, continue with “Programming” - steps 6-8** to complete the programming of a rolling code equipped device (most commonly a garage door opener).

6. At the garage door opener receiver (motor-head unit) in the garage, locate the “learn” or “smart” button. This can *usually* be found where the hanging antenna wire is attached to the motor-head unit.
7. Firmly press and release the “learn” or “smart” button. (The name and color of the button may vary by manufacturer.)

**Note:** There are 30 seconds in which to initiate step eight.

8. Return to the vehicle and firmly **press, hold for two seconds and release** the programmed Homelink® button. Repeat the **“press/hold/release”** sequence a second time, and, depending on the brand of the garage door opener (or other rolling code equipped device), repeat this sequence a third time to complete the programming.

Homelink® should now activate your rolling code equipped device.

**Note:** To program the remaining two Homelink® buttons, begin with “Programming” - step two. **Do not repeat step one.**

For questions or comments, please contact Homelink® at **www.Homelink®.com** or **1-800-355-3515**.

### **Gate Operator & Canadian Programming**

Canadian radio-frequency laws require transmitter signals to “time-out” (or quit) after several seconds of transmission – which may not be long enough for Homelink® to pick up the signal during programming. Similar to this Canadian law, some U.S. gate operators are manufactured to “time-out” in the same manner.

If you live in Canada or you are having difficulties programming a gate operator by using the “Programming” procedures (regardless of where you live), **replace “Programming Homelink®” step 3** with the following:

**Note:** If programming a garage door opener or gate operator, it is advised to unplug the device during the “cycling” process to prevent possible overheating.

3. Continue to press and hold the Homelink® button while you **press and release - every two seconds** (“cycle”) your hand-held transmitter until the frequency signal has successfully been accepted by Homelink®. (The indicator light will flash slowly and then rapidly.)

Proceed with “Programming” step four to complete.

### **Using Homelink®**

To operate, simply press and release the programmed Homelink® button. Activation will now occur for the trained device (i.e. garage door opener, gate operator, security system, entry door lock, home/office lighting, etc.). For convenience, the hand-held transmitter of the device may also be used at any time. In the event that there are still programming difficulties or questions, contact Homelink® at: **www.Homelink®.com** or **1-800-355-3515**.

## Erasing Homelink® Buttons

To erase programming from the three buttons (individual buttons cannot be erased but can be “reprogrammed” – note below), follow the step noted:

- Press and hold the two outer Homelink® buttons until the indicator light begins to flash-after 20 seconds. Release both buttons. Do not hold for longer than 30 seconds. Homelink® is now in the train (or learning) mode and can be programmed at any time beginning with “Programming” - step 2.

## Reprogramming a Single Homelink® Button

To program a device to Homelink® using a Homelink® button previously trained, follow these steps:

1. Press and hold the desired Homelink® button. **Do NOT** release the button.
2. The indicator light will begin to flash after 20 seconds. Without releasing the Homelink® button, proceed with “Programming” - step 2

## Cam-Lock Adapter Installation:

