Standard Features of the IntelliGuard 900-IQ

☑ ***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 (up to 300 feet with the optional ElectroLoop Antenna). One remote has a gun-metal-gray case, the other has a gorgeous burlwood case.

☑ ***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 IntelliGuard 900-IQ 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.

☑ ***Built-In BlackJax Anti-Carjacking System*** —All of these features for the ultimate in safe and effective vehicle recovery:

- ☑ ***No-Risk Carjack Protection*** — No buttons to push, no transmitters to carry, the owner does nothing except get out of the vehicle. The system allows the criminal to drive a safe distance of a block or two, then flashes the parking lights, sounds the siren and *safely* shuts down the engine.
- ☑ ***Safe & Intelligent Engine Shutdown*** — The IntelliGuard 900-IQ waits for the carjacker to slow for traffic or a turn, then *safely* shuts down the engine without endangering the lives of others.
- ☑ ***Immediate Vehicle Recovery*** — Since the vehicle will be immobilized just a block or two away, the vehicle owner can recover it himself well before it reaches the chop shop.
- ☑ ***PlainView™ Coded Disarming Switch*** — No *"hidden"* switch that carjackers can find in an instant. The PlainView disarming switch accepts only the customer's code, and he or she may change the code any time or place.
- ☑ ***Anti-Tampering*** — If the carjacker tries entering codes at random, the system locks out and will not respond to *any* code for a period of time, even if the thief were to stumble onto the correct code!
- ☑ ***Sabotage-Proof*** — Even if the thief removes the control unit, the engine remains immobilized!

☑ ***NightVision™ Headlight Automation*** — All electronics for this popular accessory are built right into the control unit. That eliminates more than a dozen connections! With just four connections, your customer gets all these great features and benefits:

- ☑ ***Safety Above All™*** — Your customer will never again accidentally drive in the dark without the headlights on nor forget to turn the head lights off after parking. For his or her safety and that of other motorists, when driving at twilight, the car's headlights automatically turn on just before dusk and switch off after dawn.
- ☑ ***Precision Activation*** — The headlights are turned on or off only when necessary. Driving under a dark overpass in daylight or passing through a brightly lit area at night *will not* cause the headlights to switch on and off.
- ☑ ***Automatic Post-Parking Illumination*** — For the owner's safety when parking at night, the headlights will stay on for a user-selectable duration of one second to 2 minutes to light his or her way in the dark.
- ☑ ***Complete User Control*** — The NightVision circuitry enhances headlight operation without interfering with normal operation. At any time, the driver may use the vehicle's headlight switch to override NightVision and turn on the headlights even in broad daylight.
- ☑ ***RainCheck™*** — When the windshield wipers are turned on, the IntelliGuard 900-IQ automatically turns on the headlights to increase the vehicle's visibility to all other drivers on the road. And the owner will never have to worry about accidentally leaving your headlights on after parking.
- ☑ ***Built-In Remote Headlight Activation*** — Just a press of button 2 on the remote control will instantly turn on the headlights for any user-selectable duration between one second and two minutes.

Standard Features of the IntelliGuard 900-IQ (cont.)

☑ ***UltraSecure Coded Valet Mode***™ — Ensures that no thief or carjacker can turn off the IntelliGuard 900-IQ 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 OmniSensor***™ — You can adjust, test and set the sensitivity of each of the two zones of this microprocessor-controlled bi-axial, digital 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 distinctive warning tone; if forced entry is detected, the full alarm will sound. Zero crimp connections, just plug the phone-type connector into the control unit.

- ☑ ***Infinitely Adjustable Sensitivity***— For the utmost in fine-tuning accuracy. Select the zone you want to adjust via a press on the remote control and strike the vehicle with the amount of force you want the OmniSensor zone to pick up. *That's all there is to it!* And the owner can even do it himself whenever and wherever he wants.
- ☑ ***Unprecedented Reliability***— Since there are no moving mechanical parts to wear out and the entire electronic circuitry resides in the passenger compartment, not in the engine well where it would be exposed to temperature extremes, water, vibration and dirt.
- ☑ ***Adjust and Test Unobtrusively***— No repeated arming and disarming, and no siren wailing. You set and test sensitivity without activating the alarm!

☑ ***Remote Override of Optional Sensor #2*** —A press of a button on the remote control will override optional sensor #2 (such as the optional Proximity Sensor passenger compartment radar sensor) for those times when the owner must leave a passenger or pet in the vehicle.

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

☑ ***Remote Door Locking/Unlocking with Built-in Relays*** — No external relays to wire and mount. The IntelliGuard 900-IQ 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 after the owner begins driving (at about 15-20mph). If the owner prefers, he or she can set the system to automatically lock the doors the instant the ignition is turned on.
- ☑ ***User-Selectable AutoUnLock*** — Automatically unlocks the doors when the ignition is turned off.
- ☑ ***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.

☑ ***QuietChirp***™ — User-selectable soft or full-volume arm/disarm chirps.

☑ ***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.

☑ ***Tamper-Proof Immobilizer with On-Board Relay*** —Assures that the vehicle's ignition system is electronically disconnected while the IntelliGuard 900-IQ is armed. Even if a thief disconnected power or the control unit, he still would not be able to start the engine.

☑ ***Dual-Port Immobilizer Capability*** —With the addition of an optional relay, you can add yet another layer of protection to the Tamper-Proof Immobilization by preventing an intruder from even cranking the starter.

Standard Features of the IntelliGuard 900-IQ (cont.)

- ***User-Programmable MultiSound Medallion™ Siren*** — The IntelliGuard 900-IQ's innovative MultiSound Medallion siren integrates creative form and engineering triumphs. Designed entirely by Clifford engineers, there's no other siren like it. The remarkable Clifford MultiSound Medallion Siren is far superior in its performance, features, reliability and even aesthetics to all other manufacturer's look-alike, sound-alike generic sirens.
  - ***User-Selectable SilentNight™*** — He vehicle owner can set the system to sound its usual soft or full-volume arm and disarm chirps during daylight hours, but automatically silence them at night.
  - ***Personalized Siren Sounds™***—The user may select any combination of up to 64 distinct sound patterns for unmistakable recognition from a distance.
  - ***Ultra-Reliability*** — All electronics of the MultiSound Medallion Siren are built into the control unit, sheltering the siren's electronic circuitry from the harsh underhood environment 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.
  - ***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.
  - ***User-Selectable 15-Second Entry Delay*** — Only upon passive arming, and only if the owner so chooses.
  - ***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 IntelliGuard 900-IQ'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.
- ***Smart Remote Trunk Release Capability*** — An electronic interlock assures that the optional remote trunk release can be activated only when the system is disarmed. To further prevent any possibility of unintentional opening of the trunk, the interlock also makes sure that the trunk release cannot be remotely activated 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 IntelliGuard IQ 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.

Standard Features of the IntelliGuard 900-IQ (cont.)

☑ ***Extended Range Capability*** — Optional ElectroLoop Antenna™ mounts unobtrusively inside the vehicle to triple the system's remote control range! Perfect when installing an IntelliStart remote starter accessory.

☑ ***Selectable Pulsed/Constant Panic Output*** — Ideal for air horns, interior siren, pager and/or for accessories that require a pulsed output, such as SmartWindows II.

☑ ***Channel 2, Channel 4 and Channel 5 with Selectable Output Type*** — For remote control of multiple accessories. You can change the channel 4 and/or channel 5 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 IntelliGuard 900-IQ 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, trunk and hood allow for precise trigger/sensor identification.

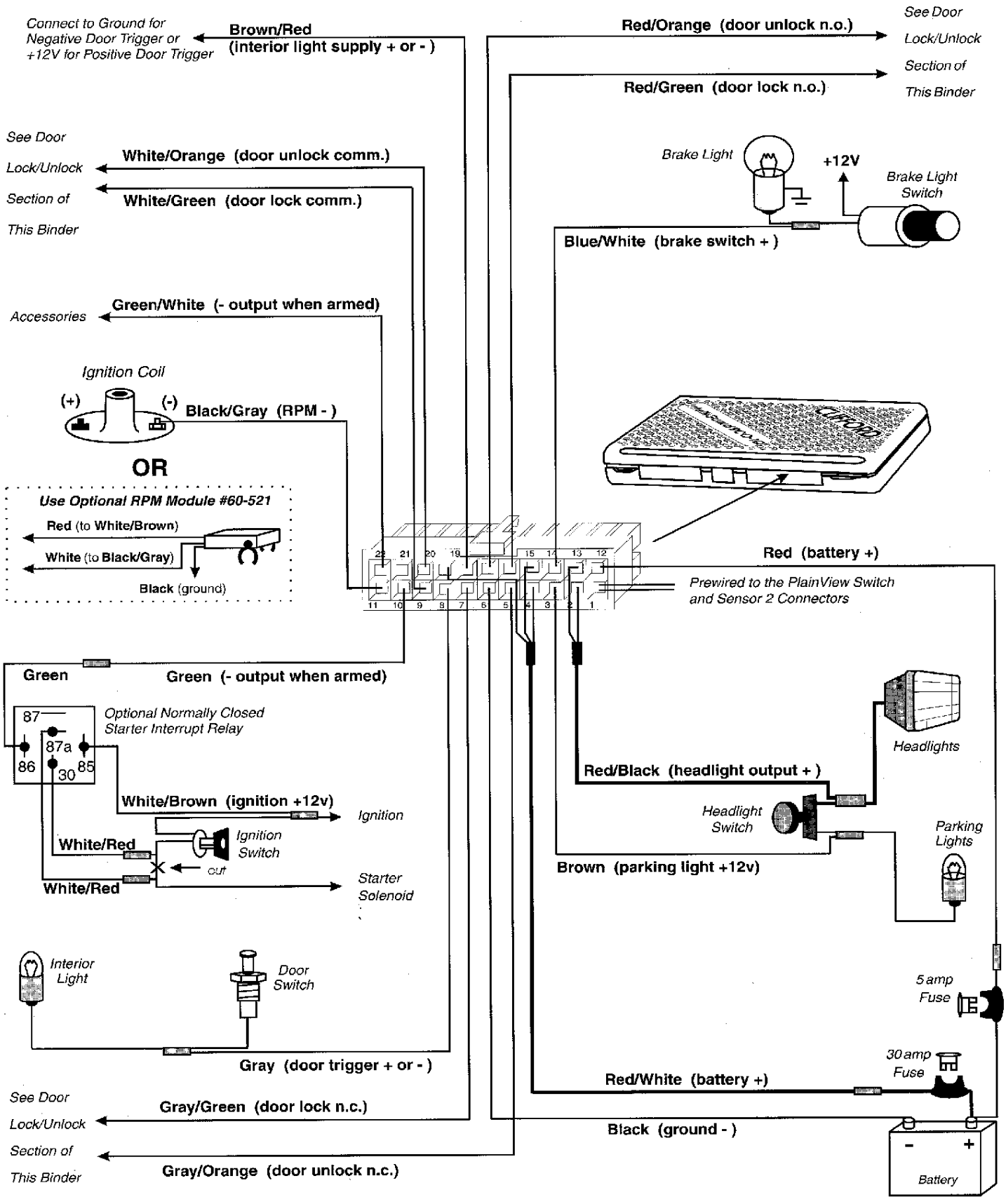
☑ ***Prewired LED, Sensor and Valet Switch Connectors*** — These prewired connectors eliminate up to ten different crimp connections to make installation easier and faster.

☑ ***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 more than 30 user-selectable features at any time, even while driving. Clear, audible signals confirm each feature selection and setting.

Wiring Description for the 22-Pin Connector

Pin	Color	Connects to	Page
1	Red	Prewired to the PlainView Switch and sensor 2 connectors	9
2	Red/Black	Headlights	10
3	Brown	Parking lights	10
4	Red/White	Battery positive (30-amp fuse)	11
5	Gray/Orange	Door unlock normally closed	8
6	Black	Battery negative	11
7	Gray/Green	Door lock normally closed	8
8	Gray	Door trigger	8
9	White/Green	Door lock common	8
10	Green	Optional starter interrupt relay #60-666	8
11	Black/Gray	Ignition coil or optional RPM Module #60-521	10
12	Red	Battery positive (5-amp)	11
13	Red/Black	Headlights	10
14	Blue/White	Brake switch	10
15	Red/White	Battery positive (30-amp fuse)	11
16	Red/Green	Door lock normally open	8
17	Red/Orange	Door unlock normally open	8
18	Brown/Red	Connect to ground for negative door trigger, +12V for positive door trigger	8
19	Red/White	Battery positive (30-amp fuse)	11
20	White/Orange	Door unlock common	8
22	Green/White	Accessories that require an armed signal input (no diode needed)	5


Connect to Ground for Negative Door Trigger or +12V for Positive Door Trigger
Brown/Red (interior light supply + or -)
Red/Orange (door unlock n.o.)
See Door Lock/Unlock Section of This Binder
Red/Green (door lock n.o.)
See Door Lock/Unlock Section of This Binder
White/Orange (door unlock comm.)
White/Green (door lock comm.)
Brake Light
+12V
Brake Light Switch
Blue/White (brake switch +)
Accessories
Green/White (- output when armed)
Ignition Coil
(+)
(-)
Black/Gray (RPM -)
OR
Use Optional RPM Module #60-521
Red (to White/Brown)
White (to Black/Gray)
Black (ground)
Red (battery +)
Prewired to the PlainView Switch and Sensor 2 Connectors
Green
Green (- output when armed)
87
87a
86
30
85
Optional Normally Closed Starter Interrupt Relay
White/Brown (ignition +12v)
Ignition
White/Red
Ignition Switch
cut
White/Red
Starter Solenoid
Headlights
Red/Black (headlight output +)
Headlight Switch
Parking Lights
Brown (parking light +12v)
Interior Light
Door Switch
5 amp Fuse
30 amp Fuse
Gray (door trigger + or -)
Red/White (battery +)
See Door Lock/Unlock Section of This Binder
Gray/Green (door lock n.c.)
Black (ground -)
Gray/Orange (door unlock n.c.)
Battery

Wiring Description for the 18-Pin Connector

Pin	Color	Connects to	Page
1	Gray Twin-Lead	Light sensor	9
2	Gray/Blue	Channel 4 accessory	9
3	Gray/Red	Channel 5 accessory	9
4	Black Twin-Lead	Medallion Siren	10
5	Black Twin-Lead	Medallion Siren	10
6	Black	Prewired to the PlainView Switch, LED and sensor connectors	8–10
7	White	Prewired to the PlainView Switch connector	9
8	Orange	Prewired to the sensor 2 connector	7
9	Green/Black	Reserved for future use NOTE: YOU MUST CONNECT THIS LINE TO +12V	BELOW
10	Gray Twin-Lead	Light sensor	9
11	Gray/Violet	Optional trunk release or other channel 2 accessory (disarmed only)	9
12	Green/Blue	Prewired to the Ignition Immobilizer relay	8
13	Yellow	Optional air horns, secondary siren and/or accessory that requires a siren output	7 & 14
14	Blue	Windshield wiper switch	10
15	Violet	Prewired to the LED connector	8
16	Gray/Yellow	Trunk pin switch	9
17	White/Brown	Prewired to the Ignition Immobilizer relay	8
18	White/Black	Hood pin switch	10

VERY IMPORTANT: The GREEN/BLACK wire (which is reserved for future use) must be connected to +12V or the system will not operated properly.

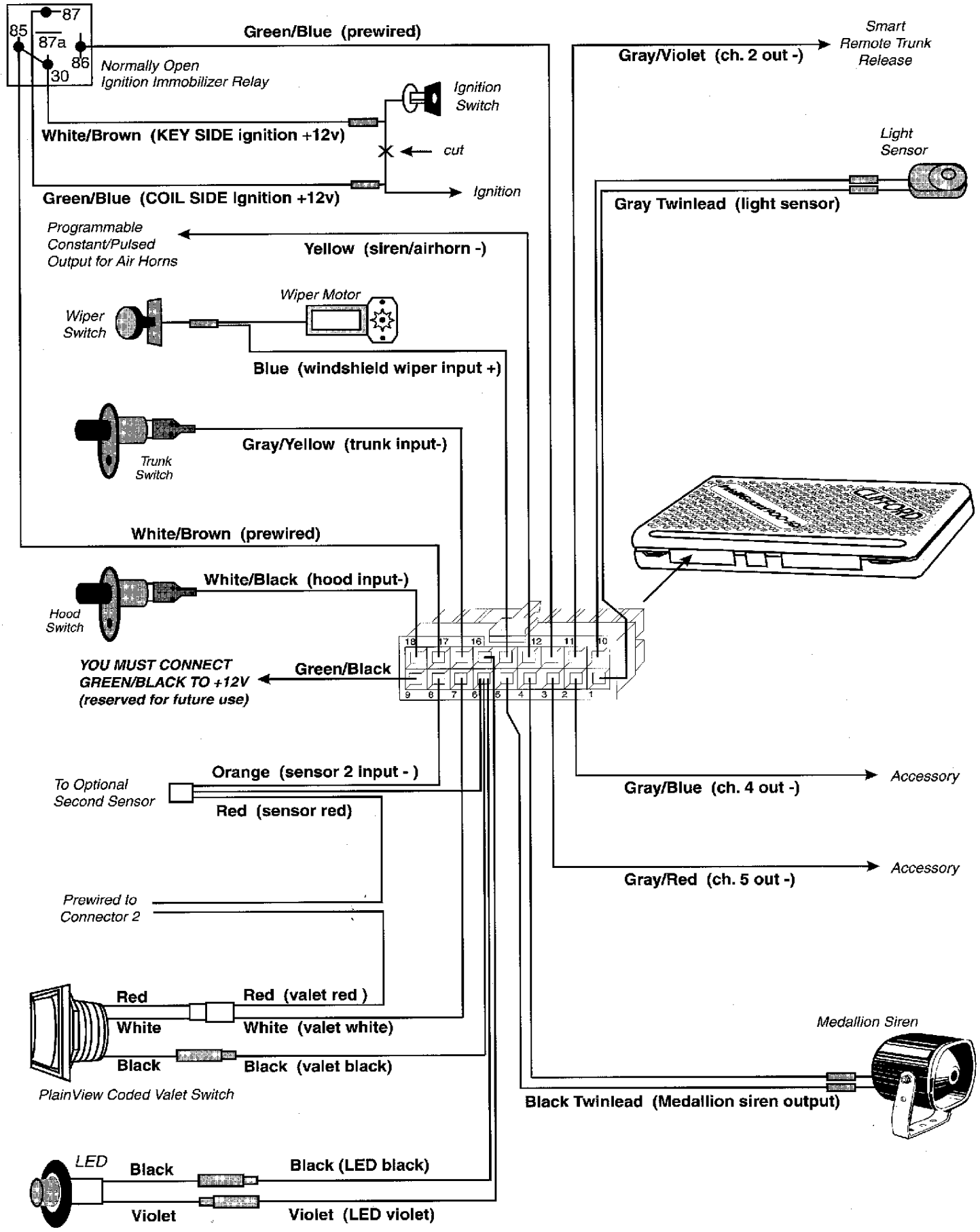
Sequence of Installation

1. **Passenger Compartment**
   a) Select a suitable location to mount the ***control unit.***
   b) Wire the ***Ignition Immobilizer Relay*** and ***optional Starter 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 connect the ***Light Sensor.***
   h) Wire the ***channel 2, channel 4 and channel 5 outputs.***
   i) Wire the ***trunk trigger*** and, if needed, mount a pin switch.
   j) Wire the ***brake switch***.
   k) Wire the ***headlights***.
   l) Wire the ***parking lights***.
   m) Wire the ***windshield wipers***.
2. **Engine Compartment**
   a) Wire the ***ignition coil*** or ***optional RPM Module***.
   b) Mount and connect the ***Dual-Zone OmniSensor.***
   c) Mount and connect the ***Medallion Siren*** and, if needed, ***hood pin switch***.
3. Make **final** wiring **connections** at the battery, then **plug in** the control unit connectors.
4. **Set sensitivity** of each OmniSensor zone, then, if needed, set the **door lock pulse**, **high/low** courtesy lighting feature and channel 4 and 5 output types (latched/timed/pulsed).
5. **Test** the system, power and test **accessories**, then secure the control unit and wiring.

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 connectors into the control unit all wiring is complete.


87
85
87a
86
30
Normally Open
Ignition Immobilizer Relay
Green/Blue (prewired)
Gray/Violet (ch. 2 out -)
Smart
Remote Trunk
Release
Ignition
Switch
White/Brown (KEY SIDE ignition +12v)
cut
Ignition
Green/Blue (COIL SIDE Ignition +12v)
Light
Sensor
Gray Twinlead (light sensor)
Programmable
Constant/Pulsed
Output for Air Horns
Yellow (siren/airhorn -)
Wiper Motor
Wiper
Switch
Blue (windshield wiper input +)
Gray/Yellow (trunk input-)
Trunk
Switch
White/Brown (prewired)
White/Black (hood input-)
Hood
Switch
YOU MUST CONNECT
GREEN/BLACK TO +12V
(reserved for future use)
Green/Black
18
17
16
12
11
10
9
8
7
6
5
4
3
2
1
Orange (sensor 2 input -)
To Optional
Second Sensor
Red (sensor red)
Gray/Blue (ch. 4 out -)
Accessory
Gray/Red (ch. 5 out -)
Accessory
Prewired to
Connector 2
Red
Red (valet red)
White
White (valet white)
Black
Black (valet black)
PlainView Coded Valet Switch
Medallion Siren
Black Twinlead (Medallion siren output)
LED
Black
Black (LED black)
Violet
Violet (LED violet)

Antenna

The coaxial cable with an F-connector is the antenna. Its position and location will effect remote control range. For maximum range, use the optional ElectroLoop Antenna. To achieve maximum range with the standard antenna:

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, WHITE/BLACK, BLACK/GRAY and the BLACK TWIN-LEAD (and YELLOW if adding air horns). 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 sensor: the WHITE/BLUE, RED and BLACK wires that terminate in a 3-pin connector. If installing a 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 Immobilizer Relay

1. Locate the ignition switch wireloom under the dash and use a voltmeter to locate the **one** wire that carries +12V throughout **BOTH the cranking AND engine running cycles**, and 0 volt when the ignition is off.
2. Start the engine, then cut the ignition wire. The engine should die.
3. Connect the relay's WHITE/BROWN wire to the key side of the ignition wire and its GREEN/BLUE wire to the coil side.

Optional Starter Interrupt Relay

The optional #60-666 starter interrupt relay is wired in-line with the vehicle's starter circuit. When a theft attempt occurs, the relay opens the starter circuit and prevents the engine from cranking. Follow the instructions that come with the relay.

> ***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.***

LED Status Indicator

Select a prominent location on the dash or console visible from 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 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 interior courtesy light supply wire to ground; if 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 PlainView Coded Valet Switch offers absolute protection while at the same time is substantially more user-friendly and easier to access. Since IntelliGuard 900-IQ has a *coded* valet mode, ***the switch can and should be mounted in plain view*** on the dash or console. Discuss placement of the switch with the vehicle owner.

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

Light Sensor

1. Mount the light sensor on top of the dashboard where it will receive direct sunlight.
2. Connect the GRAY TWIN-LEAD to the light sensor's twin-lead.

Headlights

1. Connect the RED/BLACK wire to the one wire that carries +12V when the headlights are turned on.

Parking Lights

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

Windshield Wipers

1. Connect the BLUE wire to the one wire that carries +12V when the windshield wipers are turned on.

Brake Switch

The brake switch connection is **REQUIRED** for the operation of the IntelliGuard 900-IQ's anti-carjacking electronics.

1. Turn the ignition on and press the brake pedal to make sure the brake light turns on.
2. Find the one wire that carries +12V when the brake pedal is pressed, then connect the BLUE/WHITE wire to this wire.

Trunk Trigger

Vehicles with a ground-switching trunk light will interface directly with the system (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).

Channel 2 Pulsed Output (when disarmed)

The GRAY/VIOLET channel 2 output goes to ground for 0.5 seconds when button 2 is pressed (or for as long as it is held) while the system is disarmed. It is primarily intended for a remote trunk release. Current is limited to 0.15 amps.

Channel 2 Pre-Connected Headlight Output (when armed)

The internal channel 2 timer output activates the headlights for any duration of your choosing between 1 sec. and 2 min. (factory preset to 30 seconds) when button 2 is pressed while the system is armed. Current is limited to 30 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*
- *As a latched output (i.e., the output stays at ground until channel 4 is activated a second time) or*
- *As a timed output that stays at ground for any duration of your choice between one 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 pages 13–14 to change the type of output and/or AutoActivation.

Channel 5 Output

You can program the GRAY/RED wire to operate in any of the three manners noted above. The output is activated by pressing the remote control's LevelShift button (on the side of the remote), then pressing button 1. Current is limited to 0.15 amp.

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 ground.
3. Connect terminal 86 to +12V through a 20-amp fuse.
4. Connect the GRAY/BLUE 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 that duration as noted on pages 13-14.
7. Turn on the *AutoActivate Channel 4 Upon Arming* feature as noted on pages 13-14.
8. Set the channel 4 output to timed as noted on pages 13-14.

Engine Compartment Components

RPM Monitoring

This connection is **REQUIRED** for the anti-carjacking electronics and AutoLock. After powering up the system, you ***must*** perform the simple *MANDATORY RPM Programming* noted on page 11. You have three easy installation options:

1. **First choice - Optional Spark Detect Module**
   a. Locate the coil wire that connects to the distributor and attach the module to the coil wire.
   b. Connect the module's WHITE wire to the wireloom's BLACK/GRAY wire.
   c. Connect the module's RED wire to the wireloom's WHITE/BROWN wire.
   d. Connect the module's BLACK wire to ground.
2. **Second choice - Negative coil**
   a. Connect the BLACK/GRAY wire to the negative terminal of the ignition coil, normally marked (-).
3. **Third choice - Fuel injector wire**
   a. On many engines with electronic fuel injection, there are two wires going to each cylinder: a fuel-injector wire and a common ignition wire. The ignition wire is usually the same color at each cylinder (and may also be the same color as the ignition line you tapped into at the steering column). The injector wire is the OTHER wire.
   b. Connect the BLACK/GRAY wire one of the injector wires at one of the cylinders.
4. **Fourth choice - On some cars (mostly older GM vehicles) there is a tachometer terminal at the distributor**
   a. Locate the tachometer terminal (which may be marked "tach") on the distributor cap.
   b. Connect the BLACK/GRAY wire to the tachometer terminal.

Electronically Programmable Dual-Zone OmniSensor™

For long-term reliability, all electronics for this bi-axial digital analysis vibration/impact sensor are built into the control unit.

1. Firmly mount the OmniSensor sensing module on a flat surface on the center of the firewall (passenger or engine compartment side). The arrow on the module must point straight up.
2. Plug the connector into the control unit (route through a grommet if mounted on the engine compartment firewall).

MultiSound Medallion Siren

You'll find the exclusive MultiSound Medallion Siren easy to mount, easy to program and even easy to look at thanks to its pleasing aesthetics. In time, you'll also discover the rock-solid reliability of this Clifford-designed siren: it's ten times greater than that of other manufacturers' look-alike, sound-alike sirens. The reason for this enormous reliability increase is because we have put the entire siren's circuitry in the control unit where it is sheltered from heat, water, vibration and dust. 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 TWIN-LEAD to the wireloom's BLACK TWIN-LEAD (polarity does not matter).

Hood Trigger

Vehicles with a ground-switching hood pin switch will interface directly with IntelliGuard 900-IQ.

> ***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 WHITE/BLACK 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 connectors until step 6 below.
2. Connect the 5-amp fuse and fuseholder to the RED wire.
3. Connect the 30-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 connectors. The system will power-up silently into its disarmed state (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.

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 1–5 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	OmniSensor
2 blinks	Optional sensor
3 blinks*	Door trigger*
4 blinks	Trunk trigger
5 blinks	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. Turn the **ignition on**, then completely **cover the light sensor**. The headlights will turn on after 5 seconds of "darkness."
7. Secure the control unit and position the antenna as noted on page 8 or install the optional ElectroLoop Antenna that will triple the remote control range to 300 feet or more.

MANDATORY RPM Programming

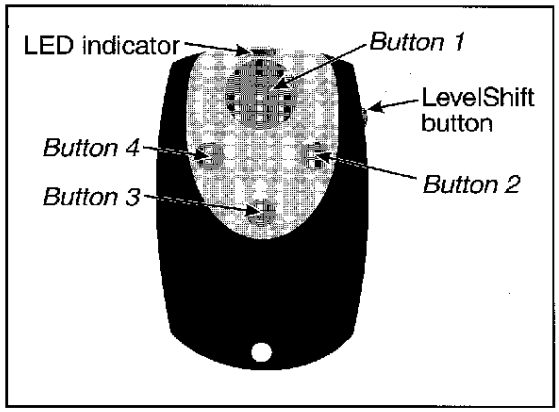
This ***MANDATORY*** programming step must be completed in order for the IntelliGuard 900-IQ's anti-carjacking features and RPM-dependent AutoLock feature to operate properly. Do the following:

1. **Drive** the vehicle to a nearby open area and allow the engine to **warm up** until the RPMs drop to the normal idle speed.
2. With the engine still running, place the **transmission in Park** (or neutral on a manual transmission).
3. Tap the **momentary** side of the PlainView switch **twice**, press to **latched**, then **press and hold the momentary** side until you hear one siren chirp and the LED turns on to acknowledge program mode entry.
4. Toggle the switch between the **latched and center 6 times**. After a three-second **pause**, the system will sound 6 chirps.
5. Tap the **momentary** side of the switch **1 time**. After a two-second **pause** you will hear 2 chirps to confirm that the idle RPM level has been read and set (if you hear just one chirp, check the connection of the BLACK/GRAY wire and/or the optional RPM Module, then repeat steps 1–5).
6. Turn the **ignition off**. You'll hear 3 chirps to confirm program mode exit and the LED will turn off.

** The high/low feature (see page 12) must be off in order for the system to read the door trigger upon remote arming.*

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

The IntelliGuard 900-IQ's Dual-Zone OmniSensor is electronically programmable. You can interactively test and adjust via the remote control the sensitivity of each of the two sensor zones. 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 OmniSensor 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, press **button 4** (you will hear 4 chirps to confirm testing mode). You may now test the current sensitivity setting by "thumping" your fist against the window pillar and/or other parts of the vehicle. To reduce noise, instead of a full siren blast, you will hear a chirp when the sensor zone is activated.
3. To **change sensitivity**, press **button 2** on your remote control (you will hear 2 chirps to confirm sensitivity setting mode), then **thump** your fist against the window pillar with the amount of force you want to set to trigger the sensor zone (for the primary zone, thump somewhat firmly, for the warning zone, thump less forcefully). A single chirp will acknowledge the impact.
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). Repeat steps 1–4 for the other sensor zone, or press button 1 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 6, feature 6) as noted on pages 13–14.

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:

Number of blinks	Trigger/Sensor Identification
1 blink	OmniSensor
2 blinks	Optional sensor
3 blinks	Door trigger
4 blinks	Trunk trigger
5 blinks	Hood trigger

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 1–5 times**, pause, then blink 1–5 times, etc. Write down the number of blinks in each cycle.
4. Refer to the **chart** on the right. 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 OmniSensor or the 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.

Programmable Features

IntelliGuard 900-IQ comes from the factory with all of its features pre-programmed as noted in bold letters inside the squares of the table on the next page. You will note that all the installation-related features are conveniently located in column 6. 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. Refer to the table on the next page and make 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: the top left cell of the table. From this position, you will first select the feature's column (across), then the feature's row (down).
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. *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 will hear a single chirp confirmation 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. There is just a lot of explanation involved. 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!*

IntelliGuard 900-IQ 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	Column 5 5th latched	Column 6 6th latched
Row 1 1st momentary	Sound 1: **on**/off	Add new remote to channel 1 ***NOTE 1***	AutoLock: **on**/off	AutoArming: **on**/off	NightVision: **on**/off	**MANDATORY RPM PROGRAMMING** *see page 12*
Row 2 2nd momentary	Sound 2: **on**/off	Add new remote to channel 2 ***NOTE 1***	RPM-activated AutoLock: **on**/off	AutoArm & Lock: on/**off**	Channel 2/post-parking headlight duration: 1sec–2.0min (**30sec**) ***NOTE 3***	Lock pulse duration: 3sec/**1sec** (1/**2** chirps)
Row 3 3rd momentary	Sound 3: **on**/off	Add new remote to channel 3 ***NOTE 1***	AutoUnLock: **on**/off	15-second entry delay: on/**off**	FACT: **on**/off	Constant/Pulsed (1/**2** chirps) ground output (YELLOW wire) upon panic ***NOTE 5***
Row 4 4th momentary	Sound 4: **on**/off	Add new remote to channel 4 ***NOTE 1***	QuietChirps: on/**off**	AutoActivate channel 4 upon remote arming: on/off	Channel 4 and 5 timer: 1sec-2.0min (**30sec**) ***NOTE 4***	Channel 4 output: **pulsed**/timed/latched (1/2/3 chirps) ***NOTE 6***
Row 5 5th momentary	Sound 5: **on**/off	Add new remote to channel 5 ***NOTE 1***	SilentNight: on/**off**	Siren duration: 60/30 seconds (1/2 chirps)	Anti-carjacking: on/**off**	Channel 5 output: pulsed/timed/latched (1/2/3 chirps) ***NOTE 6***
Row 6 6th momentary	Sound 6: **on**/off	Erase all channels ***NOTE 2***	Long-term chirp silencing: on/**off**	Set a new secret disarming/valet code	Remote control channel sequence to override anti-carjacking	High/Low: on/**off**

Gray cells indicate features that require programming only by the vehicle owner. DO NOT change any of these settings.

- ***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 will have been erased from system memory. You must now add the new and/or existing remote controls to the system (i.e., program channels 1–5 of each remote that will be used with the IntelliGuard 900-IQ).
- ***NOTE 3:*** The headlight timer starts as soon as you select this feature. When the duration you wish has been reached, press remote control button 1. You'll hear two chirps to confirm the new headlight duration. The headlights will turn on and stay on for this duration whenever channel 2 is transmitted while the system is armed (channel 2 when disarmed is reserved for the Smart Trunk Release option). The headlights will also stay on for this duration after parking at night.
- ***NOTE 4:*** The channel 4 and 5 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 and/or channel 5 is set to a timed output (see note 6), it will now have this duration.
- ***NOTE 5:*** This output is ideal for use with air horns, a pager and/or an internal siren. On certain accessories, such as SmartWindows II, that require a siren output connection, connect the accessory's siren input to this line and set the output to ***constant ground***.
- ***NOTE 6:*** The channel 4 and/or channel 5 output(s) may be programmed to either pulsed, timed or latched (factory preset to pulsed). A timed output is particularly 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 channel 4 and 5 timer to a 10-second duration and change channel 5 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 5 by flicking the switch between latched and center 5 times. Wait for the 5 chirp/column 5 confirmation.
3. Press and release the momentary side 4 times to select row 4 (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 6 by flicking the switch between latched and center 6 times. Wait for the 6 chirp confirmation.
5. Press and release the momentary side 5 times to select row 5 (you'll hear a chirp each time you press the momentary side). Pause. You will hear two chirps to indicate that the channel 5 output will now be timed. If you immediately tap the momentary side 5 times again (to re-select this feature while still in column 6), the output type will become latched (confirmed with 3 chirps). Immediately tap another 5 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 IntelliGuard 900-IQ 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 pages 13–14 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 2, row 6) and reprogramming the remaining remote control(s) into the system.