Standard Features of the Concept 20

- ***Lifetime Warranty***—For as long as your customer owns the vehicle, Clifford Electronics will repair or replace the control unit and remote controls free of charge (see warranty card for full details).

- ***FACT™—False Alarm Control and Test*** — One of many patented Clifford innovations, FACT ***absolutely, positively puts an end to recurring false alarms*** (user-selectable).

- ***A Pair of 4-Button/12-Channel Remote Controls***—Fingertip command from a typical range of 100 feet.

- ***Anti-CodeGrabbing™ (ACG) with Random Code Encryption and AutoReSync*** — A code-grabber allows a thief to record and capture off the air the digital code transmitted by a remote control when used to arm an alarm. When the vehicle owner leaves, the thief replays the remote control's captured code to disarm the alarm and unlock the doors. ACG with Random Code Encryption makes thieves' *"code-grabbers"* completely useless, because each time the owner presses the button on the remote control, a different random code is transmitted. The Concept 20 remote controls ***never*** transmit the same code twice. What's more, these new-generation ACG remote controls automatically resynchronize themselves with the control unit, so no resynchronizing procedure is ever required.

- ***Full-Time Remote Panic with Automatic Door Locking and Unlocking*** — A continuous press on remote control button 1 will sound the siren, flash the parking lights and unlock the doors of the owner's parked car for quick entry without fumbling with the keys. If the owner needs to panic the system while driving, the siren will sound, the lights will flash and the doors will lock to shield him or her from the assailant.

- ***UltraSecure Coded Valet Mode™*** — Ensures that no thief can turn off the Concept 20 like they can all other brands of alarms. User control is much easier since there is no need to *"hide"* the valet switch. Zero crimp connections allow you to easily mate the prewired connectors.
  - ***Remote Controlled Valet Mode Entry and Exit***— With just a press of a button from up to 100 feet away, the customer can enter or exit valet mode, which is confirmed from a distance with parking light flashes.

- ***Remotely Adjustable Dual-Zone Piezo Sensor™*** — You can adjust, test and set the sensitivity of each of the two zones of this microprocessor-controlled vibration/impact sensor with just a press of a button on the remote control. The two sensor zones provide full perimeter protection: If someone gently bumps the car, the system will sound a rapid 5-chirp warning tone; if forced entry is detected, the full alarm will sound. Zero crimp connections, just mate the prewired connectors.
  - ***Audible Confirmation of Sensor Adjustments*** — For the utmost in sensitivity adjustment ease and instant feedback, just press a button on the remote. *That's all there is to it!* Two chirps confirm each incremental increase, one chirp sounds for each decrease and three confirm minimum and maximum settings. It's so easy, the vehicle owner can even do it himself!
  - ***16-Step Incremental Sensitivity***— For the utmost in fine-tuning flexibility and accuracy, the Piezo Sensor's inner zone and outer zones have 16 steps.
  - ***Adjust and Test Unobtrusively***— No repeated arming and disarming, and no siren wailing. You set, adjust and test sensitivity without activating the alarm!

- ***Remote Door Locking/Unlocking with Built-in Relays*** — No external relays to wire and mount. The Concept 20 directly interfaces with all the most common types of power doorlocks, including the 3-second pulse type of older Mercedes Benz and Audi vehicles.
  - ***User-Selectable AutoLock™*** — Automatically locks the doors the instant the ignition is turned on.
  - ***User-Selectable AutoUnLock*** — Automatically unlocks the doors when the ignition is turned off. (AutoLock and AutoUnLock are now two separate features that can be turned on or off individually.)
  - ***Deluxe Remote Keyless Entry in Valet Mode*** — Use the remote control to lock and unlock the car doors, activate the headlights, accessories, etc. even while the system is in valet mode.

- ***Dual-Mode "Chirp" Silencing***— Both long-term and remote controlled chirp muting.

- ***Built-In Parking Light Flasher with On-Board Relay***—No external relay to wire and mount. The parking lights confirm arming, disarming, AutoArming countdown, remote valet entry and exit, etc.

- ***Remote Controlled Courtesy Lighting***—Again, no external relay. The system automatically turns on the courtesy lights when remotely disarmed (or remotely unlocked in valet mode) and keeps them on for 30 seconds or until the ignition is turned on, whichever occurs first.

- ***Patented Smart AutoTesting™***—Automatically tests all triggers and sensors when remotely armed and specifically identifies any malfunction, eliminating time-consuming and costly trouble-shooting.

- ***Patented Malfunction AutoBypass™ with Automatic Monitoring***—Automatically bypasses any trigger or sensor malfunction. If the owner simply left the hood, trunk or a door open when arming, he or she can just close it (the system temporarily ignores the sensor input for that moment) and the system will again monitor that trigger point.

- ***Selectable Starter/Ignition Interrupt***— Concept 20 lets you use its prewired relay to interrupt your choice of the starter or the ignition. What's more, you can set the interrupt to either normally closed or normally open. The normally-closed, fault-proof mode allows the driver to start the engine even in the unlikely event of a system malfunction, while the normally open setting ensures the engine can't be started by a thief if he tampers with system power or even if he removes the control unit! (Prewired and preprogrammed as a normally closed starter interrupt.)

- ***High-Output Insignia™ Siren***— Designed entirely by Clifford engineers, the Clifford Insignia Siren is far superior in performance, features, reliability and even aesthetics to all other manufacturer's look-alike, sound-alike generic sirens.
  - ***Ultra-Reliability***— The Insignia Siren is designed to deliver 10 times the reliability of conventional sirens.
  - ***User-Selectable Siren Duration***— 30 or 60 seconds.
  - ***Patented Automatic Noise Abatement***— Automatically limits alarm sounding to five siren duration cycles even if a door is left open in the wake of an intrusion attempt, then automatically resets and re-arms.

- ***Enhanced User-Selectable AutoArming™***— Arms itself *"passively"* if the owner forgets to arm it with the remote.
  - ***AutoArming Enable/Disable***— The owner may disable or re-enable AutoArming with just a few flicks of a switch.
  - ***AutoArm & Lock™***— The owner may set the system to automatically lock the doors every time the system AutoArms.
  - ***Visual Indication***— Two parking lights flashes signal that the 30-second countdown to AutoArming has started.
  - ***Instant AutoArm Bypass***— Just a quick turn of the ignition switch bypasses AutoArming for one cycle — perfect when fueling the vehicle. AutoArming is automatically restored the next time the car is parked.

- ***Eight-Event TotalRecall™***—The Concept 20's memory stores the identity of the last eight triggers and/or sensors activated. This provides an invaluable diagnostic means, since the system will visually identify the activated triggers and sensors in reverse chronological order.

- ***Patented Smart Prior Intrusion Attempt Alert***— Specifically identifies the sensor or trigger tripped in an intrusion attempt.

- ***On-Board Electronic Timer***— User-adjustable to any duration between one second and two minutes. Can be used for any timed accessory of other application that needs a variable timer.

- ***Remote Window/Sunroof Closure Capability*** — If the vehicle will close the power windows/sunroof via the driver's door key, the system's integrated timer and an optional relay can be used to automatically close the power windows and sunroof every time the owner remotely arms. A great feature at a next-to-nothing cost.

- ***Remote Headlight Activation Capability*** — Ten minutes and a relay is all it takes to provide this valuable addition to most vehicles. The vehicle owner can set the headlight duration to any interval between one-second and two minutes, and he can change it any time or place, or even while driving.

- ***Advanced CMOS Microcomputer*** —Very large scale integration (VLSI) microprocessor commands all system functions more than 1,000,000 times per second, yet it draws less power than the vehicle's clock, so it won't deplete the car battery like other alarms.

- ***Patented Remote Control Code Learning*** — Just a few flicks of a switch lets you or the owner match to the system up to 4 different 12-channel Clifford remote controls. Just as easily, a lost or stolen remote control can be deleted from the system memory.

- ***Multiple-Car Control*** — The vehicle owner can interface the 12-channel remote control with Concept Series systems on up to seven of his or her other vehicles.

- ***High-Luminescence LED Status Indicator with Automatic Battery-Saving Mode*** — Adds visual deterrence and identifies system status. To conserve vehicle battery power (since the LED draws more current than the control unit), if the system has remained continuously armed for 48 hours, the flash rate will automatically slow to half the normal rate. If left continuously armed for 96 hours, the blink rate will slow to one-quarter the normal rate.

- ***Channel 4 with Selectable Output Type*** — For remote control of multiple accessories. You can change the channel 4 output from its pulsed operation (factory preset) to your choice of latched or timed. Setting an output for latched operation, for instance, permits activation of the vehicle's audio system or neon undercarriage lighting. Timed outputs can control lights, power window/sunroof closure and hydraulics.

- ***AutoActivation of Channel 4*** — The perfect feature for installations in which you have the channel 4 output set to close the power windows. Every time the system is armed, channel 4 is activated (installer-selectable).

- ***Installer-Selectable High/Low Circuitry*** — If the vehicle has delayed courtesy lighting, you won't have to go through any special testing or connections. A few flicks of the PlainView switch sets the Concept 20 to adjust itself to read the door input when the interior light turns off.

- ***Multiple Sensor/Trigger Inputs*** — Separate inputs for two sensors as well as separate inputs for the doors and trunk/hood allow for precise trigger/sensor identification.

- ***Prewired LED, Sensor and Valet Switch Connectors*** — These prewired connectors eliminate up to ten different crimp connections to make installation easier and faster.

- ***Patented SmartPowerUp™ II*** — When power to the system is disconnected, the system's non-volatile memory always remembers the last state (armed, disarmed or valet mode) and returns to that state when power is restored. So if a thief disconnects the power and then restores it in an attempt to start the car, the system will re-arm and instantly sound the siren while immobilizing the vehicle.

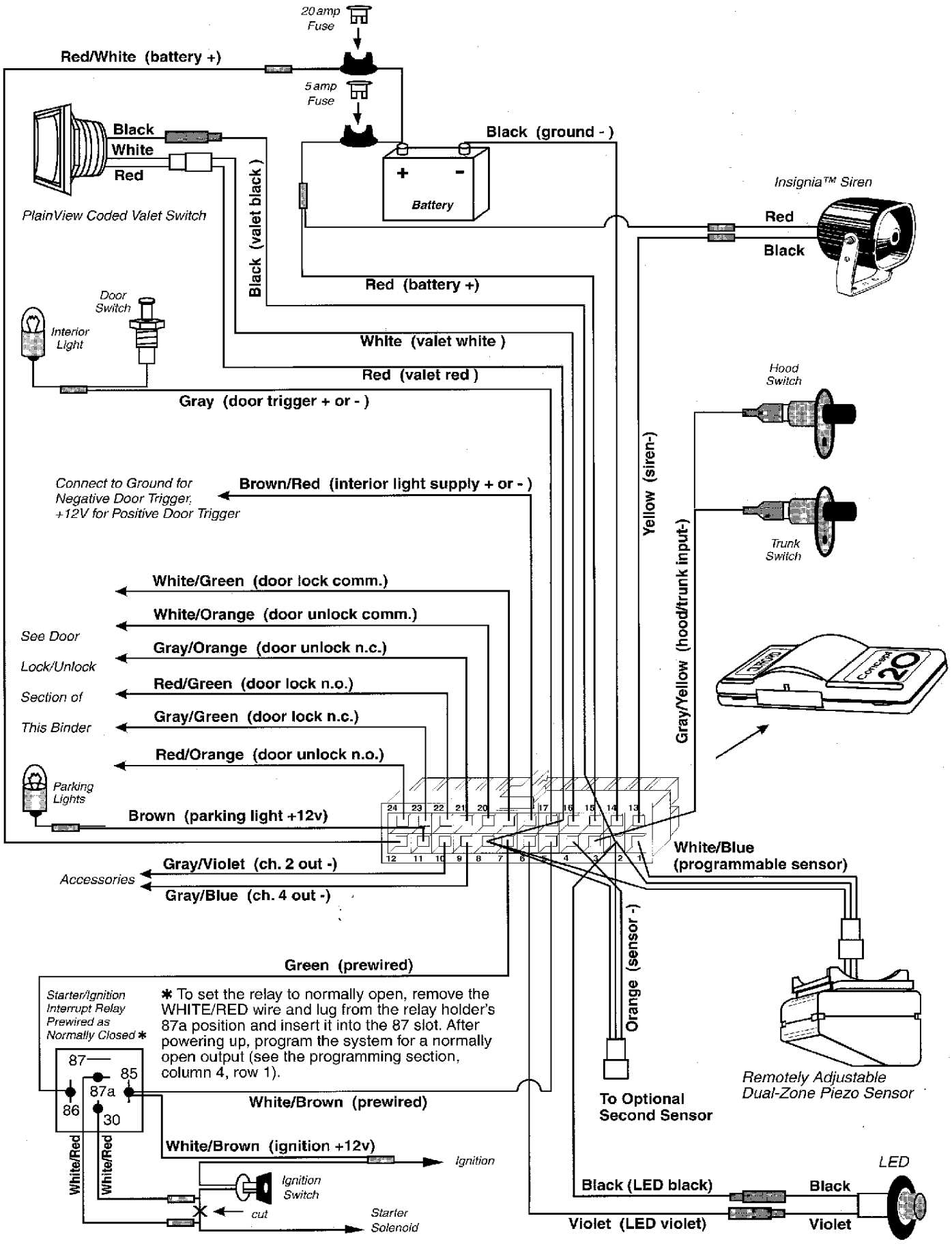
- ***Full-Time Programming Access*** — The owner can easily change the status of nearly 20 different user-selectable features at any time, even while driving. Clear, audible signals confirm each feature selection and setting.

Wiring Description for the 24-Pin Connector

Pin	Color	Connects to	Page
1	White/Blue	Prewired to the Piezo Sensor connector	7
2	Black	Prewired to the sensor connectors	5
3	Gray/Yellow	Trunk and hood pin switches	8
4	Orange	Prewired to the sensor 2 connector	5
5	White/Brown	Prewired to the starter/ignition interrupt relay	5
6	Violet	Prewired to the LED connector	7
7	Green	Prewired to the starter/ignition interrupt relay	5
8	Red	Prewired to the sensor connectors and the PlainView switch connector	5
9	Gray/Blue	Channel 4 accessory	7
10	Gray/Violet	Channel 2 accessory	7
11	Brown	Parking lights	8
12	Red/White	Battery positive (20-amp fuse)	9
13	Yellow	Siren black wire	8
14	Black	Battery negative	9
15	Red	Battery positive (5-amp fuse)	9
16	White	Prewired to the PlainView switch connector	7
17	Gray	Door trigger (+ or –)	7
18	Brown/Red	Connect to ground for negative door trigger, +12V for positive door trigger	7
19	White/Green	Door lock common	7
20	White/Orange	Door unlock common	7
21	Gray/Orange	Door unlock normally closed	7
22	Red/Green	Door lock normally open	7
23	Gray/Green	Door lock normally closed	7
24	Red/Orange	Door unlock normally open	7

Sequence of Installation

1. **Passenger Compartment**
   a) Select a suitable location to mount the ***control unit.***
   b) Wire the ***Starter/Ignition Interrupt Relay.***
   c) Mount and connect the ***LED*** status indicator.
   d) Wire the ***door trigger*** and ***interior light supply.***
   e) Wire the ***door locks.***
   f) Mount and connect the ***PlainView Valet Switch.***
   g) Mount and wire the ***Dual-Zone Piezo Sensor.***
   h) Wire the ***channel 2 and channel 4 outputs.***
   i) Wire the ***trunk trigger*** and, if needed, mount a pin switch.
   j) Wire the ***parking lights.***
   k) Mount and wire optional passenger compartment ***accessories.***
2. **Engine Compartment**
   a) Mount and connect the ***Insignia Siren*** and, if needed, ***hood pin switch.***
3. Make **final** wiring **connections** at the battery, then **plug in** the control unit connector.
4. **Set sensitivity** of each zone of the Dual-Zone Piezo Sensor and, if needed, set the **door lock pulse, high/low** courtesy lighting feature, **interrupt relay normally open/closed output** and/or **channel 4 output type** (timed/latched/pulsed).
5. **Test** the system.
6. Power and test **accessories.**
7. Secure the control unit, accessory modules and wiring.


20 amp Fuse
5 amp Fuse
Red/White (battery +)
Black
White
Red
PlainView Coded Valet Switch
Black (valet black)
Black (ground -)
Battery
Insignia™ Siren
Red
Black
Red (battery +)
Door Switch
Interior Light
White (valet white)
Red (valet red)
Gray (door trigger + or -)
Hood Switch
Connect to Ground for Negative Door Trigger, +12V for Positive Door Trigger
Brown/Red (interior light supply + or -)
Yellow (siren-)
Gray/Yellow (hood/trunk input-)
Trunk Switch
White/Green (door lock comm.)
White/Orange (door unlock comm.)
See Door Lock/Unlock Section of This Binder
Gray/Orange (door unlock n.c.)
Red/Green (door lock n.o.)
Gray/Green (door lock n.c.)
Red/Orange (door unlock n.o.)
Parking Lights
Brown (parking light +12v)
Gray/Violet (ch. 2 out -)
Accessories
Gray/Blue (ch. 4 out -)
White/Blue (programmable sensor)
Orange (sensor -)
Green (prewired)
Starter/Ignition Interrupt Relay Prewired as Normally Closed *
* To set the relay to normally open, remove the WHITE/RED wire and lug from the relay holder's 87a position and insert it into the 87 slot. After powering up, program the system for a normally open output (see the programming section, column 4, row 1).
87
85
87a
86
30
White/Brown (prewired)
To Optional Second Sensor
Remotely Adjustable Dual-Zone Piezo Sensor
White/Red
White/Red
White/Brown (ignition +12v)
Ignition
Ignition Switch
cut
Starter Solenoid
LED
Black (LED black)
Black
Violet (LED violet)
Violet

Passenger Compartment Components

Control Unit

1. Install the control unit in the passenger compartment, **not** in the engine compartment.
2. Identify where the control unit will be installed. Route wires from this point, leaving slack in the wiring for ease of service. **Do not** plug the connector into the control unit all wiring is complete.

Antenna

The short gray wire is the antenna. Its position and location will effect remote control range:

1. Do not shorten or lengthen the antenna wire.
2. Point the antenna wire away from the control unit.
3. Avoid positioning the antenna wire parallel to any wiring harness.
4. Keep the antenna and control unit as far as possible from metal.
5. The antenna is best positioned perpendicular to the largest metallic surface near the control unit.

Wireloom

All Clifford systems are designed to be wired FROM the control unit TO each component. Route power and ground connections directly to the vehicle battery. Power and test the control unit before any optional accessories. DO NOT yet plug in the control unit connectors. Using the supplied tie wraps, separate the wires into the following groups:

1. For engine compartment connections: RED, RED/WHITE, BLACK, GRAY/YELLOW and YELLOW. Sleeve these wires in vinyl tubing and pass them through an existing grommet into the engine compartment. If a new opening must be drilled, add a rubber grommet to prevent shorts and fire hazards.
2. For the door locks: GRAY/GREEN, WHITE/ORANGE, RED/ORANGE, RED/GREEN, WHITE/GREEN and GRAY/ORANGE.
3. For the Piezo Sensor: the WHITE/BLUE, RED and BLACK wires that terminate in a 3-pin connector. If installing an optional second sensor, group the ORANGE, RED and BLACK wires that terminate in a 3-pin connector.
4. For the LED: the BLACK and VIOLET wires that each terminate in a 1-pin connector.
5. For the PlainView switch: the RED and WHITE wires that terminate in a 2-pin connector and the BLACK wire that terminates in a 1-pin connector.

Ignition Input

1. Locate the ignition switch wireloom under the dash and use a voltmeter to locate the one wire that carries +12V throughout **BOTH the cranks AND engine running cycles**, and 0 volt when the ignition is off.
2. Start the engine, then cut the ignition line. The engine should die.
3. Connect the WHITE/BROWN wire to the ignition line as shown on page 5.

Selectable Starter/Ignition Interrupt Relay

Concept 20 lets you use its prewired relay to interrupt the owner's choice of the starter or the ignition. What's more, you can set the interrupt to either normally closed or normally open. The normally-closed mode allows the driver to start the engine even in the unlikely event of a malfunction, normally-open ensures the engine can't be started by a thief if he tampers with system power or even if he removes the control unit! Discuss this with the vehicle owner so that he or she may make an informed decision. ***The relay is prewired and preprogrammed as a normally closed starter interrupt.***

> ***NOTE: The starter circuit may have very high current. Be certain that both WHITE/RED wires are solidly connected. For maximum dependability, solder and shrink tube the relay's WHITE/RED connections.***

1. Select the line that the relay will interrupt:
   a. ***Ignition:*** Use the ignition wire you identified above. Cut the wire between the engine and the WHITE/BROWN crimp connection you made.
   b. ***Starter:*** Use a voltmeter to locate the wire that carries +12V during the **cranking cycle ONLY**. Cut this wire, then try to start the engine. It should not crank.
2. Connect one WHITE/RED wire to one side of the cut wire, then the other WHITE/RED wire to the other side.
3. If you want the relay to be normally open, remove the WHITE/RED wire and lug from the relay holder's 87a slot (insert a small screwdriver above the slot and press down on the lug's latch) then plug it into the holder's 87 slot. After you have powered up the system, you must program the system for a normally open interrupt (see Programmable Features section and table on page 11 and select the column 4, row 1 feature).

LED Status Indicator

Select a prominent location on the dash or console visible from both the passenger and driver windows. Discuss placement with the owner. The LED is off when the system is disarmed, flashes while armed, and glows in program and valet modes. To conserve vehicle battery power when the vehicle is armed for an extended period, the flash rate will automatically slow to half its normal rate when the system has been continuously armed for 48 hours, and will slow to one-quarter the normal rate after 96 hours.

1. Verify there is adequate space to accommodate the LED, then drill a 5/16" hole and route the wires through it.
2. Mate the LED connectors to the same wire color connectors on the wireloom, then press the LED into place.

Door Trigger

Please refer to the **Door Trigger section** in this binder for information on polarity testing and connections.

Interior Light Supply

If the door trigger polarity is negative, connect the BROWN/RED wire to ground; if the door trigger polarity is positive, connect it to +12V.

Door Locking/Unlocking

Please refer to the **Door Lock section** in this binder for information on the various circuit types and connections.

PlainView Coded Valet Switch

The valet switch is the weakest link of all other manufacturers' alarms since, just by hotwiring the ignition and flicking the switch, the thief will disarm the alarm and steal the car. The PlainView Coded Valet Switch offers absolute protection while at the same time is substantially more user-friendly and easier to access. Since Concept 20 has a *coded* valet mode, ***the switch can and should be mounted in plain view*** on the dash or console and within easy reach of the driver. Discuss placement of the switch with the vehicle owner. Avoid placing the switch where it may be accidentally toggled.

1. Verify there is adequate space to accommodate the switch.
2. Drill a 1/2" mounting hole.
3. Insert the wires through the hole and mount the switch.
4. Mate the switch's connectors to the same wire color connectors on the wireloom.

Electronically Programmable Dual-Zone Piezo Sensor™

The Electronically Programmable Dual-Zone Piezo Sensor is an all-electronic vibration/impact sensor that has no moving parts to wear out or otherwise effect sensitivity. After powering up the system, you will adjust, test and set sensitivity of each sensor zone simply by pressing buttons on the remote control (see page 9).

1. Use the supplied wire ties to firmly mount the sensor to the underside of the steering column (if the steering column is not sleeved, remove the sensor's curved base and screw it firmly to the passenger compartment firewall).
2. Mate the sensor's connector to the wireloom's sensor 1 connector (RED, BLACK, WHITE/BLUE).

Channel 2 Output

The GRAY/VIOLET channel 2 output goes to ground for 0.5 seconds when button 2 is pressed (or for as long as button 2 is held). Current is limited to 0.15 amps.

Channel 4 Output with Selectable Type and Selectable AutoActivation

You can program the GRAY/BLUE wire to operate in any of these three manners:

- *As a pulsed output of 0.5 second ground, or for as long as the button is held (this is the factory preset)*
- *As a latched output (i.e., the output stays at ground until channel 4 is activated a second time)*
- *As a timed output that stays at ground for any duration of your choice between 1 second and two minutes*

The output is activated by pressing remote control button 4. Current is limited to 0.15 amp. You can also set this output to automatically activate every time the system is remotely armed (perfect if wiring as a timed output to close the power windows and sunroof). See the programming section on page 11 to change the type of output and/or AutoActivation.

Remote Headlight Activation (may require an optional relay)

1. Connect a wire from the relay's terminal 30 to the wire that carries +12V ***only*** when the headlight switch is activated.

> ***NOTE: Most Japanese vehicles have negative-switching headlights and do not require a relay. If the headlight line goes to ground when the switch is turned on, connect the GRAY/BLUE wire to that line and skip the following steps.***

2. Connect the GRAY/BLUE wire (channel 4) to relay terminal 85.
3. Connect terminals 86 and 87 to +12V through a 30-amp fuse.
4. To program headlight duration, see page 11.

Automatic Window/Sunroof Closure (requires an optional relay)

If the door key can close the power windows/sunroof, you can make them automatically close upon remote arming:

1. Connect a wire from the relay's terminal 30 to the wire that carries +12V or ground only when you turn the key.
2. If ground, connect terminal 87 to ground; if +12V, connect 87 to the RED/WHITE wire.
3. Connect terminal 86 to the RED/WHITE wire.
4. Connect the channel 4 output wire to terminal 85.
5. With the sunroof and all windows fully open, count how many seconds it takes for them to fully close.
6. Add two seconds to the count (for slower operation when cold), then program the system timer for that duration as noted on page 11 (column 3, row 3).
7. Turn on the *AutoActivate Channel 4 Upon Arming* feature as noted on page 11 (column 2, row 4).
8. Set the channel 4 output to timed as noted on page 11 (column 4, row 4).

Parking Lights

Please refer to the **Parking Light section** in this binder for information on polarity testing and connections.

Trunk Trigger

Vehicles with a ground-switching trunk light will interface directly with the Concept 20 (on positive switching Rolls-Royce and Ford vehicles, use a relay to invert polarity). The switch may be located in or near the trunk latch or at the trunk light.

> ***NOTE: If the vehicle has a dashboard trunk ajar indicator, install one of the supplied diodes between the light and switch with the diode band pointing toward the switch.***

1. Connect the GRAY/YELLOW wire to the trunk switch (between the diode and switch if you added a diode).

Engine Compartment Components

Insignia Siren

Mount the siren in the engine compartment away from hot or moving parts and where it cannot be reached from under the vehicle, preferably opposite the exhaust system. Point the siren down to avoid water collection.

1. Mount the siren using all three sheet metal screws supplied.
2. Connect the siren's BLACK wire to the wireloom's YELLOW wire.
3. Connect the siren's RED wire to +12V.

Hood Trigger

Vehicles with a ground-switching hood pin switch will interface directly with Concept 20.

> ***If the hood light does not operate unless the parking lights are on, install one of the supplied diodes between the light and switch with the diode band pointing toward the switch.***

1. Connect the GRAY/YELLOW wire to the hood pin wire (between the diode and switch if you added a diode).

Final Wiring Connections

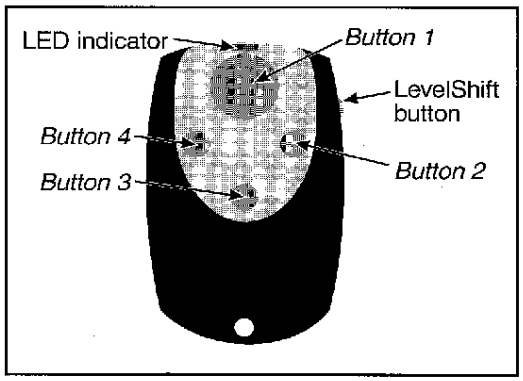
1. **Do not** plug in the control unit connector until step 6 below.
2. Connect the 5-amp fuse and fuseholder to the RED wire.
3. Connect the 20-amp fuse and fuseholder to the RED/WHITE wire.
4. Use ring connectors to attach the two fuseholders to the +12V battery lug without removing the terminal from its post.
5. Use a ring connector to attach the BLACK wireloom wire to the negative battery lug without removing the terminal.
6. Plug in the control unit connector. The system will power-up silently into its disarmed state.
7. Reset the courtesy lighting (note that if all trigger points are closed, the system will AutoArm).

NOTE: Power and test accessories after the basic system has been tested. Individually fuse all accessory power connections. Individually fuse all +12V battery connections.

SmartPowerUp™ II

SmartPowerUp II ensures that the system powers up in the same state (disarmed, armed or valet) it was last in. When you first power up the system, it will silently enter its disarmed state (note that if all trigger points are closed, the system will AutoArm). Unlike previous versions, you don't need to turn on the ignition switch in order to power-up silently.

Remote Control Operation



To transmit either channel 1, 2, 3 or 4: Just press either button 1, 2, 3 or 4. For instance, to transmit channel 3, press button 3. While you transmit, the LED indicator will blink once every second: this indicates **level 1.**

To transmit either channel 5, 6, 7 or 8: Press the LevelShift button once. This shifts buttons 1–4 to level 2 (channels 5–8). Then press the desired button *within the next 7 seconds.* For instance, to transmit channel 5, press the LevelShift button once, then press button 1. While you transmit, you'll notice that the LED indicator blinks twice, pauses, blinks twice, etc.: this indicates **level 2.**

To transmit channel 9, 10, 11 or 12: Press the LevelShift button twice. This shifts buttons 1–4 to level 3 (channels 9–12). Then press the corresponding button within the next 7 seconds. For instance, to transmit channel 10, press the LevelShift button twice, then press button 2. While you transmit, you'll notice that the LED blinks three times, pauses, blinks three times, etc.: this indicates **level 3.**

NOTE: One second after you stop transmitting level 2 or level 3 (channels 5–12), the remote control automatically returns to level 1 (channels 1–4).

Sensor Adjustment

You interactively test and adjust the Digital Dual-Zone Piezo Sensor via the remote control. You will be spared from repeated arming and disarming, and obnoxious siren noise. Setting and testing sensitivity is a simple 4-step process:

1. If the system is armed, disarm it with remote control button 1, then select the **Piezo Sensor** zone you wish to adjust:
   a. **Primary zone**: transmit **channel 11** (LevelShift twice, then button 3).
   b. **Warning zone**: transmit **channel 12** (LevelShift twice, then button 4).
2. To **test** the current sensitivity setting:
   a. **Primary zone**: Firmly **"thump"** the window pillar with the side of your fist. You will hear a chirp to confirm activation of the primary zone. Lightly "thump." There should be no chirp.
   b. **Warning zone**: **"Thump"** the window pillar with somewhat less force. A chirp will confirm activation of the warning zone. Lightly "thump." There should be no chirp.
3. To **increase** sensitivity, press **button 2**, to **decrease** it, press **button 4**. Each increase is confirmed with a double chirp, a single chirp sounds for each decrease and 3 chirps indicate minimum and maximum settings.
4. Repeat steps 2 and 3 until you are satisfied with the sensitivity, then press **button 1** to record the new sensitivity setting and exit the sensor test/adjust mode (you'll hear three chirps to confirm exit). You may now either repeat steps 1–4 for the other sensor zone, or press button 1 again to arm the system.

High/Low Feature for Factory-Delayed Courtesy Lights

Some vehicles have a courtesy light delay or dimming circuit, which interferes with the security system being able to detect the door trigger upon remote arming. Clifford's High/Low feature solves that problem. If you are working on a vehicle with delayed courtesy lights, turn on the High/Low feature (column 4, feature 3) as noted on page 11.

System Check

1. Close all doors and **arm** with button 1 of the remote control. The parking lights will **flash twice**, the doors will **lock** and the LED will begin to **blink**.
   a. If you hear 4 chirps immediately or after the initial two chirps, a trigger or sensor is open or active. Disarm with the remote control, enter the vehicle and turn on the ignition. The LED will blink 1–4 times, pause, then repeat the same number of blinks (the blink cycle repeats five times for your convenience). Refer to the chart:

Number of blinks	Trigger/Sensor Identification
1 blink	Piezo Sensor
2 blinks	Optional sensor
3 blinks*	Door trigger*
4 blinks	Trunk or hood trigger

2. **Disarm** with the remote. You will hear one chirp, the parking lights will **flash once**, the doors will **unlock** and the courtesy light(s) will **turn on.**
3. **Re-arm** the system. *If the system has been set for delayed courtesy lighting (the high/low feature), be sure to wait until the interior lights have turned off before you perform step 4.*
4. Unlock and **open a door**. The siren will sound immediately and the parking lights will flash continuously. **Disarm** with the remote control. Close the door, **re-arm** and test each remaining door.
5. **Arm** the system and test the **hood** and **trunk** triggers.
6. Secure the control unit and position the antenna as noted on page 6.

FACT—False Alarm Control and Test

The system microprocessor automatically checks for another activated sensor or trigger before sounding the siren a second time, ***thus preventing any further false alarms***. If you wish to test **FACT**, simply:

1. Arm the system with the remote control.
2. Wait 10 seconds after the interior light turns off, then thump the vehicle with your fist to activate the siren.
3. Do not disarm the system, let the siren complete its cycle.
4. Hit the vehicle again. The alarm should be silent.
5. Unlock and open a door. The alarm should sound immediately. You may now disarm.

Multiple-Event TotalRecall™

The system's non-volatile memory records the identity of the last eight activated or malfunctioning triggers and sensors, which allows you to instantly track down the source of a customer complaint about falsing. To identify the triggers and sensors stored in the system's non-volatile memory, do the following:

1. With the **ignition off**, flick the PlainView switch to its **latched** side.
2. Press remote control **button 1** to "**arm**," and then again to "**disarm**."
3. The **LED will blink 1–4 times**, pause, then blink 1–4 times, etc. Write down the number of blinks in each cycle.
4. Refer to the **chart** above. The first number you wrote down was the most recently activated trigger or sensor. The next number is the second most recent, and so on up to as many as the last eight activations.
5. If it appears that the Piezo Sensor or an optional sensor is often activated, decrease the sensitivity of that sensor. If, for example, a certain trigger was activated several times, check the pin switch operation and check the wire for possible shorting.

** The high/low feature (see above) must be off in order for the system to read the door trigger upon remote arming.*

Programmable Features

Concept 20 comes from the factory with its features pre-programmed as noted in bold letters in the table below. You will note that all the installation-related features are conveniently located in column 4. To change the setting of any programmable feature, use the procedure noted. To restore the feature to its factory setting, just repeat the procedure:

1. Note of the column (across) number and row (down) number of the feature(s) you wish to program.
2. Turn the **ignition on**, or start the engine (skip this step if the engine is already running).
3. Enter the factory preset **valet code** (the single digit 2) by tapping the PlainView switch's **momentary side twice**, then press to **latched**, then **press and hold the momentary** side for about 3 seconds until you hear one siren chirp and the LED turns on to acknowledge program mode entry. The system is now in the *"Feature Select"* position.
4. *Select the feature column:* **Toggle** the switch in and out of the **latched** position the same number of times as the column number (NOTE: each latched-to-center motion is counted as one). **Pause**. You will then hear the same number of chirps as the column number you have selected, audibly confirming your selection.
5. Within 10 seconds, *select the feature row:* **Press and release** the **momentary** side of the switch the same number of times as the feature's row number. You'll hear a chirp each time you press the momentary side 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 chirps: **Two chirps = ON, one chirp = OFF**.
8. You may select another feature, or you may exit program mode:
   a. To select another feature in that same column, repeat step 5 within the next 10 seconds (after 10 seconds, 3 chirps indicate that you are now back in 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 3 chirps and the LED will turn off to indicate exit of program mode), or wait 60 seconds and the system will automatically exit program mode.

It may sound complicated, but it really isn't. Briefly, here is all you do: Choose the feature you want to change, enter program mode, select the feature's column and row, then turn off the ignition. *That's it!*

Concept 20 Programmable Features Table: 1 chirp = OFF, two chirps = ON

Feature Select	Column 1 1st latched	Column 2 2nd latched	Column 3 3rd latched	Column 4 4th latched
Row 1 1st momentary	Add new remote to channel 1 ***NOTE 1***	AutoLock: **on**/off	AutoArming: **on**/off	Starter/Ignition interrupt: normally open/**closed** (1/**2** chirps)
Row 2 2nd momentary	Add new remote to channel 2 ***NOTE 1***	AutoUnLock: **on**/off	AutoArm & Lock: on/**off**	Lock pulse duration: 3sec/1sec (1/**2** chirps)
Row 3 3rd momentary	Add new remote to channel 3 ***NOTE 1***	FACT: **on**/off	System timer: 1sec.-2.0min (**30sec**) ***NOTE 3***	High/Low: on/**off**
Row 4 4th momentary	Add new remote to channel 4 ***NOTE 1***	AutoActivate channel 4 upon remote arming: on/**off**	Siren duration: 60/**30** seconds (1/**2** chirps)	Channel 4 output: **pulsed**/timed/latched (**1**/2/3 chirps) ***NOTE 4***
Row 5 5th momentary	Erase all channels ***NOTE 2***	Chirp silencing: on/**off**	Set new secret valet code	***NOT USED***

The gray cell indicates a feature that requires programming only by the vehicle owner. DO NOT change the valet code.

- ***NOTE 1:*** Transmit the appropriate channel of the new remote. You will hear the same number of chirps as the channel selected (e.g., 3 chirps for channel 3) to confirm programming of that channel.
- ***NOTE 2:*** When you hear one chirp, all remote control codes have been erased from system memory. You must now add the new and/or existing remote controls to the system (i.e., program channels 1–4 of each remote that will be used with the Concept 20).
- ***NOTE 3:*** The channel 4 timer starts as soon as you select this feature. When the duration you wish has been reached, press button 1 on the remote control. You will hear two chirps to confirm the new duration. If channel 4 is set to a timed output (see note 4), it will now have this duration.
- ***NOTE 4:*** The channel 4 output may be programmed to either pulsed, timed or latched (factory preset to pulsed). A timed output is useful as a power window/sunroof closer or for use with hydraulics, amp rack motors, etc. A latched output is useful for activating the audio system, under-carriage neon lighting, etc. To change the output type, simply select this feature. 1 chirp indicates that the output will be pulsed, 2 chirps indicate timed, and 3 chirps indicate latched operation.

EXAMPLE: Set the system timer to a 10-second duration and change channel 4 to a timed output:

1. Turn the ignition on, enter the valet code (momentary, momentary, latched, center), then hold to momentary until you hear a chirp.
2. Select column 3 by flicking the switch between latched and center 3 times. Wait for the 3 chirp/column 3 confirmation.
3. Press and release the momentary side 3 times to select row 3 (you'll hear a chirp each time you press the momentary side). When 10 seconds have passed, press remote control button 1 to stop the timer (you'll hear a two-chirp confirmation).
4. Select column 4 by flicking the switch between latched and center 4 times. Wait for the 4 chirp confirmation.
5. Press and release the momentary side 4 times to select row 4 (you'll hear a chirp each time you press the momentary side). Pause. You will hear two chirps to indicate that the channel 4 output will now be timed. If you immediately tap the momentary side 4 times again (to re-select this feature while still in column 4), the output type will become latched (confirmed with 3 chirps). Immediately tap another 4 times and the output will return to its pulsed state (confirmed with one chirp).

What is a Code Grabber?

Unlike scanners, which are made useless by remote controls with many millions of possible codes (since it would take years for a scanner to transmit each possibility one after another), a code grabber can simply "grab" off the air from, hundreds of feet away, the digital code transmitted by a car alarm remote control. When the vehicle owner leaves, the thief simply plays back the code to disarm the alarm and unlock the car doors. A code-grabber will duplicate any remote control code, even if the remote control has billions or trillions of code possibilities. ***Every other brand of car alarm can be deactivated that easily.*** But not Clifford systems with Anti-CodeGrabbing. Clifford's proprietary ACG technology uses complex digital signal processing and unbreachable encryption to randomly change the digital code each and every time the remote control is used. The same code will ***never*** be retransmitted and the control unit will ***never*** accept the same code. Thus the code played back by the thief's code grabber will never deactivate a Clifford ACG system. ***Only ACG can make a car alarm impervious to code-grabbing, and only Clifford systems have ACG.***

User-Programmable Anti-CodeGrabbing Remote Controls

The Concept 20 can respond to as many as 4 Clifford 12-channel Anti-CodeGrabbing remote controls with a few flicks of the PlainView switch. Just as easily, the code of a lost or stolen remote control can be deleted. Refer to page 11 for instructions on how to add a new remote control to the system. The codes of a lost or stolen remote control can be erased simply by using the Erase All Channels feature noted in the Programmable Features section (column 1, row 5) and reprogramming the remaining remote control(s) into the system.