CLIFFORD
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Prime Level THREE SECURITY UPGRADE PACKAGE

FOURTH GENERATION G4 MOBILE SECURITY

Installation Manual

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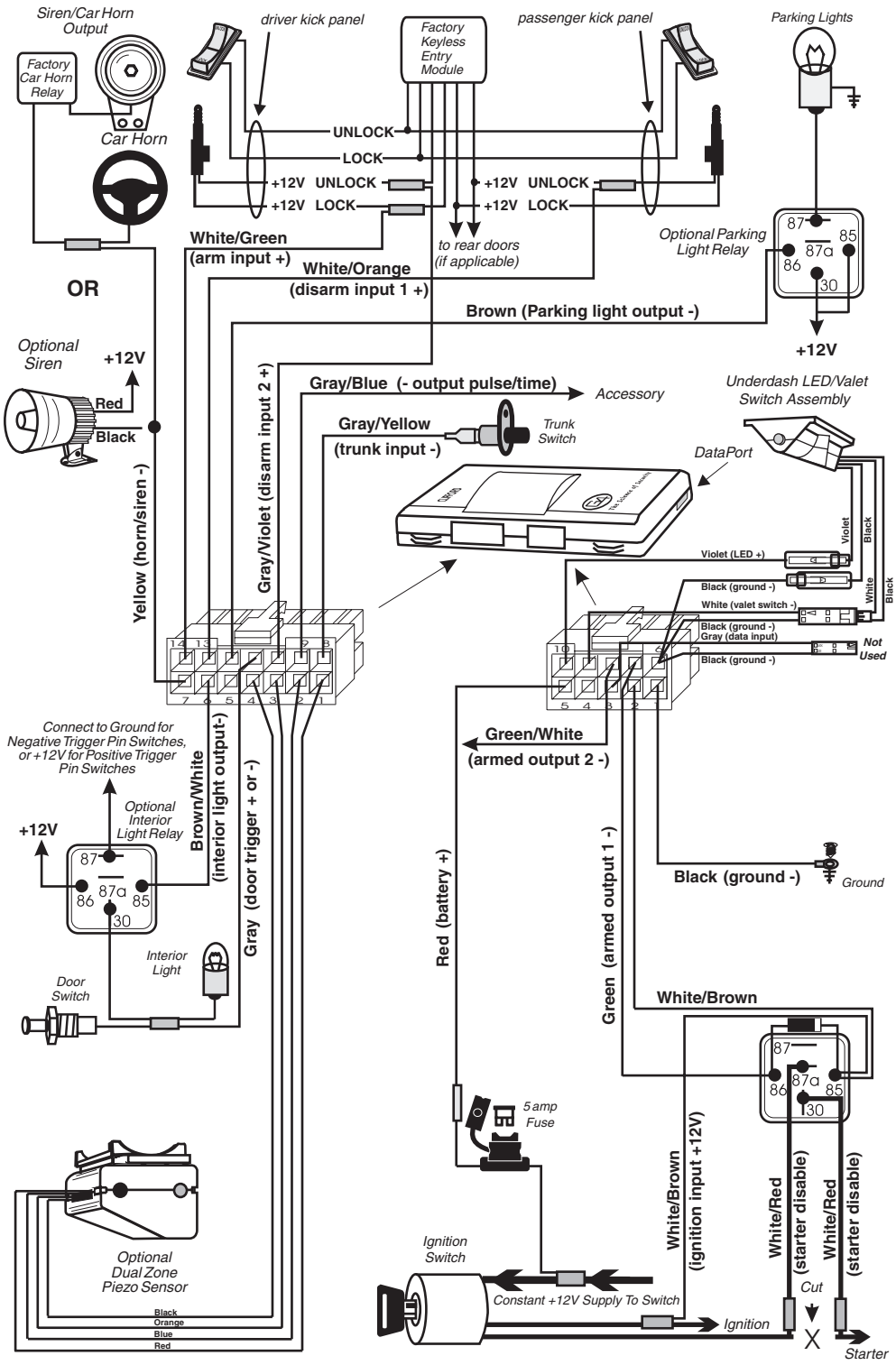
NOTE: The Prime Level 1-5 products are designed for easy, plug-in upgrade. Thus the Level 1 harness is used in the Level 2 installation, the Level 1 and 2 harnesses are used in the Level 3 installation, and so on.



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: Sleep Mode & Customer Mode

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

- **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 (the LED & switch assembly, however, should be removed by the person preparing the vehicle for delivery).
- **Customer Mode:** This is the normal as-shipped operating mode for the new car purchaser.

Passenger Compartment Connections

Control Unit

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.

Ignition & Starter

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.
2. Connect the WHITE/BROWN wire to the ignition line.
3. Find the wire that shows +12V during the **cranking cycle ONLY**.
4. Cut it and connect a WHITE/RED wire to each side of the cut wire.

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 (found on the 10-pin connector) is not used on the Level THREE.

Door Trigger

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.

NOTE: If the vehicle has positive-switching door trigger, you must set the system for positive triggering after power-up (installer grid column 2, row 3).

Optional Interior Light Illumination

This requires an optional relay.

1. Make the optional relay connections shown in the illustration on page 2.
   a. For vehicles with negative triggering door switches, connect terminal 87 to ground.
   b. If positive door trigger, connect terminal 87 to +12V via a 20-amp fuse.

Optional Parking Light Confirmation

If the factory system does not provide parking light acknowledgments of locking/unlocking, the Level THREE system can do so. This may require an optional relay.

1. Turn on the parking lights and access the parking light wire:
   ■Near the headlight switch / In the door sill harness / At any of the 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 0V when off or, on most Japanese cars, 0V when on and +12V at rest.
4. If 0V when on, connect the BROWN wire to the parking light wire; if +12V when on, make the optional relay connections shown on page 2.

Horn Connection

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

If the factory system does not provide horn beep acknowledgments of locking/unlocking, the Level THREE system can be programmed to do so after power-up.

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.

Door Lock Input

1. Locate the wire in the factory keyless entry module or in the driver's kick panel that shows a +12V pulse when locked with the factory remote. Tap in the WHITE/GREEN wire.
2. If dual-stage unlock (driver's door unlocks with one press; all doors with second press):
   a. Locate the wire in the same location that shows a +12V pulse when only the driver's door unlocks. Tap in the GRAY/VIOLET wire.
   b. Locate the wire in the same location or in the passenger kick panel that shows a +12V pulse when ALL doors unlock upon two presses of the factory remote. Tap in the WHITE/ORANGE wire.
3. If single-stage unlock (all doors unlock with one press):
   a. Locate the wire in the same location that shows a +12V pulse when the doors are unlocked with the factory remote. Tap in the GRAY/VIOLET wire. (The white/orange wire is not used.)

Optional Trunk Trigger Connection

The switch may be located in or near the trunk latch or at the trunk light, or add a pin switch.

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

Optional Dual-Zone Piezo Vibration/Impact Sensor

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

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.

Auxiliary A Output

The Auxiliary A output (GRAY/VIOLET wire) is activated by pressing the factory remote **LOCK** button three times (or pressing the vehicle's lock switch three times). This output can be programmed as either pulsed or timed. The factory setting is pulsed output (1 second ground). Current is limited to 0.15 amp.

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 the following connections to provide window/sunroof closure upon triple-locking:

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/VIOLET wire to terminal 85.
5. Connect terminal 86 to +12V.
6. After power-up, program Auxiliary A to timed output.
7. Program the timer to 2 seconds longer than the time it takes to close all windows/sunroof.

Remote Timed Headlight Activation

You can provide timed headlight activation upon triple-locking. Simply follow the steps above using the wire that shows +12V or ground when the headlight switch is activated.

Optional Engine Compartment Connections

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.

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

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 7.

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.

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

LED flashes	Trigger/sensor indication
2 flashes	Optional Sensor
4 flashes	Door trigger
5 flashes	Optional trunk trigger
6 flashes	Hood trigger (if IntelliStart 4 is installed)
7 flashes	An attempt was made to turn on the ignition while the system was armed

Programmable Features

The Level THREE 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.cliffordealer.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. Turn the ignition to the "ON" position or start the engine.
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 (LED on).
3. 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.
4. Toggle the switch to the right once, then pause. Pause. You will hear a confirmation beep.
5. Within five seconds, select the feature by toggling the switch to the left the number of times indicated. 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, repeat step 5 within the next five seconds (after five seconds, three beeps indicate return to step 4).
   b. 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.

** system horn connection required for confirmation beeps*

User-Selectable Features (Customer Mode): 1 beep = OFF, 2 beeps= ON	
Feature Select	**Right x 1**
Left x 1	Beeps: **off**/on/soft (**1**/2/3 beeps)
Left x 2	AutoArming: **off**/on
Left x 3	AutoArming entry delay: **off**/on
Left x 4	Siren duration: **30**/60/90sec. (**1**/2/3 beeps)
Left x 5	FACT anti-falsing: off/**on**
Left x 6	Reset all features to stock (except valet code)
Left x 7	Set a new secret valet code ***NOTE 1***

■NOTE 1: **Immediately toggle right**, then enter the new code, ***wait for the two beeps***, then turn off the ignition (3 beeps). You **MUST** now turn the ignition back on and re-enter the new code. If the LED flashes on, the new code is set. If it does not, the two codes did not match and the system has reverted to the previous code.

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.

Installer-Programmable Features: 1 beep = OFF, 2 beeps = ON		
Feature Select	**Right x 1**	**Right x 2**
Left x 1	**Door Ajar Warning**/Delayed Courtesy Lights (**1 beep**/2 beeps)	Sleep Mode (On/**Off**)
Left x 2	***NOT USED***	Accessory Output A type: **Pulsed**/Timed (**1 beep**/2 beeps)
Left x 3	***NOT USED***	Positive/**Negative** Door Trigger (1 beep/**2 beeps**)
Left x 4	***NOT USED***	***NOT USED***
Left x 5	***NOT USED***	***NOT USED***
Left x 6	Opt. Siren/**Car Horn** (1 beep/**2 beeps**)	Accessory Output Timer Duration (**10sec.**): 1-255 sec. ***NOTE A***

■NOTE A: 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).

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 factory remote 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 6 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 3.
- 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:

- Make sure that the WHITE/GREEN wire is getting a +12V pulse when the doors lock.
- 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 (if connected).

Close all doors and arm with the factory remote

- **2 beeps:** This is the correct response. Proceed to step 3.
- **4 beeps:** See above.
- **No beeps:** Verify the beeps feature is programmed on and check the horn connections.

Step 3: Test the parking lights (if connected).

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. If not, they must be replaced. 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 valet switch.

Test switch operation by entering programming mode as noted on page 6. 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 3.
- 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 5: Test the LED.

Arm the system with the remote control.

- **Flashes repeatedly.** This is the correct response, proceed to step 6.
- **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 6: Test the disarm function.

Disarm with the factory remote.

- **Parking lights flash once (if connected).** 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 (if connected)** 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 7: Test the door trigger circuit.

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

- **Horn sounds, parking lights flash repeatedly (if connected).** This is the correct response, proceed to step 8.
- **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 8: Test the optional trunk trigger circuit.

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

- **Horn sounds, parking lights flash repeatedly (if connected).** This is the correct response, proceed to step 9.
- **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 correct wire. If not, the trunk pin switch must be thoroughly cleaned or replaced.

Step 9: Test the optional Dual-Zone Piezo Sensor.

Arm the system, wait 70 seconds, then tap the car softly with your fist. The following should occur:

- **Horn beeps five times (if connected).** Proceed to step 10.

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

- **Alarm triggers.** Proceed to step 11.

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 70 seconds after arming.

Step 10: Adhere the Clifford window decals to the vehicle's front windows.

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For the latest vehicle wiring information and for wiring diagrams and servicing information on older Clifford products:
24-hour AutoFax: 1-800-444-4667
24-hour dealer website: www.clifforddealer.com
Quarterly Authorized Dealer Technical Support CD-ROM

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