CLIFFORD
The Science of Security™

Prime Level FIVE SECURITY UPGRADE PACKAGE

FOURTH GENERATION G4 MOBILE SECURITY

Installation Manual

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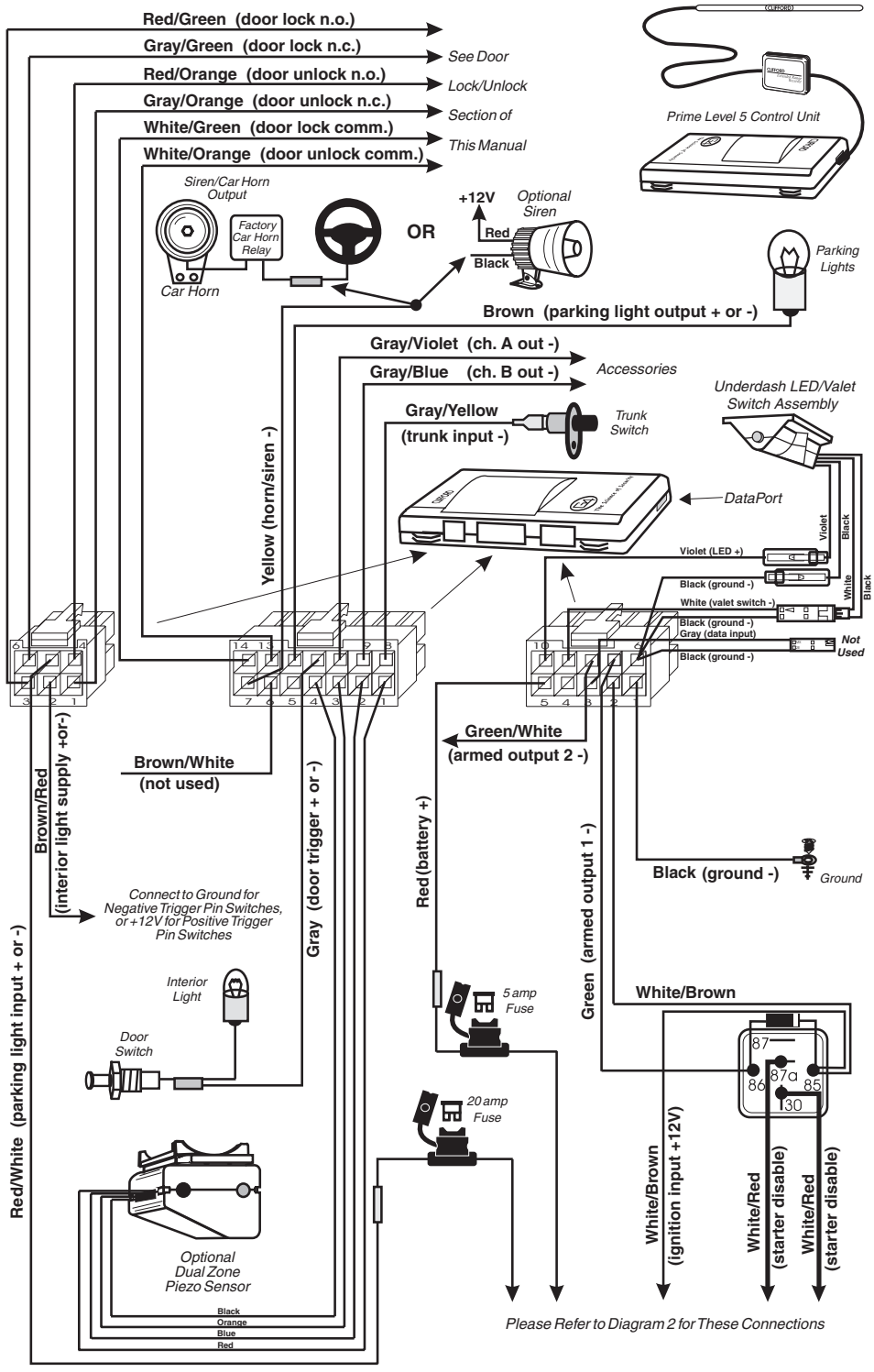
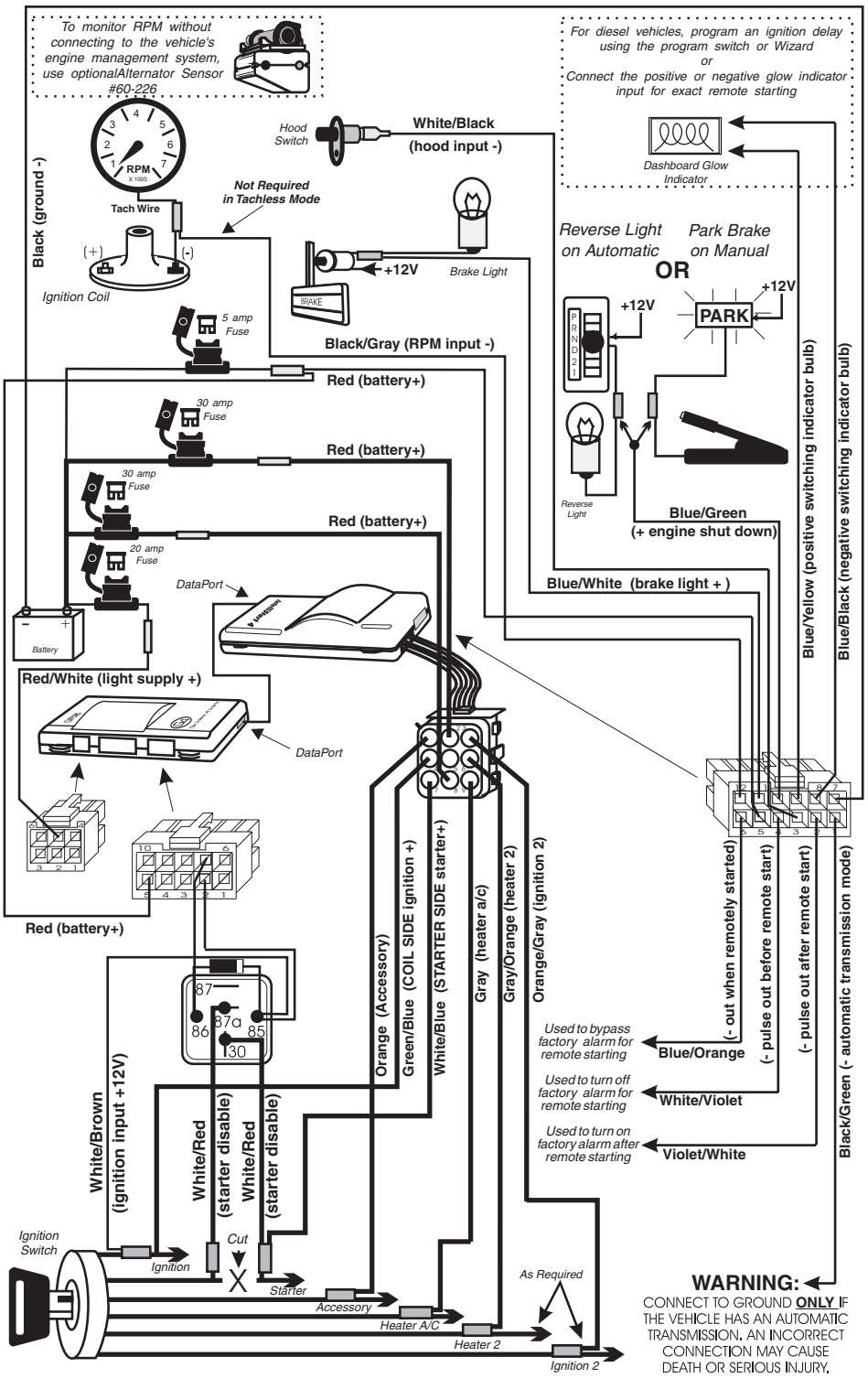
NOTE: The Prime Level 1-5 products are designed for easy, plug-in upgrade. Thus the Level 1 harness is used in the Level 2 installation, the Level 1 and 2 harnesses are used in the Level 3 installation, and so on.





Important Information

1. Use a voltmeter. DO NOT USE A TEST LIGHT! Test lights have a current drain that will damage the vehicle's onboard computer or could trigger the air bag.
2. Keep extension, if needed, as short as possible. Use same-gauge wire for extensions.
3. DO NOT mount components nor route wires near hot or moving vehicle parts.

NOTE: Clifford Electronics' web site for Authorized Clifford Dealers has detailed descriptions of wire colors and locations for most foreign and domestic vehicles. See www.clifforddealers.com for assistance 24-hours per day or refer to the latest quarterly Tech Support Database CD-ROM.

Required Installation Tools

- Voltmeter (set to "DC Volt")
- Wire crimper
- Wire stripper
- Electric drill and bits
- Phillips screwdriver
- Crescent wrench
- Vinyl tubing
- Rubber grommet (if firewall pass-through is needed)

Modes: Dealer Mode, Sleep Mode, Customer Mode

There are three modes to provide the utmost flexibility for expediters and new vehicle dealers:

- **Dealer Mode:** This is the as-shipped operating mode after you program the master remote. The system respond only to the master remote in this mode. Beeps are muted, panic and car-finder features are off, and AutoArm and AutoArm & Lock features are on. Programming the Customer Care Kit remotes switches the system to Customer Mode and auto-deletes the master remote.
- **Sleep Mode:** This mode completely disables the system. It is intended for unsold pre-loads to make the system inoperable in cases where it is not feasible to remove the system control unit. To ensure against accidental customer access, Sleep Mode is accessible only if the system is in Dealer Mode.
- **Customer Mode:** This is the normal operating mode for the customer. Programming in the Customer Care Kit remotes switches the system to Customer Mode and auto-deletes the master remote.

Passenger Compartment Connections

Control Unit and Receiver

Never install the control unit under the hood.

1. Select a mounting area, but do not affix the control unit until wiring and testing is complete.
2. Plug in the receiver module. Do not fold or make sharp bends in the cable or antenna wire. For maximum range, mount the receiver module away from the control unit and run the antenna up the window pillar and affix it to the windshield about an inch from the roofline.

Ignition Loom Connections

Ignition Connection

1. Find the wire in the steering column or ignition switch wireloom that shows +12V throughout **BOTH the cranking AND engine running cycles**, and 0 volts when the ignition is off.

You may find two wires in the steering column wireloom that test this way. If so, see the Secondary Ignition or Heater/AC wire section that follows.

2. Connect the WHITE/BROWN control unit wire and the GREEN/BLUE IntelliStart 4 wire to the ignition line.

Starter Connection

You MUST connect the starter wires before the neutral safety switch, otherwise the engine could be started while in gear. Also note that the starter circuit may have very high current. Be certain that the starter wires are solidly connected. For maximum dependability, solder and shrink tube these connections.

1. Find the wire that shows +12V during the **cranking cycle ONLY**.
2. Cut it and connect a WHITE/RED control unit wire to each side of the cut wire.
3. Connect the WHITE/BLUE wire of the IntelliStart 4 to the **starter side** of the cut starter wire.

Heater/Air Conditioner Connection

1. Turn on the heater/AC and rotate the ignition key one increment at a time. Observe at which position the blower turns on.
2. Locate the one wire that shows +12V *only* when the ignition key is at the position where the blower activates.
3. Connect the GRAY IntelliStart 4 wire to the heater/AC wire.

Secondary Ignition or Heater/AC Wire Connection

Some vehicles have two ignition and/or heater/AC wires. If so:

1. Connect the ORANGE/GRAY IntelliStart 4 wire to the second ignition line..
2. Connect the GRAY/ORANGE IntelliStart 4 wire to the second heater/AC line.
3. The BLUE/ORANGE wire is a negative out whenever the vehicle is remotely started. It can be used for extra ignition/heater/AC relays or for factory alarm bypass (see below).

Accessory Line Connection

Most vehicles have a separate accessory line to power the radio, power windows, defroster, etc.:

1. Locate the one wire that carries +12V *only* when the ignition key is in the ACC and ON positions, but 0V while the key is in the START position.
2. Connect the ORANGE wire to this accessory wire.

Factory Theft Deterrent Bypass

The following disarms the vehicle's factory security to permit remote starting.

For more information on factory security, download this information from our www.clifforddealer.com website, our AutoFax service or call our Technical Support Helpline at 1-800-444-4667.

1. The BLUE/ORANGE wire is a negative out whenever the vehicle is remotely started. It can be used for extra ignition/heater/AC relays (see above) or for factory alarm bypass.
2. The WHITE/VIOLET wire is a negative pulse out just prior to remote engine starting. It can be used to pulse a factory disarm wire or unlock the doors.
3. The VIOLET/WHITE wire is a negative pulse out after remote engine starting. This can be used to lock the doors after remote starting if the doors unlock prior to starting.

Automatic Transmission

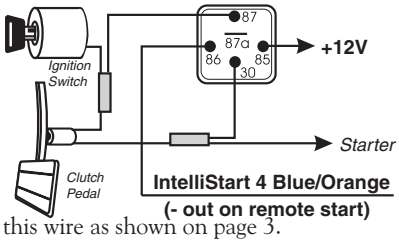
1. If the vehicle has an automatic transmission, connect the BLACK/GREEN wire to ground.

CONNECT THE BLACK/GREEN WIRE TO GROUND ONLY IF THE VEHICLE HAS AN AUTOMATIC TRANSMISSION! AN INCORRECT CONNECTION CAN CAUSE SEVERE INJURY OR DEATH.

2. Find the one kick panel wire that shows +12V only when the transmission is in reverse.
3. Connect the BLUE/GREEN IntelliStart 4 wire to this wire.

Manual Transmission (relay required)

1. Unplug the clutch pedal connector, then try to start the vehicle *while pressing the clutch pedal*. The engine should neither start nor crank.
2. Connect the BLUE/ORANGE IntelliStart 4 wire to an optional relay as shown.
3. With the ignition on, find the one wire near the emergency brake that shows +12V when the emergency brake is engaged; 0V when disengaged.
4. Connect the BLUE/GREEN IntelliStart 4 wire to this wire as shown on page 3.



Diesel Engines

There are two methods for interfacing the remote engine starting on diesel engines. You can either interface via the "Wait-to-Start" light which will trigger the starter when the light turns off, or you can use the built-in 20 second timer which cranks the engine 20 seconds after the remote start command is received.

Using the system's 20 second delay: After power-up, program the system for "Diesel" (column 2, row 4 of the installer grid on page 14) or use the CliffNet Wizard PRO installation software to customize the delay to an interval other than 20 **seconds.**

Using the Wait-to-Start light:

Note: Skip this section if using the 20 second delay method.

Check the polarity of the two wires at the bulb of the Wait-to-Start light.

- If the polarity is positive when the light turns off, connect the BLUE/YELLOW IntelliStart 4 wire to this wire.
- If the polarity is negative when the light turns off, connect the BLUE/BLACK IntelliStart 4 wire to this wire.

Brake Lights

1. Find the wire at the brake pedal switch that shows +12V when you press the brake pedal; 0 volts when released.
3. Connect the BLUE/WHITE IntelliStart wire to the brake light wire.

Parking Lights

1. Turn on the parking lights and access the parking light wire:
   - Near the headlight switch
   - In the door sill harness going to the rear lights
   - At any of the four parking light bulbs
2. If working underdash, turn the dashlight dimmer to its lowest setting.
3. Find the wire that shows +12V when the parking lights are on and 0 volts when off or, on most Japanese cars, 0 volts when on and +12V at rest.
4. Connect the BROWN wire to the parking light wire.
5. Connect the RED/WHITE and preconnected fuseholder to either:
   a. +12V if the wire showed +12V in step 3 with the lights on.
   b. Ground if the wire showed 0V in step 3 with the lights on.

LED & Valet Switch Assembly

1. Select an underdash area to mount the assembly where there is clearance for the screws and will position the LED so it is visible through the windows.
2. Mate the assembly's connector to the control unit connector of the same colors.

NOTE: The GRAY & BLACK wire 2-pin connector on the 10-pin connector is not used on the Level FIVE.

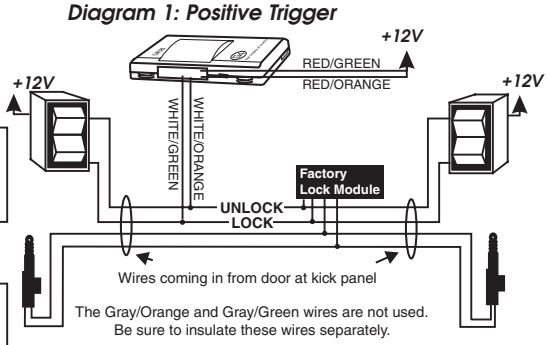
Door Trigger/Interior Light Supply

The Level FIVE has self-programming door trigger polarity. Door triggers on most vehicles are negative. To verify polarity:

1. Find the one wire off the rear of the door switch that shows +12 volts when the switch is pressed in and 0 volts when released. This is a negative trigger door wire.
2. If you can't find such a wire, find the one wire that shows 0 volts when the switch is pressed in and +12 volts when released. This is a positive trigger door wire.
3. Connect the system's thin GRAY wire to the door wire.
4. If the door trigger is negative, connect the BROWN/RED wire to ground wire; if positive, connect it to +12V.

NOTE: The BROWN/WHITE Level TWO harness wire is not used on the Level FIVE installation.

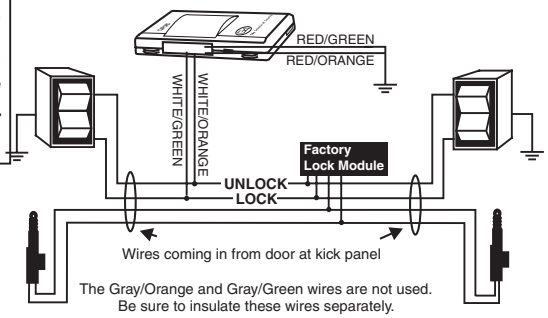
Diagram 1: Positive Trigger



Door Locks

WARNING: If the power door locks do not operate properly when the system is armed and disarmed, DO NOT USE THE VEHICLE'S DOOR LOCK SWITCH! Permanent damage to the control unit or to the car's electrical system and lock servos will result. For assistance, call the Clifford Technical Support Hotline at 800-444-4667.

Diagram 2: Negative Trigger

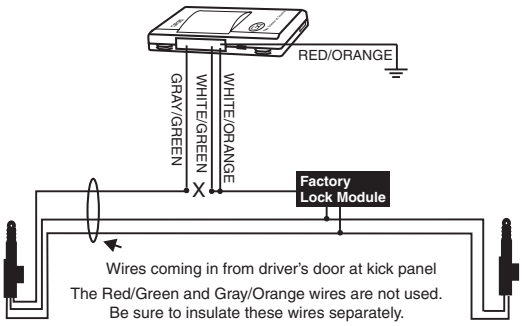


Single-Stage

(all doors unlock simultaneously)

1. Remove the door lock switch on the driver's side of the vehicle to reveal the switch wires.
   a. If there are four or more wires, make the connections shown in Diagram 4.
   b. If there are three wires, go to step 2.
   c. If the vehicle does not have a door lock switch, find the wire in the driver's kick panel that shows ground when unlocked and "open" when locked. Make the connections shown in Diagram 3.
2. Find the wire that shows +12V while activating the switch. Make the connections shown in Diagram 1. Otherwise, go to step 3.

Diagram 3: One-Wire Type



3. Repeat step 2 with the negative voltmeter lead connected to +12V. Then find the wire that shows +12V while activating the switch. Make the connections shown in Diagram 2.
4. Locks controlled from the driver's door key require installation of a #60-516 servo in the driver's door. Vehicles without factory power locks require a servo in each door. Mount the servo(s) and make the connections shown in Diagram 5.
5. On compressor type Mercedes Benz or Audi, make the connections shown in Diagram 6.
6. If needed, after power-up, program the system for 3-second pulsing or double lock and/or unlock pulses (+ or –).

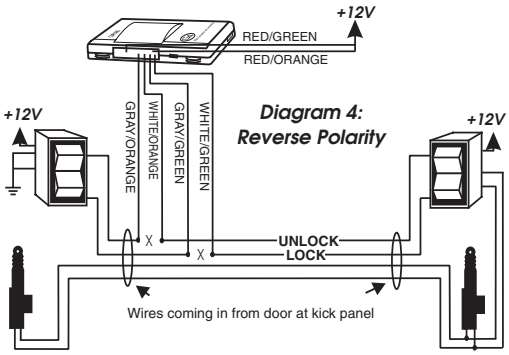


Diagram 4: Reverse Polarity

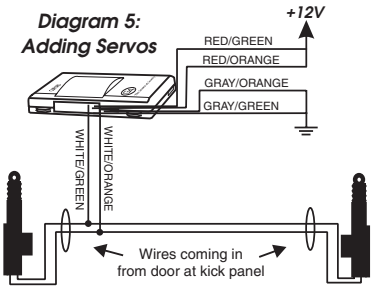


Diagram 5: Adding Servos

2-Stage ***(only driver's door unlocks upon first press; all doors upon second press)***

1. Find the driver's-door lock motor wire in the door or kick panel that shows +12V when the doors are unlocked.
2. Cut the wire and activate the switch. All doors *except* the driver's door should unlock.
3. Connect the WHITE/ORANGE wire to the motor side of the cut wire and the GRAY/ORANGE wire to the switch side.
4. Connect the RED/ORANGE wire to +12V.
5. Use the negative-pulsing GRAY/VIOLET Auxiliary A output to unlock the other doors (add a relay for lock types that are not negative-switching).
6. After power-up, set the Auxiliary A output to 2-Stage Unlock (column 3, row 3 in installer programming grid).

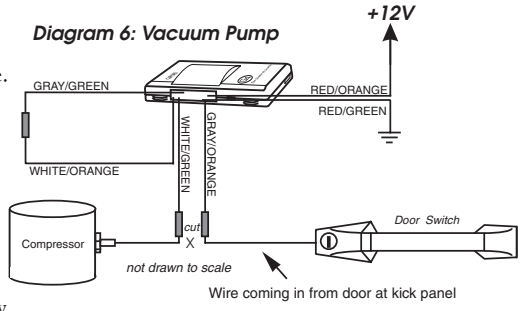


Diagram 6: Vacuum Pump

Horn Connection

NOTE: If connecting a siren, refer to the Optional Siren section that follows.

1. Locate the wire that shows ground or +12V only when the horn is activated.
   a. If ground, connect the YELLOW wire to the negative-switching car horn wire.
   b. If +12V, use a relay to invert polarity.

Optional Dual-Zone Piezo Vibration/Impact Sensor

Mount the sensor in the passenger compartment, not in the engine compartment.

NOTE: Clifford G4 systems automatically bypass sensor inputs upon remote starting. No additional sensor bypassing is needed.

1. Firmly mount the sensor near the base of the steering column (if the steering column has a rotating sleeve, firmly screw the sensor to the interior firewall, kick panel or trunk wall).
2. Mate the sensor to the connector with the ORANGE, BLUE, BLACK and RED wires.
3. After power-up, adjust sensitivity as noted in the instructions that come with the sensor.

Optional Trunk Trigger Connection

The switch may be located in or near the trunk latch or at the trunk light. Otherwise you may install a pin switch in a location away from water channels.

1. Connect the GRAY/YELLOW wire to the negative-switching trunk pin switch.

Auxiliary A Output

The Auxiliary A output (GRAY/VIOLET wire) is activated by pressing the ✱ or **Opt** button on the remote control. This output is preprogrammed to operate only when the system is disarmed (e.g., for use as a remote trunk release). It can also be used as the secondary unlock line if wiring the door locks for 2-stage unlocking (see the previous *Door Locks* section).

The factory setting is pulsed output (1 second ground). Interlock is on (operates only if the system is disarmed and the ignition is off). Current is limited to 0.15 amp.

After power-up, see *Installer-Programmable Features* on page 14 to change the type of output and/or turn the trunk interlock off or on.

Auxiliary B Output & Selectable AutoActivation

The Auxiliary B output (GRAY/BLUE wire) is activated by pressing the ✱+ 🔒 button combination (or **Opt+ LOCK** button combination) on the remote control. This output can be programmed as either pulsed, latched or timed, and can also be programmed to operate only when the system is disarmed (e.g., for use as a remote trunk release).

The factory setting is pulsed output (1 second ground). Interlock is off (operates regardless of system or ignition state). Current is limited to 0.15 amp.

You can also set this output to automatically activate every time the system is remotely armed (perfect for vehicles with a window/sunroof all-close feature; see below). After power-up, see *Installer-Programmable Features* on page 14 to change the type of output, set AutoActivation and/or turn the interlock on or off.

European Vehicle Window/Sunroof All-Close

If turning and holding the door key closes the power windows/sunroof (a common feature on European vehicles), you can make them close upon automatically remote arming:

1. Find the wire that shows +12V or ground when the key is held to lock in the door cylinder.
2. Tap a wire in to this wire and connect to terminal 30 of a relay.
3. If the wire shows ground when the key is turned, connect terminal 87 to ground; if +12V, connect terminal 87 to 12V.
4. Connect the GRAY/BLUE wire to terminal 85.
5. Connect terminal 86 to +12V.
6. Set the Auxiliary B output to use the timer and to AutoActivate.
7. Set the Accessory Output Timer to 2 seconds longer than the total time it takes to close all windows/sunroof.

Remote Timed Headlight Activation

You can make the following connections to provide remote timed headlight activation upon remote arming. Simply follow the steps above using the wire that shows +12V or ground when the headlight switch is activated. If you set the output to AutoActivate, the headlights will turn on and stay on for the programmed duration every time the vehicle is armed.

Engine Compartment Connections

MANDATORY Hood Trigger Connection

WARNING: For safety reasons, you MUST wire the hood trigger input.

Vehicles with a ground-switching hood pin switch interface directly with Level FIVE. If a switch cannot be located, you must add a pin switch in a location away from water channels.

1. Connect the WHITE/BLACK wire of the IntelliStart 4 module to the hood pin trigger.

RPM Monitoring

Some newer vehicles do not have a conventional coil marked (+) and (–). In these instances, you will need to locate the tach wire:

1. If the vehicle has a distributor cap and there is one more plug wire than the number of cylinders, the vehicle has a separate coil.
2. Follow the extra plug wire to the coil module, which will have two or more wires.
   a. If two wires: one is the ignition, the ***other*** wire is the negative coil wire.
   b. If more than two wires, set your multimeter to read AC voltage, connect the negative lead of the meter to ground and probe the wire with the positive lead. The wire that has the highest AC voltage while the engine is running is usually the tach wire.
3. If the vehicle does not have a separate coil, look for the tach wire in a plug coming out of the distributor. If no distributor can be found, there may be multiple coils. Each coil usually has an ignition and a negative coil wire. The system will learn a single or multiple coil system.
4. If no coil or distributor can be found or reached, use the #60-226 RPM Alternator Sensor.
5. You can often connect to the negative side of any fuel injector. Most injectors are screwed directly into the engine and have two wires. One is ignition and usually has a color common to all, the other is the negative side and can be tested as described in step 2b above.

Installation Options

1. **Installation Option 1 — Negative Coil**
   Connect the BLACK/GRAY IntelliStart 4 wire to the negative terminal of the ignition coil, normally marked (–).
2. **Installation Option 2 — Fuel Injector Wire**
   a. Most engines have two wires at each injector: a fuel-injector wire and an ignition wire. The ignition wire is usually the same color at each injector (and may also be the same color as the ignition line in the steering column). The injector wire is the ***other*** wire.
   b. Connect the BLACK/GRAY IntelliStart 4 wire to one of the injector wires.
3. **Installation Option 3 — Tachometer Terminal**
   a. Locate the tachometer terminal on the distributor cap (this may be marked "tach").
   b. Connect the BLACK/GRAY IntelliStart 4 wire to the tachometer terminal.
4. **Installation Option 4 — Optional Alternator Sensor (#60-226)**
   Follow the instructions provided in the Alternator Sensor kit.

After powering up the system, you must perform the MANDATORY RPM PROGRAMMING noted on page 11.

Optional Siren

Mount the siren in the engine compartment away from hot or moving parts and where it cannot be reached from under the vehicle. Point downward to avoid water collection.

1. Firmly secure the siren to the engine bay firewall or a fender well.
2. Connect the YELLOW wire to the siren's BLACK ground input.
3. Connect the siren's RED wire to the system's 5-amp pre-fused RED wire.
4. After power-up, program the horn/siren output for siren (factory setting is for horn).

Final Wiring Connections

1. Attach the fuseholder of the RED wire to a constant +12V supply.
2. Connect the BLACK wire to a grounding bolt (clean to ensure a solid ground).
3. Insert the 5-amp fuse into the RED wire's fuseholder.
4. Insert the 20-amp fuse into the RED/WHITE wire's fuseholder.

NOTE: Power and test accessories after the basic system has been tested. Individually fuse all accessory power and fuse panel connections.

MANDATORY MASTER REMOTE CONTROL ADDITION

After power-up, you **MUST** program the system to respond to the Master Remote Control used by that dealership. To do so, get one of the master remotes used at that dealership (all master remotes at a dealership are the same code) and do the following:

1. Turn the **ignition on** and toggle the valet switch (behind the LED assembly) in this manner:
   a. **Left, left, right**, then press and **hold** to the **left**.
   b. After 3 seconds of holding to the left, you'll hear a horn **beep**.
   c. **Continue holding** for another 12 seconds until you hear **3 beeps**.
   d. **Right** once, then **wait** 2 seconds for the horn **beep**.
   e. **Left** once (one **beep**), then press the **LOCK** button on the master remote (**two beeps**).
2. Turn the **ignition off (3 beeps)**.

MANDATORY RPM PROGRAMMING

Please note that the Diesel/Gas selection (column 2, row 4) must be made before programming RPM.

1. Start the engine and allow it to warm-up until the RPMs drop to the normal idle speed.
2. With the engine still running and the transmission in PARK or NEUTRAL, toggle the valet switch (located behind the LED assembly) in the following manner:
   a. **Left, left, right**, then press and **hold** to the **left**.
   b. After 3 seconds of holding to the left, you'll hear a horn **beep**.
   c. **Right** once, then **wait** 2 seconds for the horn **beep**.
   d. **Left 5 times** (you'll hear a beep each time)
3. Pause. Two beeps and two parking light flashes confirm RPM programming, two beeps and one parking light flash indicates no tach signal, check the BLACK/GRAY connection.
4. Turn the ignition off.
5. For automatic transmission, you must also set the transmission type to automatic (page 14).

Eight-Event TotalRecall

1. With the ignition OFF, press and hold the valet switch (at the rear of the LED assembly) to the right.
2. Use the remote control to lock, then unlock, then release the valet switch.
3. The LED will flash 2–7 times, pause, then flash 2–7 times, etc.
4. Refer to the following chart. The first set of flashes was the most recently activated trigger or sensor. The next is the second most recent, and so on up to as many as the last eight.

LED flashes	*Trigger/sensor indication*
2 flashes	*Optional Sensor*
4 flashes	*Door trigger*
5 flashes	*Trunk trigger*
6 flashes	*Hood trigger*
7 flashes	*An attempt was made to turn on the ignition while the system was armed*

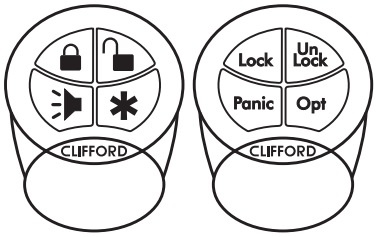
CliffNet Wizard PRO provides an on-screen written report of these activations.

Delayed Courtesy Lights

Delayed or dimming courtesy lights interfere with remote arming. If the delay is more than 5 seconds, turn on the *Delayed Courtesy Lights* feature noted on page 14 (column 3, row 1).

Remote Control Operation

REMOTE FUNCTIONS		
Function	**Icon remote**	**Word remote**
Arm & lock	🔒	**Lock**
Disarm & unlock	🔓	**UnLock**
Trunk release	✱	**Opt**
Panic *(repeated honks)*	HOLD: 🔔	HOLD: **Panic**
Locate *(short beep)*	🔔	**Panic**
Remote valet mode	✱ + 🔓	**Opt + UnLock**
Option #2	✱ + 🔒	**Opt + Lock**
Remote engine start	🔒 + 🔓	**Lock + UnLock**
AutoStart/SafeStart	🔔 + 🔒	**Panic + Lock**
Window open/vent	🔔 + ✱	**Panic + Opt**



Programmable Features

The Level FIVE comes preprogrammed as noted in **bold** text in the following tables.

Using CliffNet Wizard PRO

The CliffNet Wizard PRO software provides an intuitive access to all installer and end-user features through a user-friendly, graphical user interface and provides extensive diagnostic capabilities. See *www.clifforddealer.com* to download a free copy of the program (a #60-509 cable set is required to connect your Windows PC or palmtop to the G4 DataPort).

Programming User-Selectable Features

1. Note the column (across) and row (down) numbers of the feature(s) you wish to program.
2. Turn the ignition to the "ON" position or start the engine.
3. Enter the factory preset valet/programming code of "2" by toggling the valet switch (located behind the LED assembly) to the left two times, then to the right (LED on).
4. Immediately hold to the left for about 3 seconds until you hear one horn beep and the LED turns on to confirm the system is in the "Feature Select" position.
5. Select the feature column: Toggle the switch to the right the number of times indicated for the column. Pause. You will hear the same number of horn beeps, confirming your selection.
6. Within five seconds, select the feature row: Toggle the switch to the left the number of times indicated for the row. You'll hear a beep each time to help you count.
7. If there is a NOTE for the selected feature, perform the actions noted.
8. Pause. You will hear either one or two beeps: two beeps = ON, one beep = OFF.
9. You can select another feature, or you can exit program mode:
   a. To select another feature in that same column, repeat step 6 within the next five seconds (after five seconds, three beeps indicate return to the "Feature Select" position).
   b. To select a different feature column, repeat step 5.
   c. To exit program mode, turn the ignition off (you'll hear three beeps and the LED will turn off), or wait 60 seconds for the system to automatically exit program mode.

User-Selectable Features (Customer Mode): 1 beep = OFF, 2 beeps= ON

Feature Select				
	Add a new remote ***NOTE 1***	Chirps*/beeps: off**/**on**/quiet (1/**2**/3 chirps*/beeps)	AutoArming: **off**/on**	***NOTE 5*** — Other remote: arm (1 then 2 beeps)
	Personalized Siren Sounds* ***NOTE 2***	***NOT USED***	Lock upon AutoArming: **off**/on**	***NOTE 6*** — Other remote: trunk release (2 beeps)
	Play Siren Sounds*: trigger only/**always** (1/**2** beeps)	***NOT USED***	AutoArming entry delay: **off**/on	***NOTE 6*** — Other remote: panic (3 beeps)
	Siren duration: **30**/60/90sec. (**1**/2/3 beeps)	AutoStart: **both off**/both on/temp only/battery only (**1**/2/3/4 beeps)	FACT: off/**on**	***NOTE 6*** — Other remote: disarm (4 beeps)
	AutoLock: off/**on**/rpm (1/**2**/3 beeps)	***NOT USED***	***NOT USED***	***NOTE 6*** — Other remote: remote starting* (5 beeps)
	AutoUnLock: off/**on**	Clear all remotes ***NOTE 3***	***NOT USED***	***NOTE 6*** — Other remote: window rolldown/venting* (6 beeps)
	Reset all features to default (except remotes & valet code)	Set a new secret valet code ***NOTE 4***	***NOT USED***	***NOTE 6*** — Other remote: valet mode (7 beeps)

** Requires optional G4 accessory*

*** In Dealer Mode (see page 4), beeps/chirps are off; AutoArming and Lock upon AutoArm are on*

- **NOTE 1:** Press the lock button of the new vehicle buyer's remote. You'll hear one beep. Press the lock button *again.* You'll hear two beeps to confirm that the new remote control has been added.
- **NOTE 2**: If equipped with the optional Self-Powered SmartSiren 4, selection of this feature will cause the system to sound a few seconds of siren sound #1. Toggle the valet switch to the right to turn on this sound or to the left to turn it off. The system will then sound a few seconds of sound #2. Repeat: right=ON, left=OFF for each of the six sounds.
- **NOTE 3**: Two beeps indicate all remotes have been cleared from memory. You must now add new/existing remotes with the "Add new remote" feature and/or the "Other remote" feature.
- **NOTE 4**: **Immediately toggle to the right**, then enter the new code, ***wait for the two beeps***, then turn off the ignition (you'll hear 3 beeps to confirm program mode exit). You **MUST** now turn the ignition back on and then re-enter the new code. If the LED flashes on, the new code is set. If the LED does not light, the two codes did not match and the system has reverted to the previous code.
- **NOTE 5**: Permits arming with the remote of a G4 system on another vehicle. For example, to set the ✱ button of the other car's remote to arm this system, select column 4, row 1, then press the ✱ button of the other car's remote (you'll hear one beep). Immediately press the ✱ button again (two beeps). The ✱ button of the other remote will now arm this system. Then select row 4 of this same column to assign a different button to disarm.
- **NOTE 6**: The features in this column allow control of the system with the remote of a G4 system on another vehicle. Select the function, then press the unused button or button combination on the other remote that you want to use to perform that function on this system (you will then hear a the beeps noted). ***NOTE***: You must first set a button or button combination on the other car's remote that will arm the system (column 4, row 1) before these others will be accepted.

Installer-Programmable Features

1. Turn on the ignition.
2. Enter the factory preset valet/programming code of "2" by toggling the valet switch (located behind the LED assembly) to the left two times, then to the right.
3. Hold the switch to the left. You'll hear one beep after about 3 seconds to indicate user programming mode. **KEEP HOLDING** (about 12 more seconds) until you hear the 3-beep installer programming mode confirmation.
4. Select the feature column: Toggle the switch to the right the number of times indicated for the column. Pause. You will hear the same number of horn beeps, confirming your selection.
5. Within five seconds, select the feature row: Toggle the switch to the left the number of times indicated for the row. You'll hear a beep each time to help you count.
6. If there is a NOTE for the selected feature, perform the actions noted.
7. Pause. You will hear either one or two beeps: two beeps = ON, one beep = OFF.
8. You can select another feature, or you can exit program mode:
   a. To select another feature in that same column, repeat step 5 within the next five seconds (after five seconds, three beeps indicate return to the "Feature Select" position).
   b. To select a different feature column, repeat step 4.
   c. To exit program mode, turn the ignition off (you'll hear three beeps and the LED will turn off), or wait 60 seconds for the system to automatically exit program mode.

Table of Installer-Programmable Features: 1 beep = OFF, 2 beeps = ON

Feature Select	*Right x 1*	*Right x 2*	*Right x 3*
Left x 1	**Single**/Double Lock Pulse (**1 beep**/2 beeps)	Accessory Output Timer Duration (**10sec.**): 1-255 sec. ***NOTE B***	**Door Ajar Warning** /Delayed Courtesy Lights (**1 beep**/2 beeps)
Left x 2	**Single**/Double Unlock Pulse (**1 beep**/2 beeps)	Accessory Output B type: (**Pulsed**/Timed/Latched) (**1 beep**/2 beeps/3 beeps)	Accessory Output A Trunk Interlock (**On**/Off)
Left x 3	Lock/Unlock Pulse: **1 second**/3 second (**1 beep**/2 beeps)	***NOT USED***	Accessory Output A for 2-Stage Unlocking (pgs 7-8) (On/**Off**)
Left x 4	***NOT USED***	IntelliStart 4: Diesel/**Gas** (1 beep/**2 beeps**)	Accessory Output B Trunk Interlock (On/**Off**)
Left x 5	IntelliStart 4: Program RPM ***NOTE A***	Program Optional SmartWindows 4 ***NOTE C***	AutoActivate Accessory Output B Upon Remote Arming (On/**Off**)
Left x 6	**Car Horn**/Optional Siren (**1 beep**/2 beeps)	Sleep Mode (only if in dealer mode, see page 4) (On/**Off**)	***NOT USED***

- **NOTE A**: Please note that the Diesel/Gas selection (column 2, row 4) must be made before programming RPM. To program RPM, the engine must be running at its normal idle speed when you select this feature. Two beeps and two parking light flashes confirm RPM programming, two beeps and one parking light flash indicates no tach signal, check the BLACK/GRAY wire connection.
- **NOTE B:** A chirp will indicate the timer has started. When the desired duration has been reached (1-255 seconds), tap the valet switch to the right (2 chirps).
- **NOTE C:** You will hear two beeps. Press and hold the driver's window switch in the up position for 2 seconds, then release. The windows will close and open repeatedly. Programming is complete when the windows vent. For a second SmartWindows 4 module, briefly tap the driver's window switch up to repeat the process for the rear windows.

System Checklist & Troubleshooting

The following checklist will assure that you have installed the Level FOUR correctly. Each successive step requires that the previous step has been completed as indicated.

NOTE: If you are still having trouble after performing the following steps, please call Clifford Technical Support Services at 1-800-444-4667.

Step 1: Test the immobilization circuit.

Arm the system by pressing the LOCK button on the Dealer Master remote (note: there are no arm/disarm beep confirmations in Dealer Mode [see page 4]) from inside the vehicle and wait 10 seconds. Turn the ignition to the "START" position.

- **Engine does not respond.** This is the correct response, proceed to step 2.
- **4 beeps:** If 4 beeps immediately or 5-10 seconds after arming, a trigger or sensor is open or active, or the vehicle has delayed courtesy lights and the Delayed Courtesy Lights feature has not been programmed on. Disarm and use the Eight-Event TotalRecall feature noted on page 11 to identify the open/active input. If the *door trigger* is indicated, activate the delayed courtesy lights feature.
- **Engine starts or cranks.** The starter or ignition connection is miswired. Retest the vehicle wires as noted in the *Starter Connection* section on page 5.
- Make sure the fuses are in the fuseholders and check the power and ground connections.
- Verify the control unit connectors are properly inserted into the control unit.
- Verify the ignition wire is connected to the true ignition line instead of a +12V line.

NOTE: If the 20-amp fuse blows upon arming:

- Disconnect the system's parking light wire, replace the 20-amp fuse and rearm. If the fuse does not blow, the parking light wire is shorting.
- If the fuse blows while the parking light wire is disconnected, the door locks are not wired correctly. Reconnect the vehicle's power locking system to its original condition, then retest the voltages as indicated in the *Door Locks* section.
- If engine still starts or cranks after retesting all the wiring, check the power and ground connections. Make sure fuses are in the fuseholders, verify the control unit connectors are securely fastened, verify the ignition input wire is connected to the true ignition line instead of a +12V or accessory line, and verify the transmitters are programmed.

Step 2: Test the horn connection.

Rapidly turn the ignition on then off (this invokes the AutoArming Bypass feature):

- **1 beep:** This is the correct response. Proceed to step 3.
- **No beeps:** Check horn connections.

Step 3: Test the parking lights.

Arm the system with the remote control.

- **Two flashes.** This is the correct response, proceed to step 4.
- **No flashes.** If no flashes, verify the parking light bulbs are operational. Verify that the RED/WHITE wire is connected to a constant +12V source and that the 20-amp fuse is not blown. If so, see the *Parking Lights* section.
- **Only one side flashes.** If only the left or the right side parking lights flash, the vehicle has dual circuits; call Technical Support at 1-800-444-4667.

Step 4: Test the door locks.

Arm the system by pressing the Lock button on the remote control.

- **Doors lock.** This is the correct response, proceed to step 5.
- **Doors do not lock.** You either selected the wrong lock diagram, programmed the wrong lock polarity or connected the wires incorrectly. Reconnect the vehicle's locking system to its original condition, then retest as indicated in the *Door Locks* section.

WARNING: If the doors do not lock, DO NOT activate the vehicle's lock switches. Doing so may damage the control unit, the vehicle's electrical system and/or the power lock servo motors.

- **Doors unlock.** You either selected the wrong door lock diagram or connected the wires incorrectly. Reconnect the vehicle's power locking system to its original condition, then retest the voltages as indicated in the *Door Locks* section and wire the locks as indicated.
- **Only one door locks.** You either selected the wrong door lock diagram or connected the wires incorrectly. Reconnect the vehicle's power locking system to its original condition, then retest the voltages as indicated in the *Door Locks* section.

Step 5: Test the valet switch.

Test switch operation by entering programming mode as noted on page 12. If no response:

- Verify the WHITE/BROWN wire has +12V when the ignition is ON and 0V when OFF. If not refer to *Ignition Connection* on page 4.
- Verify the WHITE wire rests at +5V, shows +3V when toggled to the left and 0V when held to the right. If not, test the switch's BLACK wire. It should read 0V at rest, 0V when pressed to the left and 0V when pressed to the right. If the BLACK wire tests incorrectly, check the ground circuit. If both wires test correctly, the valet code has been changed. Use CliffNet Wizard PRO to reset the PIN code.

Step 6: Test the LED.

Arm the system with the remote control.

- **Flashes repeatedly.** This is the correct response, proceed to step 7.
- **No flashes.** Verify that the LED's VIOLET and BLACK wires are properly connected. ***Warning:*** This is a 2-volt LED, testing with 12 volts will destroy the LED.

Step 7: Test the disarm function.

Disarm by pressing remote control button 1. The following should occur (note: there are no arm/disarm beep confirmations in Dealer Mode [see page 4]):

- **Parking lights flash once.** If the parking lights do not flash once, refer to step 3.
- **LED stops flashing.**
- **Doors unlock.** If not refer to step 4.
- **Immobilizer circuit immediately disengages** (test by starting the engine with the key). If the immobilizer circuit does not disengage, refer to step 1.
- **Interior courtesy light(s) turn on** and stay on for 30 seconds or until ignition on.
  - If the interior light(s) do not turn on, verify that you replaced the interior light fuse if removed or have turned the lights back on.
  - If the fuse blew when you disarmed, the vehicle uses a positive door trigger and you connected the interior light supply wire to ground instead of +12V.
  - Check the door trigger circuit.

Step 8: Test the door trigger circuit.

Rearm, then use the key to unlock and open the driver's door.

- **Horn sounds, parking lights flash repeatedly.** This is the correct response, proceed to step 9.
- **Horn does not sound immediately.** Make sure the door pin switches consistently show less than 1.5 volts if negative-switching or more than +11 volts if positive-switching.

Step 9: Test the hood trigger circuit.

Arm the system from inside the vehicle, then use the interior release to top the hood.

- **Horn sounds immediately, parking lights flash repeatedly.** This is the correct response.
- **Alarm does not sound immediately.** If the alarm does not sound immediately, make sure that the hood pin switch is working properly and, when open, is consistently showing less than 1.5 volts. Also make sure the hood pin switch is connected to the WHITE/BLACK wire on the IntelliStart 4.
  - **Parking lights flash four times.** Check the hood connection.

Step 10: Test the optional trunk trigger circuit.

Arm the system, then use the key to unlock the trunk.

- **Horn sounds immediately, parking lights flash repeatedly.** This is the correct response.
- **Alarm does not sound immediately.** If the alarm does not sound immediately, make sure that the trunk pin switch is working properly and, when open, is consistently showing less than 1.5 volts. Also make sure the trunk pin switch is connected to the GRAY/YELLOW wire.

Step 11: Test the optional Dual-Zone Piezo Sensor.

Arm, wait 10 seconds, then tap the car softly with your fist. The following should occur:

- **Horn beeps five times.** This is the correct response.

Hit the car firmly with your fist. The following should occur:

- **Alarm triggers.** Proceed to step 12.

If either of these test fail, adjust the sensor using the adjustment knob and retest. Keep in mind that the sensor does not come online until about 10 seconds after arming.

Step 12a: Test the remote start function: AUTOMATIC TRANSMISSION.

Testing the remote engine starting function will require addition of a Customer Care Kit remote control. When testing is complete, reprogram the master remote control into the system. This clears out the codes of any Customer Care Kit remote controls and returns the system to Dealer Mode.

Make sure the gear lever is in PARK, the hood is closed, and the emergency brake is on.

- **Test 1:** Simultaneously press the **LOCK+UNLOCK** buttons on the remote control.
  - **Parking lights flash once** and engine does not start. System has not been wired for automatic transmission. See *Installer-Programmable Features*.
  - **Parking lights flash twice** and the engine starts. Proceed to the next test.
  - **Parking lights flash three times.** Check the ignition switch connection.
  - **Parking lights flash four times.** Check the hood connection.
  - **Parking lights flash five times.** Check the brake connections.
  - **Parking lights flash six times.** Check the BLUE/GREEN connection.
- **Test 2:** Press the brake pedal.
  - **The engine shuts down.** This is the correct response. Press the **LOCK+UNLOCK** buttons to start the vehicle and proceed to the next check.
  - **The engine continues to run.** Check the brake connections.
- **Test 3:** Open the hood.
  - **The engine shuts down.** This is the correct response. Press the **LOCK+UNLOCK** buttons to start the vehicle and proceed to the next check.
  - **The engine continues to run.** Check the hood connections.
- **Test 4:** Insert the key into the ignition and try to crank the engine. The starter should not crank or grind. Push the brake pedal and turn the ignition OFF. Press the **LOCK+UNLOCK** buttons again to start the vehicle.
- **Test 5:** Leave the engine running. It should turn itself off after 30 minutes.
  - If the system does not pass any of the above tests, verify all wiring connections and retest the system thoroughly.

Step 12b: Test the remote start function: MANUAL TRANSMISSION.

Testing the remote engine starting function will require addition of a Customer Care Kit remote control. When testing is complete, reprogram the master remote control into the system. This clears out the codes of any Customer Care Kit remote controls and returns the system to Dealer Mode.

1) Start the car using the ignition key.
2) Set the emergency brake, and make sure the transmission is not in gear. Do not step on the brake pedal.
3) Enable SafeStart pre-enable mode by simultaneously pressing the **PANIC+LOCK** buttons on the remote before turning off the ignition. This keeps the engine running until you exit and arm.
4) Close all doors, then arm. The engine stops running and is now preset for remote starting.

NOTE: For safety reasons, the SafeStart pre-enable mode is canceled if the alarm is tripped or a door is opened.

- **Test 1:** Simultaneously press the **LOCK+UNLOCK** buttons on the remote control.
  - **Parking lights flash once** and engine does not start. The pre-enable SafeStart procedure noted above was not performed or the alarm was tripped or a door opened after SafeStart pre-enabling.

- **Parking lights flash twice** and the engine starts. Proceed to the next test.
- **Parking lights flash three times.** Check the ignition switch connection.
- **Parking lights flash four times.** Check the hood connection.
- **Parking lights flash five times.** Check the brake connections.
- **Parking lights flash six times.** Check the BLUE/GREEN connection.

■ **Test 2:** Press the brake pedal.
- **The engine shuts down.** This is the correct response. Press the **LOCK+UNLOCK** buttons to start the vehicle and proceed to the next check.
- **The engine continues to run.** Check the brake connections.

■ **Test 3:** Open the hood.
- **The engine shuts down.** This is the correct response. Press the **LOCK+UNLOCK** buttons to start the vehicle and proceed to the next check.
- **The engine continues to run.** Check the hood connections.

■ **Test 4:** Insert the key into the ignition and try to crank the engine. The starter should not crank or grind. Push the brake pedal and turn the ignition OFF. Press the **LOCK+UNLOCK** buttons again to start the vehicle.

■ **Test 5:** Leave the engine running. It should turn itself off after 30 minutes.
- If the system does not pass any of the above tests, verify all wiring connections and retest the system thoroughly.

Step 14: Test optional accessories.

Testing range and optional accessories, such as the SmartWindows 4 remote window control accessory, will require use of the Customer Care Kit remote control that you programmed into the system during the previous step. When testing is complete, reprogram the master remote control into the system. This clears out the codes of any Customer Care Kit remote controls and returns the system to Dealer Mode.

To test range, stand 300 feet from the vehicle and use the remote control to arm and disarm.

■ The system will respond as previously noted. If not:
- Reposition the external receiver as high as possible under the dash and as far as possible from heavy wirelooms and metal.
- Reposition the antenna rod underdash or, for maximum range, run the antenna cable up the window pillar and mount the antenna rod on the windshield about an inch below the roofline.
- Make sure that the remote control battery measures at least 3 volts *while* transmitting.
- Make sure the voltage at the control unit between the 5-amp fused power line and each the ground line is at least 12.0 volts when triggered (if less, make sure the ground connection is solid; if so, the vehicle battery may need charging, servicing or replacement).
- Make sure no accessories are tapped in to the RED or BLACK power and ground wires.

USA Headquarters West
20750 Lassen Street Chatsworth, California 91311
1-800-CLIFFORD or 1-800-824-3208 or 1-818-709-7551

USA Headquarters East
1535 Barclay Boulevard Buffalo Grove, Illinois 60089
1-800-CLIFFORD or 1-800-824-3208 or 1-818-709-7551

Canada Headquarters
4513 Dobrin Street Montreal, Quebec H4R 2L8
1-800-361-3444 or 1-514-332-4444

UK Headquarters
Boundary Business Court
92/94 Church Road Mitcham, Surrey CR4 3TD
0800 929949 or 0181 646 8440

Germany Headquarters
Schlesische Straße 27 10997 Berlin
0130 115 681 oder 030 611 2602

Mexico Headquarters
Saratoga 804 B, Col. Portales
Deleg. Benito Juárez 03300 México D.F.
01 800 021 2543 o 5 605 0382

Netherlands Headquarters
Trompenburgstraat 8A
1079 TX Amsterdam
020 40 40 919

AutoFax & Technical Support Helpline:
1-800-444-4667

For the latest vehicle wiring information and for wiring diagrams and servicing information on older Clifford products:
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