

# **Concept 650**

installation guide



***IMPORTANT!*** *The Clifford Concept 650 system is designed to be installed in any petrol or common rail diesel vehicle with a 12-volt battery.*

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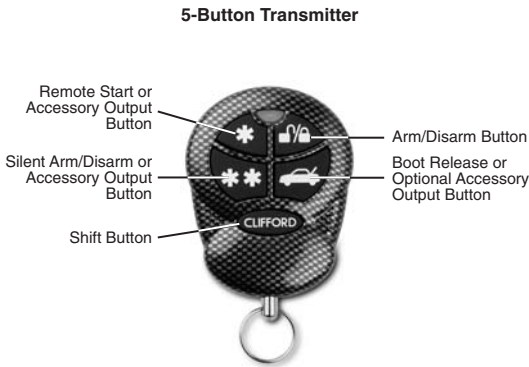
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# what is included

- One control module with 8-wire immobiliser harness and clamshell
- One 5-button transmitter and one 4-button transmitter
- One XHF antenna/receiver with harness
- One pre-wired Blue status LED
- One PlainView 2 Valet switch
- One 515U Smart Self-powered siren
- One of the following sensor options
  - Digital Dual-Zone Proximity Sensor
  - 509U Ultrasonic Sensor
  - 507T Tilt/Motion Sensor and
  - 506T Glass Tamper Sensor
- One 18-pin main wiring harness
- One 3-pin 2-wire door lock harness
- One Cliffnet Dataport extension harness
- One MUX sensor port 'T' harness
- One hardware pack
- One Owner's Guide
- Two window decals
- Presentation envelope

# transmitter configurations

The Concept 650 system has a 5-button and 4-button remote control. Two additional remote controls can be added.



### 4-Button Transmitter




## transmitter functions

This system uses computer-based code learning to learn the transmitter buttons. This makes it possible to assign any transmitter button to any system function. The transmitter initially comes programmed with standard configuration, but may also be customised by an authorised dealer. The buttons in all of the instructions in this manual correspond to a standard configuration transmitter.


### standard configuration for 5-button Radar 2 transmitter

 Button


The arming and disarming functions are controlled by this button.

 Button



The boot release or accessory output A is controlled by this button.

 Button

Silent arm and disarm is controlled by this button.



 Button

Remote start is controlled by this button if the Intellistart\* accessory is installed.

 Button, then  Button

Accessory B output is controlled by these buttons.

\* This feature/accessory is not evaluated by Thatcham.

 Button, then  Button

These buttons activate the optional SmartWindows.

 Button twice, then  Button



These buttons activate remote valet.

 Button twice, then  Button



These buttons disable the sensors.

 Button twice, then  Button

These buttons enter safe start mode for manual transmission vehicles and activate Autostart mode if Intellistart\* is installed.

 Button three times, then  Button

These buttons adjust the optional dual-zone omnisensor.


 Button three times, then  Button

These buttons adjust the optional dual-zone proximity sensor.


## standard configuration for 4-button OEM transmitter

 Button


The arming and disarming functions are controlled by this button.

 Button

The boot release or accessory output A is controlled by this button.

 Button

Accessory output B is controlled by this button.

 Button

Remote start is controlled by this button. (Requires the optional Intellistart\* accessory.)

 and  Buttons

Silent arm/disarm is controlled by these buttons.

\* This feature/accessory is not evaluated by Thatcham.

 and  Buttons

These buttons activate SmartWindows.

 and  Buttons

These buttons activate remote valet.

 and  Buttons

These buttons disable the sensors.

 and  Buttons

These buttons enter safe start mode for manual transmission vehicles and activate Autostart mode. (Requires the optional Intellistart accessory.)



# primary harness wire connection guide

## primary harness wiring diagram

|       |              |   |
|-------|--------------|---|
| H1/1  | WHITE        | Indicator Light Flash 2 Output                    |
| H1/2  | VIOLET/BLACK | Tachometer Input                                  |
| H1/3  | ORANGE       | (500mA) (Ground when Armed)                       |
| H1/4  | GREEN/WHITE  | Ground (connected to H1/8)                        |
| H1/5  | RED/WHITE    | (-) Accessory A Output (200mA)                    |
| H1/6  | WHITE/BLUE   | (-) Accessory B Output (200mA)                    |
| H1/7  | GREY         | (-) Bonnet Input - Zone 6                         |
| H1/8  | GREEN/WHITE  | Normally Closed Input Zone 6 - Connected to H1/4  |
| H1/9  | BLUE         | (-) Boot Input - Zone 5                           |
| H1/10 | WHITE        | Indicator Light Flash 1 Output                    |
| H1/11 | YELLOW/WHITE | (-) Horn Honk Output (200mA)                      |
| H1/12 | BLACK/WHITE  | Interior Light Illumination Output (30)           |
| H1/13 | BLACK/WHITE  | (+) or (-) Interior Light Illumination Input (87) |
| H1/14 | BROWN/RED    | (+) Brake Light 12V Input (87)                    |
| H1/15 | BLUE/WHITE   | (-) Second Unlock Output (200mA)                  |
| H1/16 | BROWN/WHITE  | Brake Light Output (30)                           |
| H1/17 | VIOLET       | (+) Door Trigger Input - Zone 4                   |
| H1/18 | GREEN        | (-) Door Trigger Input - Zone 4                   |

## primary harness wiring guide

This guide describes in detail the connection of each wire. Also included are possible applications of each wire. This system was designed with the ultimate in flexibility and security in mind. Many of the wires have more than one possible function. Please read the instructions carefully to ensure a thorough understanding of this unit and how it operates.

### h1/1 and h1/10 white indicator light flash outputs

These wires are the output of an on-board dual make relay and should be connected to wires in the vehicle that control the indicators. The dual outputs are designed for European vehicles with isolated indicator light systems. If the vehicle's indicator lights are controlled by a single wire, connect both WHITE wires to this single wire.

***IMPORTANT!** The polarity of this wire is determined by the connection of the H4/3 light flash input wire. Always confirm the light flash polarity before connecting H4/3 or damage to the vehicle's lighting system could occur.*

### h1/2 violet/black tachometer input

This wire monitors engine speed for Blackjax\* and door locking. Connect it to one of the following sources; the negative side of the coil, the uncommon wire on any fuel injector, or for diesel vehicles the Directed 60-226 alternator adaptor. If installing with Intellistart\*, only connect the Intellistart\* wire; DO NOT use this wire.

### h1/3 orange (500mA) (Ground when Armed)

This wire provides a (-) ground output as long as the system is armed and will turn off when the system is disarmed. This wire does not provide a ground when Autoimmobilised only. This output can be used to control additional accessories such as window closers, voice modules, or pagers.

### h1/4 green/white ground (connected to h1/8)

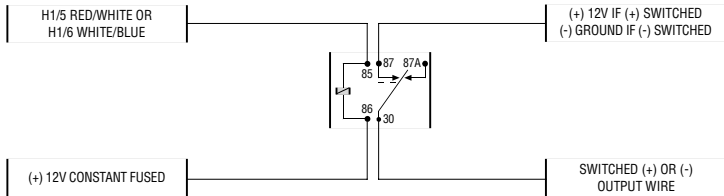
This wire is pre-connected to the normally closed trigger wire H1/8.

\* This feature/accessory is not evaluated by Thatcham.

### h1/5 red/white (-) accessory A output (200mA)

This wire produces a 200mA output when activated by the remote control and can be used to operate a variety of accessories. This is often used to operate a boot/hatch release or other relay-driven function. All accessory outputs can be programmed to different types of outputs. Please see Programming Note #6.

**IMPORTANT!** *Never use this wire to drive anything but a relay or a low-current input! The transistorised output can only supply 200 mA of current. Connecting directly to a solenoid, motor, or other high-current device will cause it to fail.*



### h1/6 white/blue (-) accessory B output (200mA)

This wire produces a 200mA output when activated by the remote control and can be used to operate a variety of accessories. All accessory outputs can be programmed to different types of outputs. Please see Programming Note #5.

### h1/7 grey (-) bonnet input - zone 6

Connect this wire to the bonnet pin switch. If the bonnet is opened when the alarm is armed, this wire will trigger the system.

### h1/8 green/white normally closed input - zone 6 (pre-connected to h1/4)

This wire is pre-connected to ground on H1/4. Some vehicles are factory fitted with normally closed bonnet pin switches which can be connected to this wire. Or alternatively, it can be connected to ground after being looped through external ancillary equipment such as mountain bikes, spot lamps, spare wheels, in-dash CD players, etc. The input can also be used for connection to a heated rear window switched wire. This last option is especially useful as if the rear windscreen was removed whilst the alarm was armed the alarm would trigger.

### h1/9 blue (-) boot input - zone 5

This input will respond to a negative input with an instant trigger. Connect to (-) boot pins and it will report on Zone 5.

h1/11 yellow/white (-) horn honk output (200mA)

This wire is a low current output (200mA) for the horn to sound when the system has been triggered. It can be programmed to either pulse or latch on when the alarm is triggered.

h1/12 black/white interior light illumination output (30)

Connect this wire to the interior light circuit trigger wire or the alarm's door trigger input wire H1/17 or H1/18. When the alarm is disarmed this wire will provide an output to turn on the interior light for 30 seconds.

h1/13 black/white interior light illumination input (87)

This wire determines the output of the BLACK/WHITE H1/12 wire on the main 18-pin harness. If the vehicle has a negative switched interior light circuit, ground this wire; if the vehicle has a positive switched interior light circuit, attach this wire to a 12 volt constant source.

h1/14 brown/red (+) brake light 12V input (87)

This is the polarity source for the brake light output and must be 12 volt constant.

h1/15 blue/white (-) second unlock output (200mA)

This wire produces a (-) 200mA output for vehicles with progressive/selective door unlock, where the driver's door unlocks first and the remaining doors unlock with a second turn of the key in the keyswitch or a second press of the unlock button.

h1/16 brown/white brake light output (30)

When activated by the Blackjax\* feature this wire powers the brake light circuit from the 12 volt source on H1/14.

h1/17 violet (+) door trigger input - zone 4

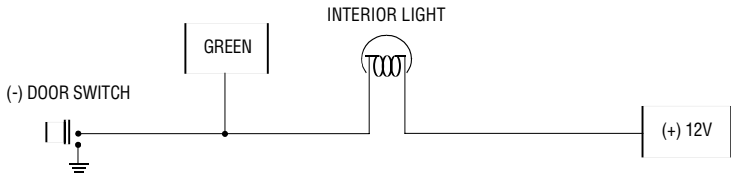
Connect this VIOLET wire to a wire that shows (+)12V when any door is opened. This wire will report Zone 4.

h1/18 green (-) door trigger input - zone 4

Most vehicles use negative door trigger circuits. Connect the GREEN wire to a wire showing ground when any door is opened. When connecting to newer model vehicles there is sometimes the need to use individual door trigger wires. This wire will report Zone 4.

\* This feature is not evaluated by Thatcham.

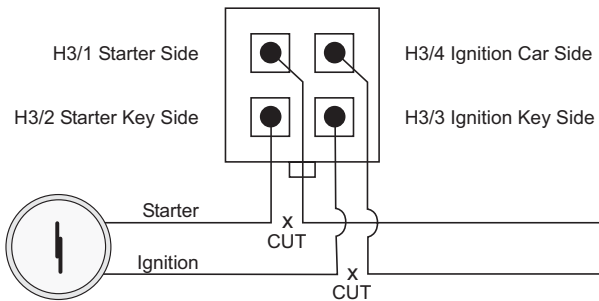
**NOTE:** If using a door trigger wire that has a delay, the installer-selectable programming grid or the Cliffnet Wizard can be used to turn the door ajar warning off.



## pigtail harness wire connection guide (h3 and h4)

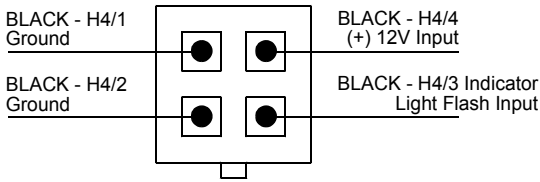
### h3 connector (male)

Locate the ignition and starter wires using a multimeter. Cut the appropriate wire and attach the key side and car side wires to the corresponding wires on the four-pin immobiliser harness.

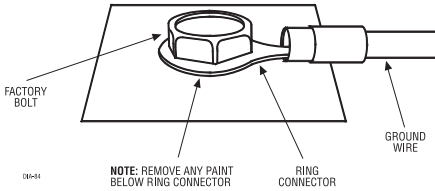


**NOTE:** The current handling capacity for each immobilisation circuit is 20 amps continuous and 30 amps peak.

## h4 connector (female)



Connect the BLACK wires H4/1 and H4/2 to separate ground locations using a factory bolt that does NOT have any vehicle component grounds attached to it or drill a new hole if required. A screw should only be used in conjunction with a two-sided lock washer. Under dash brackets and door sheet metal are not acceptable ground points.



The Black H4/3 wire is the input for the on-board dual make indicator light flash relay. If the indicators are switched positive connect this wire to a 12 volt constant source at the vehicle fusebox, if they are switched negative connect to ground. (Make sure the supplied fuseholder and 20-amp fuse is used.)

Connect the H4/4 power supply wire to an unfused source at the vehicle's fusebox. Use the supplied fuse holder and a 5 amp fuse).

**IMPORTANT!** Always confirm light flash polarity before connecting Hf1/H12 or damage to the vehicle lighting system could occur.

**NOTE:** Remove all tags from H3 and H4 wires after installation.

# door lock harness wire connection guide (h5)

|      |             |   |
|------|-------------|---|
| H5/1 | GREEN       | (-) Lock, (+) Unlock Output (200mA)             |
| H5/2 | EMPTY       | (+) 12V Protected, Low Current for 451M (200mA) |
| H5/3 | (250mA)BLUE | (-) Unlock, (-) Lock Output (200mA)             |

**IMPORTANT!** The door lock outputs are low current and should not be attached directly to any high-current device; they are only to be used to activate relays

## type A: positive (+) 12-volt pulse

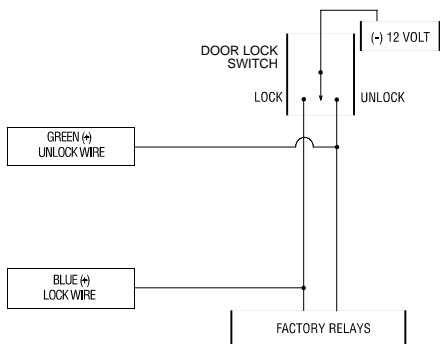
The system can control Type A door locks directly, with no additional parts. The switch will have three wires on it; one will test (+)12 volt constantly. The others will alternately pulse (+)12 volt when the switch is pressed to the lock or unlock position.

If you cannot get to the switch, and you find a set of wires that pulse (+)12 volt alternately on lock and unlock, make sure that it is not a Type C direct-wire system.

Cut the wire that pulses (+)12 volt on lock, and then operate the switch to unlock.

- If all doors unlock, the vehicle uses type A system.
- If you lose all door lock operation in both directions, you are operating the master switch in a Type C system.
- If you lose all door lock operation of one or more, but not all motors, and other doors still work, you have cut a wire leading directly to one or more motors. You must instead find the actual wires leading to the switch.

**IMPORTANT!** Remember that these wires' functions reverse between Type A and Type B.

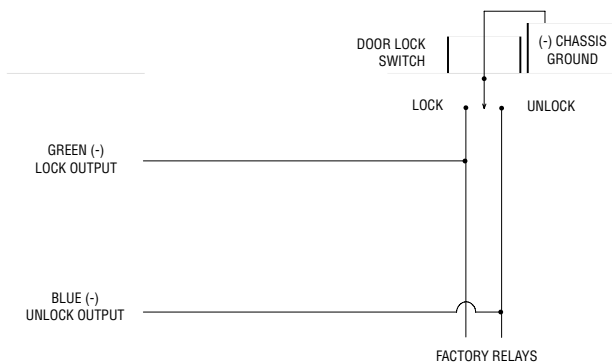


## type B: negative (-) pulse

This system is common in many Toyotas, Nissans, and Hondas. Most European Ford vehicles with (-) negative pulse locking are high current so a 451M or 2 relays need to be used.

The switch will have three wires on it, and one wire will test ground all the time. One wire will pulse negative (-) when the switch locks the doors, and the other wire will pulse negative (-) when the switch unlocks the doors. This type of system is difficult to mistake for any other type.

**IMPORTANT!** Remember that these wires' functions reverse between Type A and Type B.



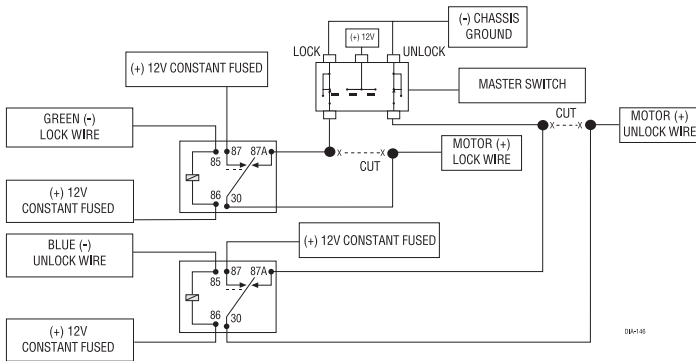


## type C: reversing polarity

Interfacing with a reversing polarity system requires either two relays or one DEI 451M (not included). It is critical to identify the proper wires and locate the master switch to interface the door locks properly. Locate wires that show voltage on lock and unlock. Cut one of the suspected wires and check operation of the locks from both switches. If one switch loses operation in both directions and the other switch operates in one direction only, you have located one of the target wires. The switch that lost all operation is the master switch. If one switch works in both directions and the other switch works in only one direction, you have a Type A system. If both switches still operate, but one or more doors has stopped responding entirely, you have cut a motor lead. Reconnect it and continue to test for another wire. Once both wires have been located and the master switch has been identified, cut both wires and interface as shown in the following diagram.

**IMPORTANT!** If these wires are not connected properly, you will send (+) 12 volt directly to (-) ground, possibly damaging the alarm or the factory switch.

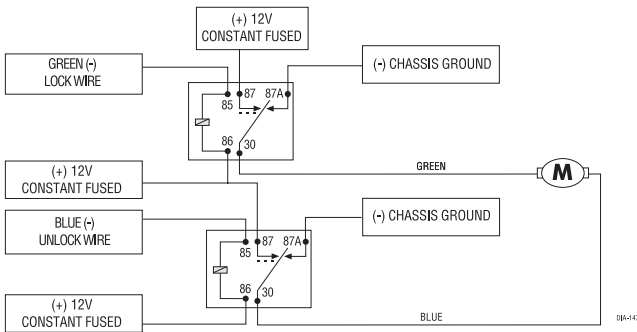
**IMPORTANT!** Do not connect the outputs of the alarm directly to the actuator.



## type D: after-market actuators

In order for this system to control one or more after-market actuators, a DEI 451M or two relays (optional) are required. Vehicles without factory central locking require the installation of one actuator per door. This requires mounting the door lock actuator inside the door. Other vehicles may only require one actuator installed in the driver's door if all door locks are operated when the driver's lock is used.

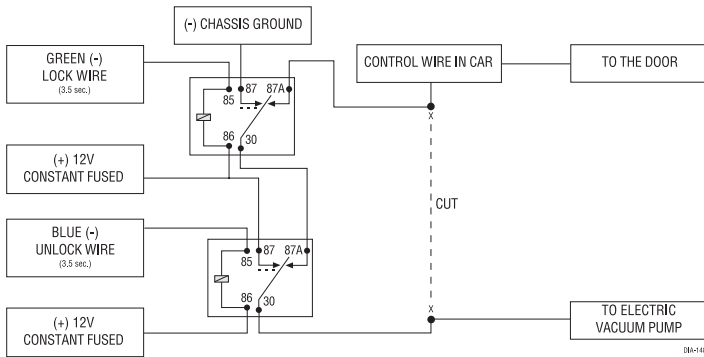
The fuse used on 12 volt inputs should be 7.5A per motor installed in the vehicle.



## type E: mercedes-benz and audi (1985 & newer)

Type E door locks are controlled by an electrically activated vacuum pump. Some Mercedes and Audis use a Type D system. Test by locking doors from the passenger key cylinder. If all the doors lock, the vehicle's door lock system can be controlled with just two relays (optional). The control wire can be found in either kick panel and will show (+)12 volt when doors are unlocked and (-) ground when doors are locked.

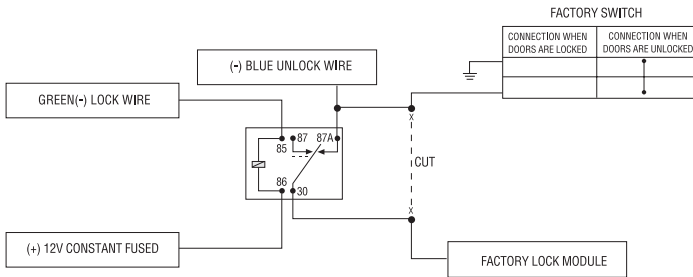
To interface see diagram below. The system must be programmed for 3.5 second door lock pulses up to 1993 and 1 second pulse 1994 or newer.



## type F: one-wire system

Type F door locks usually require a negative pulse to unlock and cutting the wire to lock the door. In some vehicles, these functions are reversed. Type F door locks are found in Nissan 300ZX 1992-up and some Mitsubishis, and Lotus.

One relay (optional) is used to interface to this type of system as follows:



DB-143

## type G: positive (+) multiplex

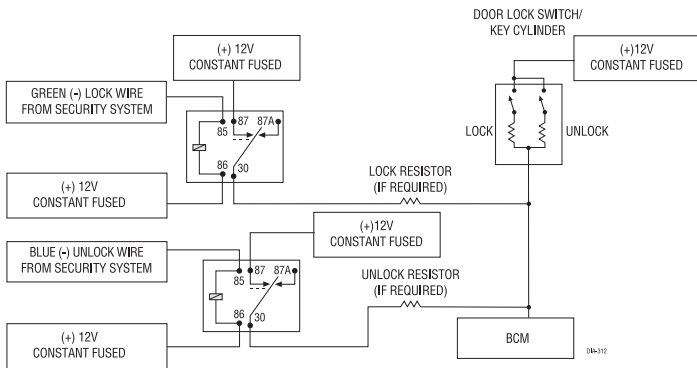
The door lock switch or door key cylinder may contain either one or two resistors. When interfacing with this type of door lock system, two relays or a DEI 451M must be used.

### Single-Resistor Type

If one resistor is used in the door lock switch/key cylinder, the wire will pulse (+)12 volt in one direction and less than (+)12 volt when operated in the opposite direction.

### Two-Resistor Type

If two resistors are used in the factory door lock switch/key cylinder, the switch/key cylinder will read less than (+)12 volt in both directions.



## type H: negative (-) multiplex

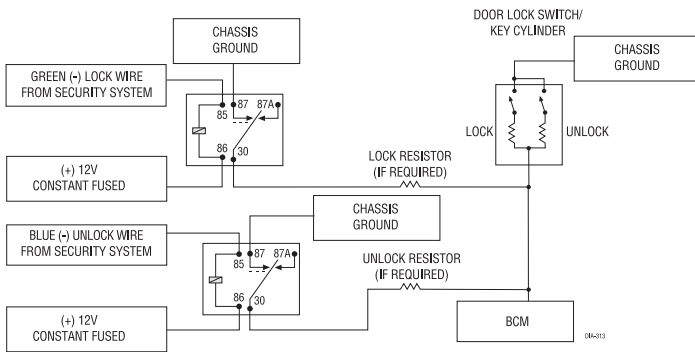
The door lock switch or door key cylinder may contain either one or two resistors. When interfacing with this type of door lock system, two relays or a DEI 451M must be used.

### Single-Resistor Type

If one resistor is used in the door lock switch/key cylinder, the wire will pulse ground in one direction and resistance to ground when operated in the opposite direction.

### Two-Resistor Type

If two resistors are used in the factory door lock switch/key cylinder, the door lock switch/key cylinder will read resistance to ground in both directions.



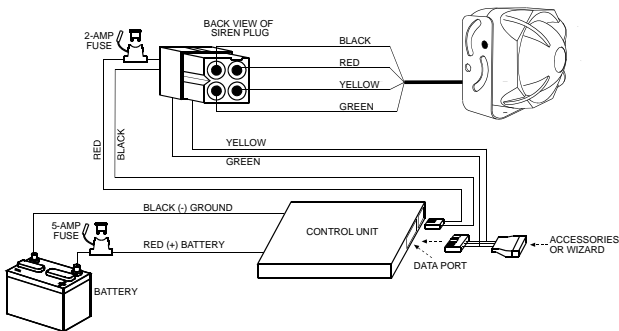
# 515U self-powered smartsiren

The siren transmits a two-way digital signal between itself and the control unit. If a thief disconnects power and/or cuts or tampers with any or all of the siren wires while the system is armed, the siren will sound for five minutes and then reset. Since this will only occur while the system is armed, there is no need for a siren override key. Unlike other back-up battery sirens that constantly drain the car battery, Clifford's design draws charging current only when the ignition is on (i.e., engine running). If the internal battery is discharged, the arm/disarm chirps are muted.

## siren installation instructions

1. Firmly secure the siren to the engine bay firewall or wing using the screws supplied. Mount the siren away from areas of water ingress or excessive heat. Point the siren downward to avoid moisture collecting.
2. Run the cable from the 515U Self-Powered Siren through the firewall into the passenger compartment, being careful not to tear the pins from the end of the cable.
3. Insert the siren wires into the siren plug as shown in the diagram below.
4. Insert the 3-pin data harness with the YELLOW and GREEN wires into the CliffNet Wizard port on the control unit.
5. Insert the red two pin power plug into the SSPS (Smart Self Powered Siren) power port.

**NOTE:** The vehicle must be driven for a total of eight hours after the siren has been installed in order to sufficiently charge the siren's back-up battery.



# passenger compartment

## mounting the control unit

**NOTE:** The Concept 650 control unit must be installed inside the vehicle. Under no circumstances should the unit be installed under the bonnet or other similarly hostile environment.

Select an area behind the dash that will allow you to securely fasten the unit using the screws provided in the hardware pack. Do not mount the unit near moving parts or in direct path of air blowing from the heater vents.

## mounting the receiver/antenna

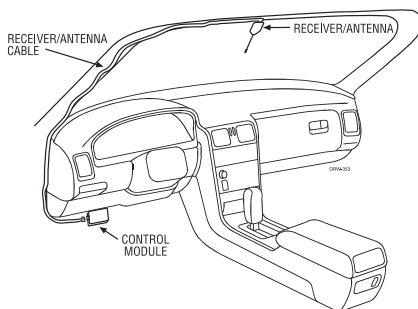
**NOTE:** Do not bundle excess cable as this will reduce the range.

The receiver/antenna position should be discussed with the vehicle owner prior to installation since the antenna may be visible to the driver.

The best position to locate the receiver/antenna is centered high on either the front or rear windshield. For optimal range, the antenna should be mounted vertically. It can be mounted horizontally in relation to the windshield or under the dashboard away from metal, but range will be reduced. Metallic window tint can also affect range, so this should be a consideration when determining the mounting location.

After determining the best mounting location, follow these steps:

1. Clean the mounting area with a quality glass cleaner or alcohol to remove any dirt or residue.
2. Plug the receiver/antenna cable into the receiver/antenna.
3. Mount the receiver/antenna with double-sided tape.
4. Route the receiver/antenna cable down the window pillar to the control module and plug the cable into the control module.

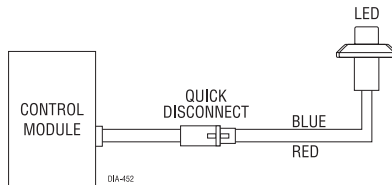




# peripheral plug-in harnesses/sensors

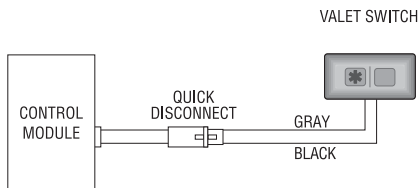
## super bright blue led, 2-pin white plug

The super bright LED operates at (+) 2V DC. Make sure the LED wires are not shorted to ground as the LED will be damaged. Multiple LEDs can be used, but they must be wired in series. The LED can be top-mounted or flush-mounted. If top-loading the LED with a bezel, the LED fits into a 5/16-inch mounting hole. If flush-mounting the LED from the back of a panel, drill a mounting hole using a 17/64-inch drill bit. Make sure you check for clearance prior to drilling the mounting hole.



## plain-view valet switch, 2-pin blue plug

The Valet/Program switch should be accessible from the driver's seat. It plugs into the blue port on the side of the unit. The switch is coded for protection so it need not be hidden. Consider how the switch will be used before choosing a mounting location. Check for rear clearance before drilling a 9/32-inch hole and mounting the switch.



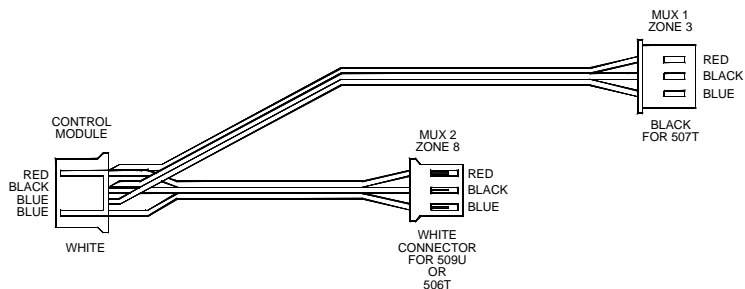
## multiplex (MUX) sensor 'T' harness, 4-pin connector

red and black wires

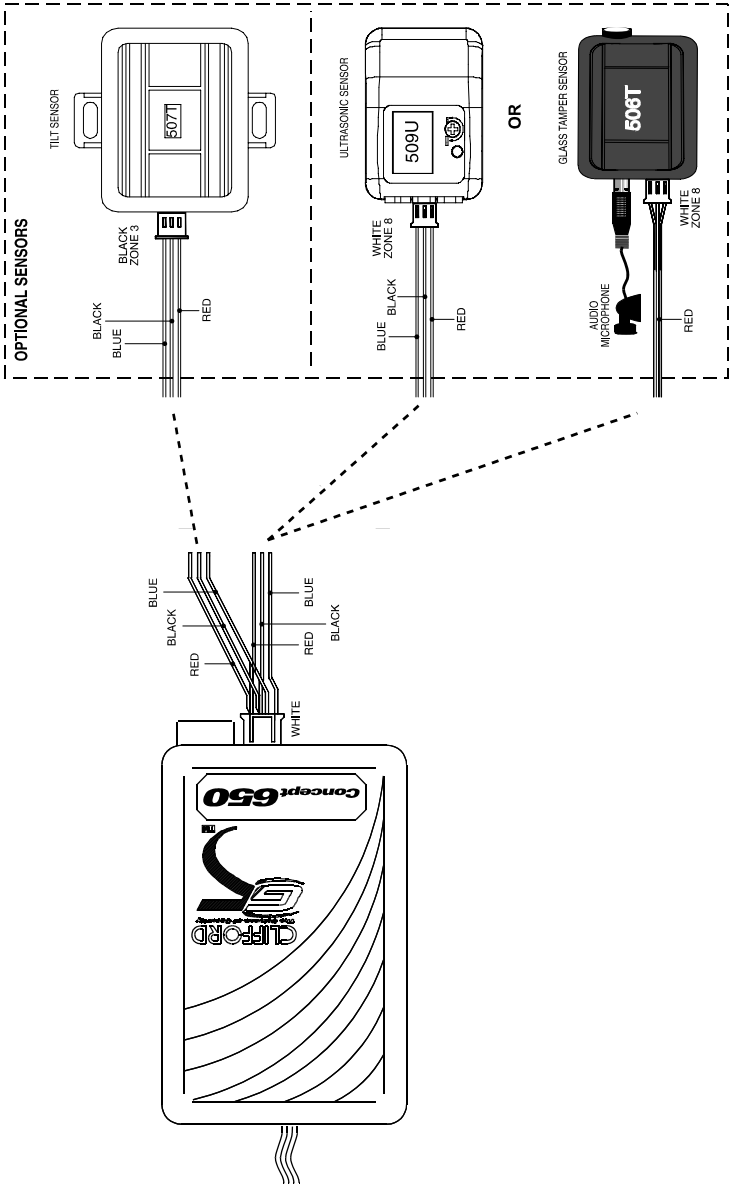
These wires supply 12 volts and ground to the sensor when the system is armed.

blue wires, zone 3 zone 8

These wires are multiplex inputs. If a (-) input of less than 0.8 seconds is supplied to either wire, the Warning Zone response will occur. A (-) input of longer than 0.8 seconds to either wire will initiate the triggered sequence and report Zone 3 or Zone 8.



*NOTE: For mounting and adjustment of sensors, please refer to the Mux Sensors section of this guide.*



## tilt/motion sensor

The 507T tilt/motion sensor detects when the vehicle is being raised in an attempt to either remove the wheels/tires or tow the vehicle. It is capable of independently learning the vehicle's initial angles of vertical and horizontal inclination each time the vehicle is parked, ensuring the most accurate tilt (vertical) and motion sensing (horizontal) possible.

The sensor control module must be mounted at an angle no greater than 45 degrees, with respect to the horizontal plane of the vehicle, and it must be mounted with the case top facing upward. We recommend mounting the control module to the floor of the vehicle. To mount the control module, fasten the unit with either Velcro or screws. Plug the sensor into the Black T-harness connector. It will report zone 3 if triggered.

## glass tamper sensor

The 506T Glass Tamper Sensor is a low-current device that provides an added level of protection to an existing security system by detecting sounds that have the acoustic signature of breaking glass or metal-to-glass impacts. It consumes less than 1 mA of current. Plug the sensor into the White T-harness connector. It will report zone 8 if triggered.

## remote adjustable proximity sensor

The proximity sensor input circuitry has been improved for G5 so the sensor only has power when the alarm is armed. While driving this protects highly sensitive vehicle electronics (i.e. radar detectors) that can be affected by outside interference. However, this does change the way the sensor is adjusted but will not affect normal operation of the sensor.

Inside the vehicle's headliner is the optimal mounting location for this sensor and should always be the first choice. The sensor should face down, centered side to side, with the wire harness exiting toward the front or rear of the vehicle.

If headliner mounting is not possible, the sensor can be placed in a lower area of the vehicle, but field size and sensitivity may be affected. The center console may be appropriate.

Plug the sensor into the Proximity sensor port on the side of the control unit using the shielded 3-wire harness. It will report to zone 1 if triggered.

*NOTE: Never place the sensor behind any metal brackets or under console pockets that will have coins or other metal objects in it.*

## ultrasonic sensor

The 509U Ultrasonic sensor is used to provide coverage of a vehicle's interior cabin area. The sensors detect movement inside the vehicle by sensing air disturbance. They should trigger the alarm if a thief has gained access to the interior of your vehicle.

mounting the control module and transducers

1. Choose a location under the dashboard for the control module that is close enough that the wire harness can reach the alarm control module and the transducers will reach the top of the A-pillar on both driver and passenger sides.
2. One transducer is longer than the other, so mount the transducer with the longest harness furthest from the control module. Use the screws provided or insert the mounting tabs between the dashboard and windscreen pillar.
3. Angle the sensors towards the top centre of the rear window. If mounted at the top of the A-pillars make sure the transducers position does not affect use of the sunvisor.
4. Route the sensor cables to the 509U control module and plug-in.

Plug the sensor into the White T-harness connector. It will report zone 8 if triggered.

## omnisensor

The Omnisensor is designed to give the ultimate in impact detection without the possibility of false alarms that are common with less sophisticated sensor.

The omnisensor can be located in either the passenger or engine compartment. It must be firmly mounted with the indicator arrow pointing UP to a vertical metal surface. For best results it must be secured with screws using ALL FOUR mounting points.

Plug the sensor into the Green Omnisensor port on the side of the control unit. It will report zone 2 if triggered.

## arming/disarming diagnostics

The systems microprocessor monitors and reports all active and violated zones when arming and disarming the system.

### arming

Zones that are triggered at the time the system is armed are reported by an additional set of status chirps called Malfunction AutoBypass. The specific zone bypassed is then reported by the LED. For more zone information, refer to *Table of Zones* section of this guide.

### disarming

If a zone is triggered, three disarm chirps will sound. The specific zone that was triggered is then reported by the LED when the ignition is turned on. For more zone information, refer to the *Table of Zones* section of this guide.

## system status chirps

| Action | Chirps        | Light Flashes | Description  |
|--------|---------------|---------------|--|
| Arm    | 2             | 2             | System armed   |
| Arm    | 4             | 4             | System armed with boot or bonnet active and bypassed (zones 5 and 6) |
| Arm    | 2 (5 sec.) 4  | 2 (5 sec.) 4  | System armed with door active and bypassed (zone 4)                  |
| Arm    | 2 (10 sec.) 4 | 2 (10 sec.) 4 | System armed with sensor active and bypassed zones (1, 2, 3, and 8)  |
| Disarm | 3             | 3             | System disarmed with tamper alert                                    |
| Disarm | 1             | 1             | System disarmed  |
| Disarm | 1 (low pitch) | 1             | System disarmed with transmitter low battery warning                 |



## remote siren silencing

While the siren is sounding, press the arm/disarm button once to silence the siren but leave the system in the armed state. To disarm the system, press the arm/disarm button a second time.

*NOTE: If the remote control battery is low, the siren will generate a single low pitched chirp when disarming.*

## multiple event total recall

This will report the last eight system triggers in reverse chronological order.

1. Press and hold  of the PlainView 2 Valet switch.
2. While still holding , arm and disarm the system, then release the button.
3. The LED will start to flash to indicate the most recent trigger and proceed down to the eighth trigger. If fewer than eight triggers are stored in memory, the LED will flash continuously until the system is armed/disarmed or the ignition is turned on. For more information, please refer to the Table of Zones section of this guide.

# table of zones

When using the diagnostic functions, use the Table of Zones to see which input has triggered the system. It is also helpful in deciding which input to use when connecting optional sensors and switches.

*NOTE: The Warning Zone response does not report on the LED.*

| LED Flashes | Trigger type | Input description                          |
|-------------|--------------|--|
| 1           | Data         | Optional Proximity Sensor                  |
| 2           | Data         | Optional Omnisensor                        |
| 3           | Mux 1        | Optional Tilt/motion sensor                |
| 4           | Instant      | Door Switch Input                          |
| 5           | Instant      | Boot Input                                 |
| 6           | Instant      | Bonnet or Normally Closed Input            |
| 7           | Instant      | Ignition Input                             |
| 8           | Mux 2        | Optional Glass tamper or Ultrasonic sensor |
| 9           | N/A          | BlackJax Activation                        |
| 10          | N/A          | Alarm power reset                          |

## system features programming

This system has many features that can be programmed to accommodate the user's personal preferences and make system installation easier. They are listed in two programming grids on the following pages. Many features have default settings that have been programmed at the factory and are indicated in bold type.

The User Selectable Features grid allows the user and installer to change operational features through the PlainView 2 Valet. The Installer Selectable Features grid allows the installer to change input/output functions of the system to integrate with the vehicle's specific characteristics.

## cliffnet wizard pro installation software programming

Cliffnet Wizard Pro provides access to all available system features and some that are not available when manually programming with the Valet switch. Cliffnet Wizard Pro is compatible with Microsoft Windows 95/98/2000/ME/XP/NT so most programming operations can be accomplished by pointing and clicking with a mouse. This



eliminates the need for programming grids and lengthy programming sequences. For a complete guide to system programming using the Cliffnet Wizard Pro refer to the Cliffnet Wizard help menu.





## manual programming instructions


It is a good idea to document changes by taking note of all feature changes made in programming mode.

To enter the User Selectable Features programming:

1. Ignition on - Turn the ignition to the run position or start the engine.
2. Enter PIN - Enter the factory preset PIN code noted on the back of the owner's guide.

*NOTE: If the factory preset PIN has been changed, the new PIN must be entered.*













3. Hold/Chirp/Release - After entering the PIN code, press and hold  until a chirp is heard and the LED turns on, then release the button. You have now entered the feature selection position of the User Selectable Features grid.
4. Column select - Press  the same number of times as the desired column. After a pause the siren will chirp the same number of times as the selected column for confirmation.
5. Feature select - Press  the same number of times as the desired feature. The siren will chirp with each press. The feature can now be changed using the remote control.
6. Feature change - Press the  button on the transmitter. If the system chirps once, the feature has just turned off; if the system chirps twice, the feature has just turned on. If the feature has more than two settings, continue pressing the arm/disarm button on the transmitter to toggle through the settings.

To advance to the next feature in the same column, press  the same number of times as the desired feature within 60 seconds; to change a feature in a different column begin at step 4 by entering the column number first and then the row number.

*NOTE: Refer to the Feature Descriptions sections of this guide for important notes and descriptions of the system features and programming.*

7. Exit programming - To exit programming mode turn the ignition off or wait 60 seconds without pressing the PlainView 2 Valet switch. The siren will chirp three times to indicate programming mode has been exited.

## user selectable features

| Then Press \ First Press  | 1 x  | 2 x  | 3 x  |
|---|---|---|---|
| 1 x  | Add new remote (autolearn) <sup>***</sup>   | Change PIN code   | New remote learn arm/disarm only  |
| 2 x  | Auto (passive) arm on/off   | <b>Not used</b>   | New remote learn accessory A channel  |
| 3 x  | Chirps on/off/quiet   | <b>Not used</b>   | New remote learn accessory B channel  |
| 4 x  | Auto lock ignition/off/rpm  | Remote valet on/off   | New remote learn silent mode  |
| 5 x  | Auto unlock ignition/off  | Entry delay on/off  | New remote learn remote valet   |
| 6 x  | Auto (passive) arm and lock on/off  | Reset all features to factory (except remotes and PIN code)                           | New remote learn remote start*  |
| 7 x  | <b>Not used</b>   | <b>Not used</b>   | New remote learn window down/vent**   |
| 8 x  | Second unlock on/off  | Autostart setting* (off/battery only/ temp only/ battery and temp)                    | <b>Not used</b>   |
| 9 x  | <b>Not used</b>   | BlackJax on/off ****  | Clear all remotes   |

- \* This feature is only available with optional IntelliStart connected.
- \*\* This feature is only available with optional SmartWindows connected.
- \*\*\* This feature is only available with the 5-button Radar 2 transmitter. To program the 4-button remote use New remote learn in column 3.
- \*\*\*\* This feature is not evaluated by Thatcham.

### user selectable features descriptions - column one

add new remote (only applicable with Radar 2 remote)

- Auto-learn new remote controls to the system in the standard button configuration. For more information, see programming note #1.

auto (passive) arm - on/off

- On: When the system sees the ignition turn off and the last protected entry (door, bonnet, or boot) close, it will begin a 30-second countdown before arming itself. After the first five seconds, you will hear two chirps and the lights will flash. The system will arm 25 seconds later.
- Off: The transmitter must be used to arm the system.

chirps - on/off/quiet

- On: Chirps will sound when arming/disarming the system.

- Off: Chirps will not sound when arming/disarming the system.
- Quiet: Chirps will sound when arming/disarming the system but at a lower volume than normal.

#### auto lock - ignition/off/rpm

- Ignition: The doors will automatically lock three seconds after the ignition is turned on unless a door is open at that time.
- Off: The doors will not lock automatically.
- Rpm: The doors will lock when the system sees the engine reach a preprogrammed RPM. The H1/4 VIOLET/BLACK or Intellistart must be connected.

#### auto unlock - ignition/off

- Ignition: The doors will automatically unlock as soon as the ignition is turned off.
- Off: The doors will not automatically unlock when the ignition is turned off

#### auto (passive) arm lock - on/off

- On: The doors will lock when the system passively arms. This feature only applies when passive arming is programmed on.
- Off: The doors will not lock when the system passively arms.

#### second unlock - on/off

- On: Second unlock output is active when the arm/disarm button is pressed within 10 seconds of disarming the system.
- Off: Second unlock output is pulsed at the same time as the unlock output when the system is disarmed.

### **user selectable features descriptions - column two**

#### change pin code

- This feature allows you to change the user's personal PIN code. For more information, see programming note #5. The factory default PIN code is noted on the back of the Owner's guide.

#### remote valet on/off

- On: The alarm can be put into valet mode with the remote control.
- Off: The alarm can not be put into valet mode with the remote control.

entry delay on/off

- On: If the system has passively armed, it will not trigger for 15 seconds after a door is opened allowing the user to enter the vehicle and disarm the system via the PlainView 2 Valet switch.
- Off: There is no entry delay when the system has passively armed. The system will trigger instantly when a door is opened.

reset all features to factory settings

- All system settings (except PIN and remote programming) in the User Programming grid will be reset to their default factory setting as indicated in bold lettering. No installer programmable features will be changed.
- Press the arm/disarm button of the TX; the siren will chirp twice as confirmation.

auto start setting - off/battery only/temp only/battery and temp

- This feature is only available with the IntelliStart\* option.
- Off: The vehicle will not autostart.
- Battery: The vehicle will only autostart when the car battery voltage has dropped to a preset level.
- Temperature: The vehicle will only autostart at a preset low temperature.
- Battery and temperature: The vehicle will autostart with a low voltage car battery or low temperature.

*NOTE: Temperature and battery calibration and settings can only be made with the Cliffnet Wizard or Wizard Pro programming software.*

blackjax\* on/off

- On: The system will enter BlackJax mode when triggered.
- Off: The system cannot enter BlackJax mode.

### **user selectable features descriptions - column three**

The features in this column pertain to programming individual transmitter channels in custom configurations. Following is an explanation of the features. Program the individual transmitter channels following the instructions in programming note #2.

arm/disarm only

- The remote control channel programmed into this feature will arm/disarm the system only.

\* This feature/accessory is not evaluated by Thatcham.

*NOTE: When programming a new remote control to custom configuration a channel must first be programmed to this feature before programming the remaining channels.*

#### accessory a output

- The transmitter channel programmed into this feature will activate the accessory output.

#### accessory b output

- The transmitter channel programmed into this feature will activate the accessory output.

#### silent mode

- The transmitter channel programmed into this feature will arm/disarm the system, but the siren will not chirp.

#### remote valet

- The transmitter channel programmed into this feature will make the system enter/exit valet mode.

#### remote start

- This feature is only available with IntelliStart\* connected
- The transmitter channel programmed into this feature will activate or shut down the Intellistart remote start system.

#### window control

- This feature is only available with SmartWindows connected
- The transmitter channel programmed into this feature will activate the vent or roll down feature of the SmartWindows system.


#### clear all remotes









- This feature will erase all remote codes from the system memory. This feature is convenient for erasing any transmitters that have been lost, stolen, or incorrectly programmed into the system.
- After entering this feature press any button on the transmitter; the siren will chirp to indicate that all transmitters have been erased from memory.

\* This feature/accessory is not evaluated by Thatcham.

## installer selectable features

To enter the Installer Selectable Features grid follow the instructions for the User Selectable Features with the exception of step 4. Perform step 4 as described below to enter the Installer Selectable Features grid.

Hold/Chirp/Release - After entering the PIN code, press and hold  until the siren chirps once. Continue holding for approximately 10 seconds until the siren chirps three times, then release the button. You have now entered the feature selection position of the Installer Selectable Features grid.

| Then Press \ First Press  | 1 x  | 2 x  | 3 x  |
|---|---|---|---|
| 1 x  | Lock pulse<br><b>single/double</b>  | Acc. output A P1*/<br>P2**/timer A/latch/<br>latch (ignition reset)                   | Program RPM   |
| 2 x  | Unlock pulse<br><b>single/double</b>  | Acc. output B P1*/<br>P2**/timer B/latch/<br>latch (ignition reset)                   | Engine type<br><b>petrol/diesel***</b>  |
| 3 x  | Lock pulse<br>duration<br><b>0.8/3.5 sec</b>  | Not used  | Program<br>SmartWindows 4****   |
| 4 x  | Delayed interior<br>light on/off  | Timer A duration<br>for acc output A  | Horn output<br><b>pulsed/latched</b>  |
| 5 x  | Acc. output B<br>auto-activate<br><b>off/arm/disarm/both</b>                          | Timer B duration<br>for acc output B  | Not used  |

\* P1 = Pulsed channel output is disabled with the ignition on or the alarm is armed.

\*\* P2 = Pulsed channel output works anytime.

\*\*\* Only with optional IntelliStart connected.

\*\*\*\* Only with optional SmartWindows connected.

### installer selectable features descriptions - column one

lock pulse single/double

- Single: One door lock pulse will be output when the system arms.
- Double: Two door lock pulses will be output when the system arms.

unlock pulse single/double

- Single: One door unlock pulse will be output when the system disarms.
- Double: Two door unlock pulses will be output when the system disarms.

lock pulse duration 0.8/3.5 sec

- 0.8 seconds: The door lock pulses will be 800 milliseconds in length.
- 3.5 seconds: The door lock pulses will be 3.5 seconds in length.

delayed interior light

- On: Smart auto testing will ignore the interior light until it turns off.
- Off: Smart auto testing will generate a warning to indicate the door is open.

accessory output B auto activation

*NOTE: The accessory output will not auto-activate if programmed to latched setting.*

- Off.
- Arm: The accessory output will auto-activate when the system is armed.
- Disarm: The accessory output will auto-activate when the system is disarmed.
- Both: The accessory output will auto-activate when the system is armed and disarmed.

## **installer selectable features descriptions - column two**

accessory output a programming

The auxiliary accessory output wire (RED/WHITE) can be programmed for several different types of outputs.

- P1 0.8 seconds: The pulsed output is disabled with the ignition on or the alarm armed.
- P2 0.8 seconds: The pulsed output will operate any time.
- Timed: The length of output duration set.
- Latched: The output can be turned on at any time with the remote control and will remain in that state until the button is pressed again.
- Latched (ignition reset): The output can be turned on at any time with the remote control and will remain in that state until the button is pressed again.




accessory output b programming

The auxiliary accessory output wire (WHITE/BLUE) can be programmed for several different types of outputs.

- P1 0.8 seconds: The pulsed output is disabled with the ignition on or the alarm armed.
- P2 0.8 seconds: The pulsed output will operate any time.




- **Timed:** The length of output duration set.
- **Latched:** The output can be turned on at any time with the remote control and will remain in that state until the button is pressed again.
- **Latched (ignition reset):** The output can be turned on at any time with the remote control and will remain in that state until the button is pressed again or the ignition is turned on.

accessory output a timer duration

- **Start Timer:** Press the /lock button; the siren will chirp to signal the start of the timer duration setting.
- **Stop Timer:** Press the /lock button; the siren will chirp to signal the end of the timer duration setting, or for maximum time, do not press the /lock button.

*NOTE: The timer max setting is 255 seconds.*

accessory output b timer duration

- **Start Timer:** Press the /lock button; the siren will chirp to signal the start of the timer duration setting.
- **Stop Timer:** Press the /lock button; the siren will chirp to signal the end of the timer duration setting, or for maximum time, do not press the /lock button.

*NOTE: The timer max setting is 255 seconds.*

## installer selectable features descriptions - column three

rpm programming

- Programs the tachometer input for the BlackJax\* and door locks. For more information, see programming note #4.

engine type petrol/diesel

- This feature applies only if IntelliStart 4 is installed.
- **Petrol:** The IntelliStart will crank the engine three seconds after the ignition is turned on or after input on the wait-to-start wires ceases.
- **Diesel:** The IntelliStart will crank the engine 20 seconds after it turns the ignition on and will ignore the wait-to-start input wires.

*NOTE: RPM must be reprogrammed after changing this feature.*

\* This feature is not evaluated by Thatcham.



smart windows program



- This feature applies only if SmartWindows is installed.
- Enter this feature and then follow the programming instructions included with SmartWindows.

horn output - pulsed/latched


- Pulsed: H2/9 YELLOW/WHITE wire will generate a pulsing (-) output when the alarm is sounding. When arming and disarming the output does not operate.
- Latched: H2/9 YELLOW/WHITE wire will generate a constant (-) output when the alarm is sounding. When arming and disarming the output will pulse as per the standard chirp pulses.

## programming notes

Note #1: Adding a new transmitter in auto-learn configuration


- Press the  button of the Radar 2 remote control; the siren will chirp once.
- Immediately press  again; the siren will chirp twice to confirm the new transmitter has been programmed.

Note #2: Adding a new transmitter in custom-configuration

- For the  channel, transmit the channel of the new three, four, or five button transmitter that you want to control that feature; the siren will then chirp once.
- Immediately transmit the same channel again, the siren will chirp twice to confirm the transmitter channel has been programmed.
- For the rest of the channels only one press of the button is required to learn, and the siren will chirp the same number of times as the feature row.

*NOTE: When programming a new transmitter to custom configuration, an arm/dis-arm channel must first be programmed before programming the remaining channels.*

### Note #3: RPM programming

- Drive the vehicle to an open area and allow the engine to warm up until the engine RPM drops to normal idle speed.
- Place the engine in park or neutral and set the hand brake.
- Enter the feature and press the  button.
- The indicators will flash twice to confirm the engine RPM has been learned.

*NOTE: If only one flash is seen, the engine RPM was not successfully learned. Test the tach wire connection and retry.*





- Turn the ignition off and activate BlackJax\* or RPM door locks to test.

### Note #4: PIN Programming








A PIN code can have one to four digits; each digit can be from 0-9.

*NOTE: A PIN code cannot begin with a zero.*

- Programming Procedure

1. Enter the feature location in the user-selectable programming grid.
2. Immediately press and release  of the PlainView 2 Valet switch.
3. Select each digit by pressing  1-9 times, and then press  to enter the number into the system. To enter a zero, press  only.


- To program a PIN code of 1032:

1. Press and release  once and  once. You will hear one chirp.
3. Press and release  once. You will not hear a chirp after programming a zero.
5. Press and release  three times, and then press  once. You will hear three chirps.
6. Press and release  two times, and then press  once. You will hear two chirps.
4. Wait for two siren chirps after a five second pause or five seconds after the last digit has been entered if using less than four digit code number.
5. Turn off the ignition; the siren will chirp three times.
6. The programming mode is now exited.

\* This feature is not evaluated by Thatcham.

- PIN Code Confirmation Procedure

Begin this procedure within 15 seconds of finishing the programming sequence or the new code will not be set.

1. Turn on the ignition.
2. Enter the new PIN code.
3. Press and hold  for three seconds.
  - LED turns on: New PIN code is learned and programming is complete.
  - LED stays off: New PIN code is not learned and the system reverts to the old PIN code. Repeat the programming sequence.

#### Note #5: Accessory Channels

- All accessory channels can be programmed to different types of outputs including a pulsed output that does not function when ignition is on or the system is armed, a pulsed output regardless of the ignition/armed state, a timed output, a latched output, or a latched output that resets with ignition on.
- Accessory channel B can be programmed to auto-activate with the arm command of the transmitter, the disarm command of the transmitter, or both. Auto-activate can also be turned off and activate as a normal addition accessory channel output.

## smart power up II

The Smart Power Up II feature ensures that when the security system is powered back up after being disconnected, the system will resume the same state it was in before power was lost. For example, if power is disconnected during a full trigger sequence, the system will still be in the full trigger sequence when power is reconnected to the unit. If power is disconnected while the unit is disarmed, it will still be disarmed when power is restored.

## remote control sensor disable

1. Arm the system.
2. Use the transmitter to bypass the sensor.
3. The lights will flash four times. All warn away zones are now bypassed.
4. Transmit the sensor bypass channel again.
5. The lights will flash four times again. The sensor warn away and full trigger zones are now bypassed.
6. The sensor zones will reset when disarmed.

# mux (multiplex) sensors

## adjusting the 506T glass tamper sensor

*NOTE: Before testing, all the doors and windows must be shut. If a window is open, the acoustics of the vehicle interior change dramatically. The customer should be informed of this. Also remember that Clifford security systems cannot trigger until ten seconds after they are armed.*

A single tap of a key or a coin should not trigger the sensor, since it is designed to react to multiple, closely-grouped sounds. A sharp rap with a set of keys should trigger the sensor. If the sensitivity needs to be increased, turn the adjustment screw clockwise an eighth of a turn and retest. If the sensitivity needs to be decreased, turn the adjustment screw counter-clockwise and retest.

## adjusting and testing the 509U ultrasonic sensor

1. The sensitivity adjuster is found on the top of the 509U control module. Insert a small screwdriver into the adjustment hole and turn the screw clockwise to increase sensitivity or counterclockwise to decrease sensitivity.
2. Arm the alarm system, wait a few seconds and then move your arm through an open window on the vehicle as if attempting to remove an item from the seat. The LED should illuminate on the control module to provide visual indication it has detected the movement and the alarm system should trigger. If it does not, then increase the sensitivity in small increments until the optimum position is reached and the sensors do pick up the movement. Do not over adjust the sensors as the system will false alarm. The sensitivity level should be left at the minimum setting where the sensors pick up movement in the rear seating position.
3. When satisfied with the final sensitivity setting, mount the 509U control module securely with the double-sided tape and cable tie provided.

## adjusting the tilt/motion sensor

The unit has selectable dipswitch settings for both the tilt threshold and the motion sensitivity levels. The dipswitches are located on the side of the sensor next to the harness plug. Dipswitch 1 controls the tilt sensitivity threshold, and dipswitches 2 and 3 control the motion sensitivity threshold. Dipswitch 4 will control the arming delay from either 10 seconds or 2 minutes. One second after the unit has powered up, the 507T has an internal LED that will flash in two groups to indicate which sensitivity settings have been programmed. The first group of LED flashes indicates the tilt sensitivity setting, and the second group indicates the motion sensitivity setting.

tilt sensitivity threshold

Dipswitch 1 controls the tilt sensitivity threshold that detects when the vehicle is being lifted. A 1-degree threshold can be selected for extreme sensitivity, or a 3-degree threshold can be selected for normal sensitivity.

motion sensitivity threshold

Dipswitches 2 and 3 control the motion sensitivity threshold that detects horizontal vehicle movement, such as when the vehicle is rocked back and forth when using a jack to remove the wheels or tires. The motion sensitivity can be programmed off, or to a low, medium or high sensitivity setting.

| <b>Dipswitch 2</b> | <b>Dipswitch 3</b> | <b>Setting</b>          |
|--------------------|--------------------|-------------------------|
| OFF                | OFF                | Disable motion          |
| OFF                | ON                 | low motion sensitivity  |
| ON                 | OFF                | Medium Sensitivity      |
| ON                 | ON                 | High motion sensitivity |


arming delay













Dipswitch 4 sets the amount of time the sensor waits before it will become active. In the off position, the sensor will have a 10-second delay; In the on position, the sensor will have a two-minute delay before becoming active. This feature is ideal for Range Rover and Citroen vehicles that have suspension that settles after parking.

## adjusting the proximity sensor

It is recommended that adjustments be performed away from fluorescent lighting, large metal structures, or confined areas that can affect the sensor field. The proximity sensor field takes about one to two minutes to settle after it receives power. Make the first adjustment with the remote control after about 45 seconds. If the alarm does not see an adjustment signal, it will exit adjustment mode after 60 seconds. Make the adjustments slowly to let the sensor field settle. Each zone has 32 settings that are indicated by chirps that raise and lower in frequency as adjustments are made.

If the alarm exits adjustment mode automatically it will revert to its previous settings.










To lock in the new settings, you MUST exit using the  button after programming! The total adjustment time for this sensor should be 5 minutes or less. Taking the time to properly adjust this state-of-the-art sensor will give your customer years of unsurpassed security and stop any returns for further adjustments.

1. Disarm system
2. Transmit Channel 16. (Press  3 times then  1 time)
  - The LED will turn on and the siren will chirp 1 time.
  - Primary (full trigger) zone adjustment has now been entered.
  - Primary zone can now be adjusted.
3. Adjusting Primary Zone
  - Press  of the remote control to increase sensitivity.
  - Press  of the remote control to decrease sensitivity.
  - The sensor Primary zone can be tested at any time during adjustment and will generate 1 siren chirp each time the zone is activated.
4. Press   to adjust Warn-Away zone
  - Siren chirps 1 time.
  - Warn-away Zone adjustment has now been entered.
  - Warn-away Zone can now be adjusted.
5. Adjust Warn-away Zone
  - Press  to increase sensitivity.
  - Press  to decrease sensitivity.
  - The sensor Warn-away zone can be tested at any time during adjustment and will generate 1 siren chirp each time the zone is activated.
6. Press  of the remote control to return to Primary zone adjustment and lock in Warn Away zone setting.
  - Siren chirps 2 times
  - Primary zone can now be re-adjusted as described in step 3.
  - Or press  again to lock in primary zone setting and exit programming mode.
  - The siren will chirp 3 times when sensor adjustment mode has been exited.
  - **Auto-scroll for adjusting sensitivity** - press and hold  or  to increase or decrease sensitivity setting several levels rapidly.



# adjusting the omnisensor

While adjusting this sensor it is required that you strike the vehicle with the amount force that is desired for the system to trigger.


***CAUTION!** DO NOT strike window glass or flat sheet metal panels that can dent easily. It is recommended that you only strike the metal pillars between the windows, they are structurally sound enough not to dent. ONLY strike the pillars using the heel of your hand, it is more than sufficient for the sensor to distinguish as a theft attempt.*

1. Disarm system
2. Transmit Channel 15 (Press  3 times then   1 time).
  - The LED will turn on and the siren will chirp 1 time.
  - Sensor test and adjustment mode is entered.
3. To test Primary (full trigger) zone.
  - Press  of the remote control.
  - Siren will chirp 2 times.
  - Hit vehicle.
  - Siren chirps 1 time if hit hard enough to activate sensor.
4. Adjust Primary zone
  - Press  of the remote control.
  - Siren chirps 2 times.
  - Sensor adjustment mode is entered.
  - Hit vehicle at the desired level of impact.
  - Sensor adjusts itself to the force of Hit.
  - Siren chirps 1 time as confirmation of adjustment.
  - Press  of the remote control to lock adjustment.
5. Adjust Warn-away zone
  - Press  .
  - Siren chirps 1 time.
  - Warn-away zone adjustment is entered.
6. To test Warn-away zone
  - Press .
  - Siren will chirp 2 times.
  - Hit vehicle.
  - Siren chirps 1 time if hit hard enough to activate sensor.

## 7. Adjust Warn-away zone

- Press .
- Siren chirps 2 times.
- Sensor adjustment mode is entered.
- Hit vehicle at the desired level of impact.
- Sensor adjusts itself to the force of Hit.
- Siren chirps 1 time as confirmation of adjustment.
- Press  to lock adjustment.

## 8. Press to re-enter Primary zone adjustment

- Siren chirps 2 times.
- Primary zone can now be re-adjusted as described in #4.
- Or press  again to exit programming mode.
- The siren will chirp 3 times when sensor adjustment mode has been exited.

## second unlock feature

ON: System will monitor disarm channel for 10 seconds after disarm, if disarm channel is again transmitted within 10 seconds, H1/15 Blue/white will generate the programmed unlock output.

OFF: H2/12 Blue/white wire will generate the programmed unlock pulse at the same time as first unlock.

## auto-immobilisation feature

Immobiliser circuits automatically activate after 30 seconds.

*NOTE: H1/3 orange ground when armed will not activate during Auto-Immobilisation*


## auto-immobilisation sequence

1. Turn ignition off or disarm alarm
2. After 30 seconds the systems Immobilisation circuits activate and engage the starter and ignition interrupt
3. LED flashes at ½ normal speeds.

Disarm the system when immobilised



Use one of the following methods to turn off auto-immobilization

- Turn ignition on and press the  button of the transmitter.
- Arm the alarm and then disarm the alarm.
- Turn the ignition on and enter the system valet/PIN code.

## one-time valet feature

This feature allows the system to be put in valet mode only until the next time the ignition is turned off. (This feature is a Thatcham and EC requirement and, therefore is not programmable.)

## blackjax\* feature

### blackjax activation sequence

When BlackJax is programmed ON, BlackJax sequence will begin every time the ignition is turned on and must be turned off by entering the PIN code. It will then activate again while driving when triggered as described below.

*NOTE: BlackJax can be turned off by entering PIN code at any time.*

1. Ignition on.
  - System sees input on Zone 7 ignition input.
2. Door Open & Close.
  - System sees input on H1/17 or H1/18 Door trigger input.
3. Press and release brake pedal.
  - a. System sees (+) input on H2/16 BROWN/WHITE brake input/output wire.
  - b. System then begins monitoring input on H1/2 VIOLET/BLACK wire or Intellistart 4.
  - c. System sees RPM at or above 2 x programmed rate, BlackJax begins 20 second countdown.
4. After a 20 second countdown:
  - a. 5 siren chirps as reminder to enter PIN code.
  - b. Brake light relay pulses (+) 12v on H2/16 BROWN/WHITE to flash brake lights.
  - c. You then have 20 more seconds to enter PIN to turn off Blackjax.

\* This feature is not evaluated by Thatcham.


5. If PIN code is NOT entered within 20 seconds:
  - System sounds siren and begins flashing indicator lights.
  - Brake lights continue to flash.
  - The system will now immobilise as described in steps 6-7.
6. If system sees the RPM rate return to 1 ½ times programmed RPM rate or lower, the system will immobilise the vehicle as described in step 7
7. Vehicle Immobilisation:
  - immobiliser will engage the starter and ignition circuits.
  - The siren will continue to sound and the indicator and brake lights will flash for a maximum of 5 minutes.
  - Immobilisation circuits will remain active until correct PIN code is entered.

## blackjax\* deactivation sequence

To deactivate BlackJax\* turn the key on and then enter the PIN code at any time.


## bypass blackjax\* temporarily (if on in program grid)

Bypass BlackJax\* temporarily

1. Turn ignition on.
2. Enter PIN code. Do not enter valet or programming mode.
3. Within 10 seconds: Press  button of remote control.
4. Siren chirps 1 time as confirmation of BlackJax\* bypassed.
5. Turn Ignition Off, siren chirps 3 times as confirmation of exiting programming.

*NOTE: If ignition remains on after entering PIN code and no action for 10 seconds, unit will automatically exit programming mode without chirps.*

To return to normal BlackJax\* Operation

1. Turn ignition on.
2. Enter Pin code.
3. Within 10 seconds: Press  button of remote control.
4. Siren chirps 2 times as confirmation of BlackJax\* active.
5. Turn ignition off, siren chirps 3 times as confirmation of exiting programming.

*NOTE: If ignition remains on after entering PIN code and no action for 10 seconds, unit will automatically exit programming mode without chirps.*

\* This feature is not evaluated by Thatcham.

## blackjax\* off warning indicator

Each time the ignition is turned off when BlackJax is bypassed the LED will flash 10 times as a visual reminder.

## certificate of installation

After installation you must fill out the certificate of installation. Once you have filled out all information on the certificate the customer must sign and date it. Distribute the copies as follows:

- White (top) copy - customer
- Blue copy - customer's insurance broker
- Pink copy - Directed Electronics, UK office
- Green copy - installing dealer

## troubleshooting

Closing the door triggers the system, but opening the door does not.

- Have you correctly identified the type of door switch system? This happens often when the wrong door input has been used.

The system will not passively arm until it is remotely armed and then disarmed.

- Are the door inputs connected? Is a BLUE wire connected to the door trigger wire in the vehicle? The GREEN H1/18 or the VIOLET H1/17 should be used instead.

The PlainView 2 Valet switch does not work.

- Make sure that it is plugged in. (See the Plug-In Harness section of this guide.)
- Is the switch plugged into the correct socket?
- Check the System Features Learn Routine for the default PIN code.
- Has the PIN code been changed?

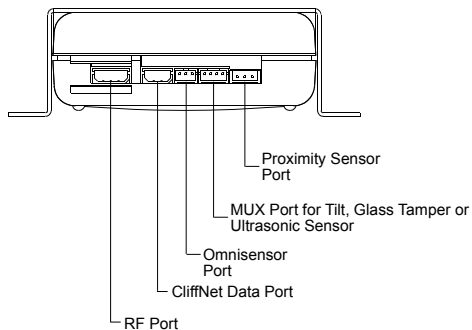
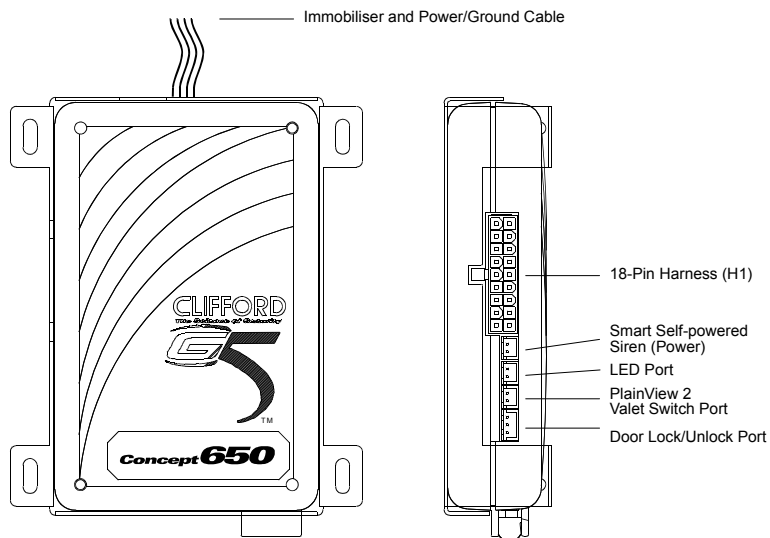
The status LED does not work.

- Make sure that it is plugged in. (See the *Plug-In Harnesses* section of this guide.)  
Is the LED plugged into the correct socket?

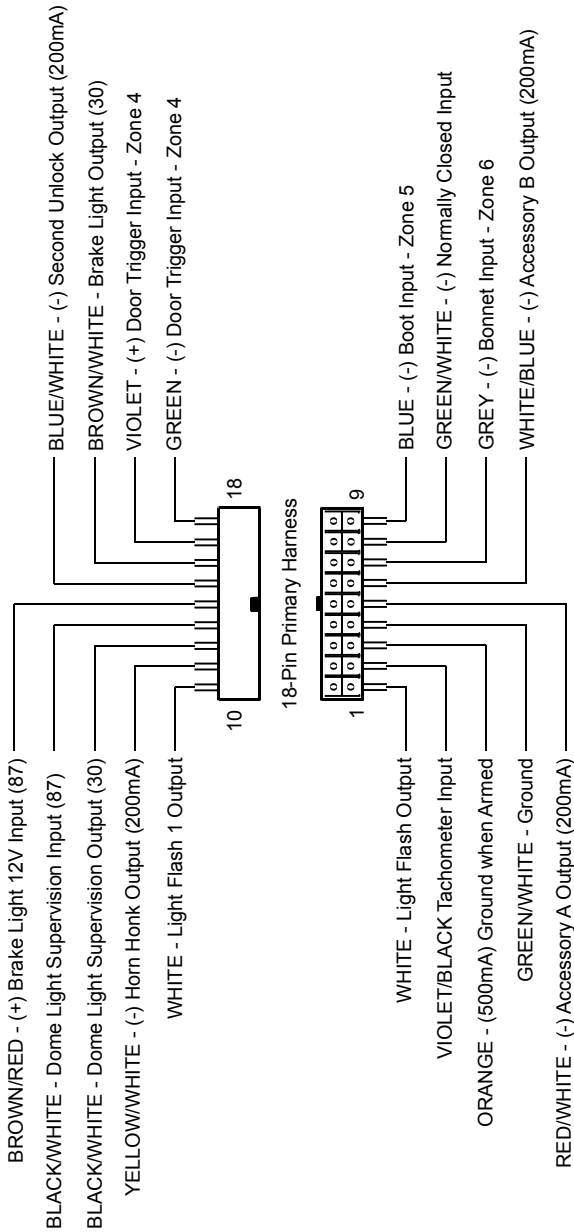
\* This feature is not evaluated by Thatcham.

# wiring reference guide

## control unit



# H1 harness



**NOTE:** The current draw for the entire security system when armed is 20mA. Power supply voltage is 9 to 18 volts.





