Standard Features of the IntelliGuard 900

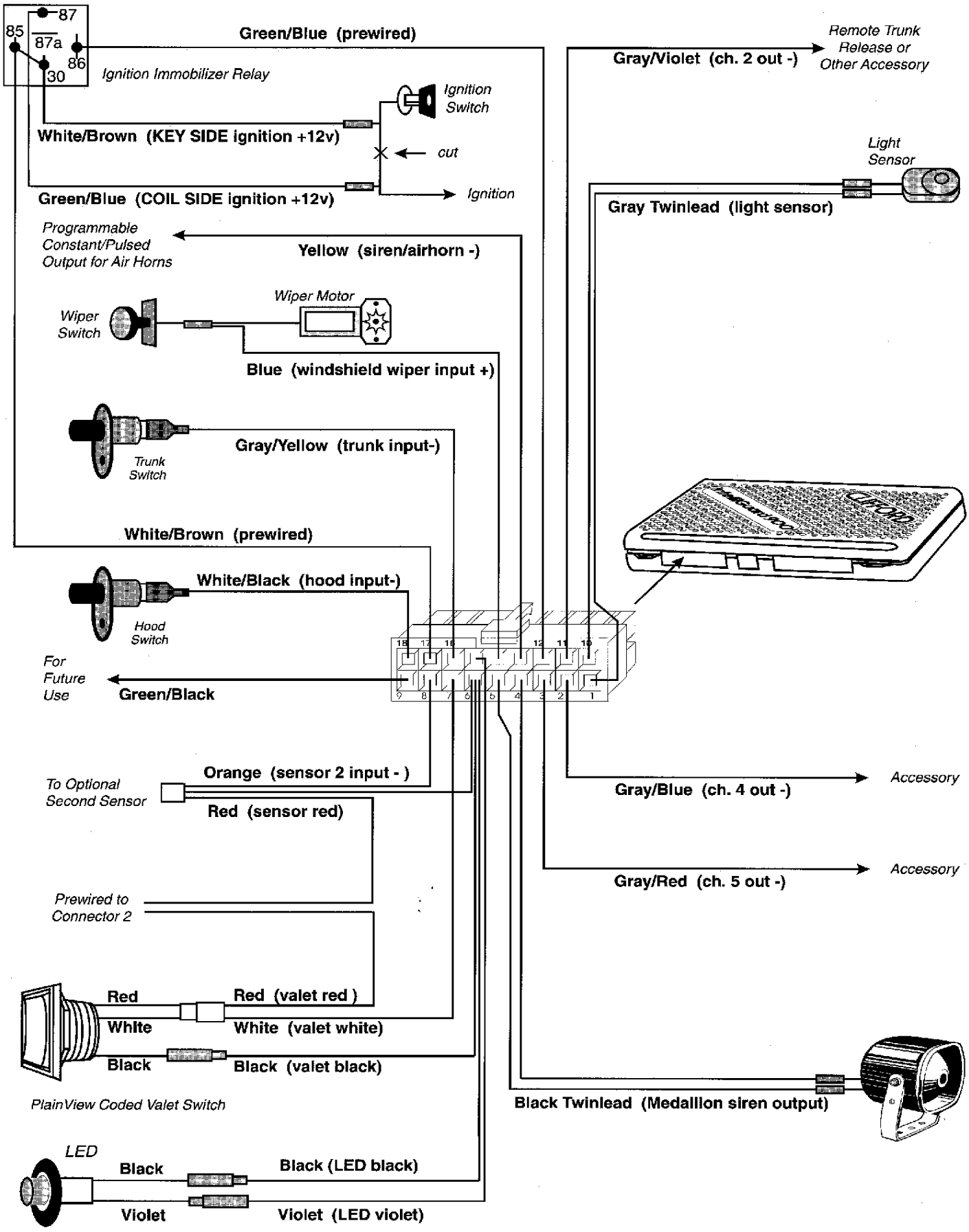
- ☑ ***$3,000 AntiTheft Guarantee*** — Pays the vehicle owner up to $3,000 if the vehicle is stolen and not recovered (see the AntiTheft guarantee card for details.)
- ☑ ***Limited Lifetime Warranty*** — The system control unit and remote controls are covered for as long as your customer owns the vehicle (see the warranty card for details).
- ☑ ***FACT™ — False Alarm Control and Test*** — Absolutely, positively eliminates recurring false alarms (user-selectable).
- ☑ ***Built-In BlackJax Anti-Carjacking System*** —All of these features for the ultimate in safe and effective vehicle recovery:
  - ☑ ***Greatest 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 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 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 and/or button sequences at random, after three incorrect codes, the system will lock itself out for two minutes and not respond to any code, even if the thief were to stumble onto the correct one!
  - ☑ ***Sabotage-Proof*** — Even if the thief finds the control unit and tear it out of the car, the engine *REMAINS IMMOBILIZED!*
- ☑ ***Tamper-Proof Ignition Immobilizer with an On-Board Relay*** — Assures that the vehicle's ignition or fuel system is electronically disconnected while the IntelliGuard 900 is armed. Even if a thief disconnected the control unit, he still would not be able to start the vehicle's engine.
- ☑ ***Fault-Proof™ Starter Interrupt Output*** — Adding a relay will prevent an intruder from even cranking the starter and provide a second parameter of protection.
- ☑ ***Built-In NightVision™ Headlight Automation System*** — 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:
  - ☑ ***Complete Headlight Automation*** — The customer will never again need to use the headlight switch.
  - ☑ ***Safety Above All™*** — The headlights automatically turn on when driving at dusk, off at dawn.
  - ☑ ***Automatic Post-Parking Illumination*** — After parking the vehicle at night, the headlights stay on for a user-selectable duration (one second to 2.5 minutes; 30-second factory preset) to light his or her way away from the vehicle.
  - ☑ ***NightVision Override*** — NightVision permits the vehicle owner to manually turn the headlights on or off whenever he wishes.
  - ☑ ***RainCheck™*** — Automatically activates the headlights when the windshield wipers are turned on, and turns the headlights off after parking to ensure against battery drain.
  - ☑ ***NightVision Enable/Disable*** — The owner may deactivate or reactivate all the NightVision features at will.
- ☑ ***A Pair of 4-Button/12-Channel Remote Controls*** — Fingertip command of the IntelliGuard 900 from 100 feet away (up to 300 feet with the optional ElectroLoop Antenna).
- ☑ ***AntiScan™*** — Blocks digital code scanners from disarming the system.
- ☑ ***Proprietary Anti-CodeGrabbing™ (ACG) with Random Code Encryption*** — Unlike other companies' remote controls, the IntelliGuard remote controls never transmit the same code twice. The random codes transmitted by the IntelliGuard remote control makes thieves' remote control "code-grabbers" completely useless.
- ☑ ***Multiple-Car Control*** — The vehicle owner can interface his or her 12-channel remote control with IntelliGuard Series systems on up to seven of his other vehicle(s) (user-selectable)
- ☑ ***Patented Remote Control Code Learning and MultiRemote™ Recognition*** — Add or delete, with just a touch of a switch, up to 4 different Clifford 12-channel Anti-CodeGrabbing remote controls (user-selectable).

Standard Features of the IntelliGuard 900 (cont.)

- ***Patent-Pending UltraSecure Coded Valet Mode***— Ensures that no thief or carjacker can turn off the IntelliGuard 900 system 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 Headlight Activation*** — No additional wiring needed. A press of button 2 on the remote control will illuminate the headlights for the customer's choice of any duration between 1 second and 2.5 minutes.
- ***On-Board User-Programmable Electronic Timer***— User-adjustable to any duration between 1 second and 2.5 minutes. Can be used for any timed accessory or other application that needs the use of a variable timer.
- ***Remote Window and Sunroof Closure Capability***— On several models of BMW, Volkswagen and Jaguar, the IntelliGuard 900's integrated timer circuit may be used to remotely close all the vehicle's power windows and sunroof without the need for any optional modules.
- ***QuietChirps***™— Soft or full volume arm/disarm chirp confirmations (user-selectable).
- ***User-Selectable SilentNight***™ — The IntelliGuard 900 can be programmed by the vehicle owner to sound chirps during daylight hours upon remote arming and disarming, but automatically silence the chirps the chirps at night (parking light flashes will confirm remote arming and disarming).
- ***Remotely Adjustable Dual-Zone OmniSensor***™ — Clifford Electronics' unique microprocessor-based, digital-analysis sensor. A distinct warning tone is issued if someone forcefully leans against the vehicle or taps the bumper. Any genuine tampering will instantly and fully trip the system. Zero crimp connections, just plug the phone-type connector into the control unit.
- ***Remote Sensor Adjustment*** — Incredibly easy and accurate sensor adjustment and testing with the remote control!
  - ***Infinitely Adjustable Sensitivity*** — For the utmost in fine-tuning flexibility and accuracy. Select the zone you want to adjust via a few presses 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!*
  - ***Adjust and Test Unobtrusively*** — No repeated arming and disarming, and no siren wailing. IntelliGuard Series systems let you set and test sensitivity without activating the alarm!
- ***Remote QuickAccess***™ — Another great Clifford exclusive:
  - ***Remote Controlled Valet Mode*** — Allows the owner to enable or disable valet mode from up to 100 feet away! The parking lights and the LED visually confirm valet mode entry and exit.
  - ***Remote Sensor Override*** — Lets the vehicle owner override the optional second sensor input with the remote control. It's perfect if there is an optional radar sensor and the owner must leave a child or pet in the vehicle.
  - ***Remote Adjustment of Primary Sensing Zone*** — The owner can easily and interactively adjust and test sensitivity via the remote control. The IntelliGuard 900 provides clear but unobtrusive audible feedback. This innovative breakthrough gives the owner unprecedented system control any time, any place and in all types of environments.
  - ***Remote Adjustment of Perimeter Sensing Zone*** — Same as above for the sensor's warning zone.
- ***Built-In Parking Light Flasher with an On-Board Relay*** — No external relay to wire and mount. The parking lights will visually confirm alarm and doorlock status from a distance.
- ***Remote Courtesy Lighting with an On-Board Relay*** — Again, no external relay. Automatically turns on the vehicle's interior light(s) when remotely disarmed and keeps them on for 30 seconds or until the engine is started.
- ***User-Programmable MultiSound Medallion***™ ***Siren*** — Designed and built by Clifford Electronics, the unique MultiSound Medallion Siren is far superior in performance, features, reliability and even aesthetics to all other look-alike, sound-alike generic sirens used by other alarm companies.
  - ***Personalized Siren Sounds***™ — The user may select any combination of up to 64 different siren sound patterns.
  - ***Ultra-Reliability*** — All electronics of the MultiSound Medallion Siren are built into the system control unit, sheltering the siren electronics from the harsh underhood environment.
  - ***User-Selectable 30/60-Second Siren Duration***
  - ***Patented Automatic Noise Abatement*** — Automatically limits siren sounding to no more than 5 cycles of the user-selectable siren duration.

Standard Features of the IntelliGuard 900 (cont.)

- ☑ ***Smart Trunk Release Capability*** — An electronic interlock ensures that the optional remote trunk release can be activated only when the system is disarmed. To further prevent accidental activation, the interlock also makes sure that the trunk release cannot be remotely activated while the vehicle's ignition is on.
- ☑ ***Dual-Mode Chirp Silencing*** — Both long-term chirp silencing or remote controlled chirp muting (user-selectable).
- ☑ ***On-Board Door Lock/Unlock Relays*** — No external relays to wire and mount. The IntelliGuard 900 directly interfaces with all the most common types of power doorlocks.
- ☑ ***AutoLock***™ — Automatically locks the doors when the engine is started (user-selectable).
- ☑ ***AutoUnLock*** — Automatically unlocks the doors when the ignition is turned off (user-selectable).
- ☑ ***Deluxe Remote Keyless Entry in Valet Mode*** — Allows for remote controlled door locking/unlocking with visual parking light confirmations and interior light illumination even while the IntelliGuard 900 is in its UltraSecure Valet Mode.
- ☑ ***Extended Range Capability*** — Add an optional ElectroLoop Antenna to triple remote control range to as much as 300 feet!
- ☑ ***Patented Smart AutoTesting***™ — Automatically tests all system sensors and triggers, and specifically identifies any malfunction, virtually eliminating costly trouble-shooting time.
- ☑ ***Patented Malfunction AutoBypass***™ — Automatically bypasses any trigger or sensor malfunction.
- ☑ ***Eight-Event TotalRecall***™ — For quick and accurate diagnostics, non-volatile memory stores the identities of the last eight triggers and/or sensors activated. This provides an invaluable informational and diagnostic means.
- ☑ ***Patented Smart Prior Intrusion Attempt Alert*** — Specifically identifies the sensor or trigger activated in an intrusion attempt.
- ☑ ***Enhanced AutoArming***™ — Automatically (passively) arms itself if the owner forgets.
  - ☑ ***AutoArming Enable/Disable*** — Allows the owner to enable or disable AutoArming any time.
  - ☑ ***AutoArm & Lock*** — Select whether or not the doors will lock when the system AutoArms (user-selectable).
  - ☑ ***User-Selectable 15-Second Entry Delay*** — Only upon passive arming, and only if the owner so chooses.
  - ☑ ***Visual Confirmation*** — Parking lights visually confirm initiation of the AutoArming countdown.
  - ☑ ***Instant AutoArming Bypass***™ — With just a quick turn of the ignition switch, temporarily turn off AutoArming until you park the car again.
- ☑ ***Full-Time Remote Panic Feature*** — Lets the owner remotely activate the siren and parking lights from inside or outside the vehicle, or even while driving.
- ☑ ***Selectable Pulsed/Constant Panic Output*** — Ideal for air horns, interior siren, pager and/or other accessories.
- ☑ ***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.
- ☑ ***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 to adjust itself to read the door input when the interior light turns off.
- ☑ ***High-Luminescence LED Indicator*** — Adds visual deterrence, visually confirms system status, and identifies trigger/sensor faults and trips. Zero crimp connections, just mate the prewired connectors.
- ☑ ***Multiple Trigger/Sensor Inputs*** — For precise identification of the exact trigger or sensor tripped in a prior intrusion attempt.
- ☑ ***Patented SmartPowerUp***™ — Eliminates excessive noise in the installation bay.

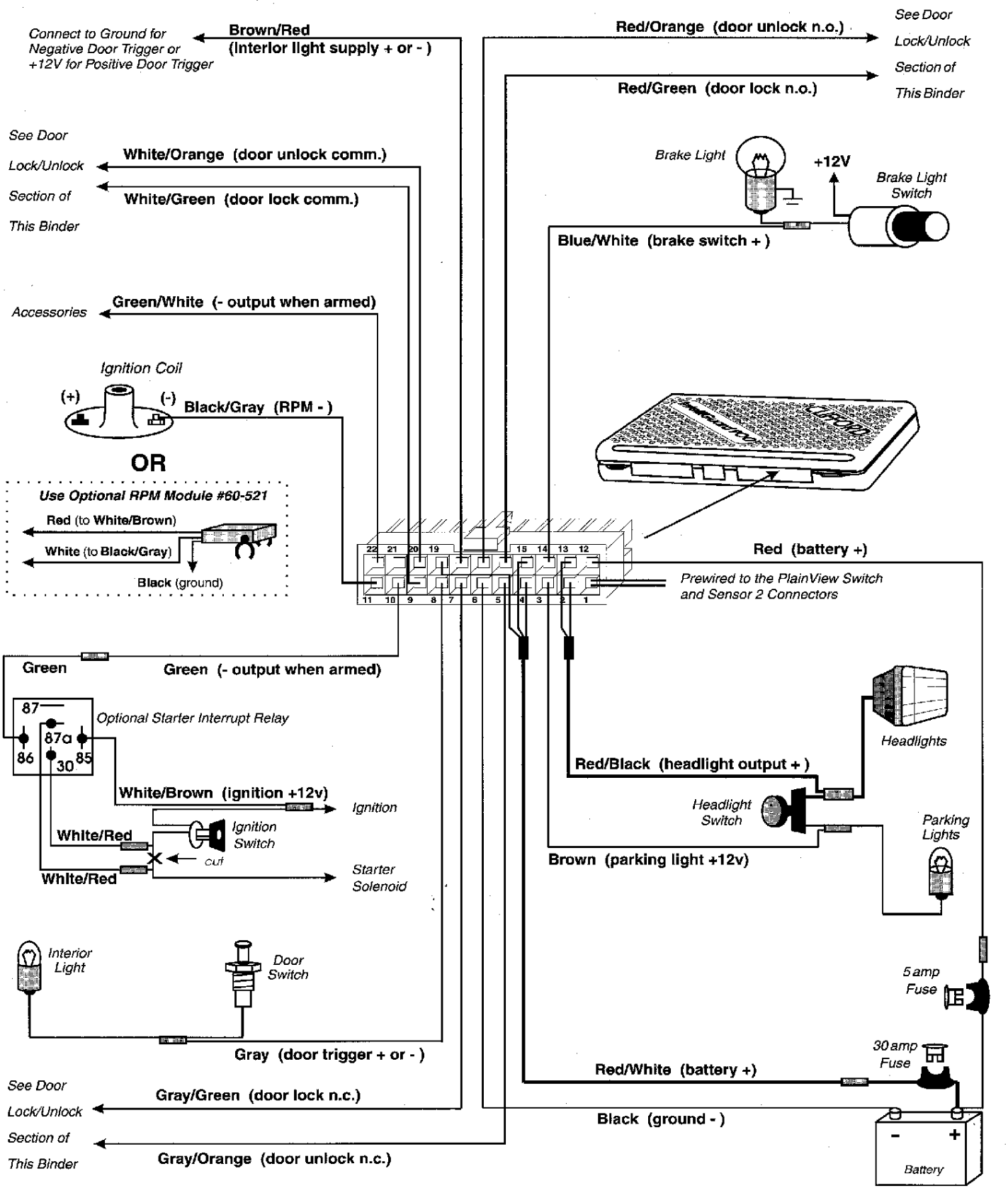

87
85
87a
86
30
Ignition Immobilizer Relay
Green/Blue (prewired)
Gray/Violet (ch. 2 out -)
Remote Trunk Release or Other Accessory
Ignition Switch
White/Brown (KEY SIDE ignition +12v)
cut
Ignition
Green/Blue (COIL SIDE ignition +12v)
Light Sensor
Gray Twinlead (light sensor)
Programmable Constant/Pulsed 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
For Future Use
Green/Black
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
Black Twinlead (Medallion siren output)
LED
Black
Black (LED black)
Violet
Violet (LED violet)

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***.
   n) Mount and wire optional passenger compartment ***accessories***.
2. **Engine Compartment**
   a) Wire the ***ignition coil*** or ***optional RPM Module***.
   b) Mount and connect the ***Dual-Zone OmniSensor.***
   c) Select locations to mount the ***Medallion Siren*** and ***hood pin switch***.
   d) Route and connect wires to each component using crimp connectors or solder and shrink tube.
3. Make **final** wiring **connections** at the battery, turn the **ignition on**, *then* **plug in** the control unit connectors.
4. **Test** the system.
5. Adjust the **sensor**.
6. Power and test **accessories**.
7. Secure the control unit and wiring.

Wiring Description for the 18-Pin Connector

Pin	Color	Connects to	Page
1	Gray Twin-Lead	Light sensor	8
2	Gray/Blue	Channel 4 accessory	8
3	Gray/Red	Channel 5 accessory	8
4	Black Twin-Lead	Medallion Siren	9
5	Black Twin-Lead	Medallion Siren	9
6	Black	Prewired to the PlainView Switch, LED and sensor connectors	7–9
7	White	Prewired to the PlainView Switch connector	8
8	Orange	Prewired to the sensor 2 connector	4
9	Green/Black	Reserved for future use	4
10	Gray Twin-Lead	Light sensor	8
11	Gray/Violet	Optional trunk release or other channel 2 accessory	8
12	Green/Blue	Prewired to the Ignition Immobilizer Relay	7
13	Yellow	Optional air horns or secondary siren	4
14	Blue	Windshield wiper switch	9
15	Violet	Prewired to the LED connector	7
16	Gray/Yellow	Trunk pin switch	8
17	White/Brown	Prewired to the Ignition Immobilizer Relay	7
18	White/Black	Hood pin switch	9


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)
22 21 20 19 15 14 13 12
11 10 9 8 7 6 5 4 3 2 1
Red (battery +)
Prewired to the PlainView Switch and Sensor 2 Connectors
Green
Green (- output when armed)
87
87a
86
30
85
Optional Starter Interrupt Relay
Headlights
Red/Black (headlight output +)
White/Brown (ignition +12v)
Ignition
Headlight Switch
Parking Lights
White/Red
Ignition Switch
cut
White/Red
Starter Solenoid
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.)
Gray/Orange (door unlock n.c.)
Black (ground -)
-
+
Battery

Wiring Description for the 22-Pin Connector

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

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.

Antenna

The short gray wire 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 connector. 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. 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. Connect the relay's WHITE/BROWN wire to the key side of the ignition wire.
3. Connect the relay's GREEN/BLUE wire to the coil side of the ignition wire.

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 when armed, and glows in program and valet modes.

1. Verify there is adequate space to accommodate the LED.
2. Drill a 5/16" hole and route the wires through it.
3. Mate the LED connectors to the same wire color connectors on the wireloom.
4. 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 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 IntelliGuard 900 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. Avoid placing the switch where it may be accidentally toggled.

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.

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 2.5 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

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 2.5 minutes*

See the programming section on pages 14–15 to change the type of output. The output is activated by pressing remote control button 4. Current is limited to 0.15 amp.

Channel 5 Output

You can program the GRAY/RED wire to operate in any of the three manners noted above. See the programming section on pages 14–15 to change the type of output. The output is activated by first pressing the remote control's LevelShift button (on the side of the remote), then pressing button 1. Current is limited to 0.15 amp.

Remote Window/Sunroof Closure (requires an optional relay)

If the door key can close the vehicle's power windows and sunroof, you can make them remote controlled:

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 fused +12V
4. Connect the channel 4 or 5 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 timer as noted on pages 14–15.

Trunk Trigger

Vehicles with a trunk light will interface directly with the IntelliGuard 900 if the switch polarity is **ground**. The trunk switch may be located near the trunk latch, in the trunk latch mechanism or at the trunk light.

1. Use a voltmeter to determine switch polarity.
2. If polarity is negative, connect the GRAY/YELLOW wire to the trunk switch.

NOTE: If the vehicle has a dashboard trunk ajar indicator, use Clifford isolation diode #46-005.

NOTE: If switch polarity is positive, use a relay. Vehicles with no trunk switch require Clifford pin switch #74-035.

Brake Switch

The brake switch connection is vital for the operation of the anti-carjacking electronics of the IntelliGuard 900.

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.

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.

Engine Compartment Components

RPM Monitoring

The IntelliGuard 900 monitors engine RPM through either the optional spark detect module or the BLACK/GRAY wire. This connection is vital for the operation of the anti-carjacking electronics of IntelliGuard 900 as well as the AutoLock feature. After powering up the system, you ***must*** perform the simple *MANDATORY RPM Programming* noted on page 10. 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. Locate the negative terminal of the ignition coil, normally marked (-) next to the terminal.
   b. Connect the BLACK/GRAY wire to the negative coil terminal.
3. **Third choice - On some cars (mostly GM cars) there is a tachometer terminal at the distributor**
   a. Locate the tachometer terminal (normally marked "tach") near 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 digital analysis vibration/impact sensor are built into the control unit. For ease of installation there are zero crimp connections.

1. Firmly mount the OmniSensor sensing module on the center of the engine compartment firewall. The arrow on the module must point straight up.
2. Route the connector and cable through a grommet in the firewall and plug the connector into the control unit.

MultiSound Medallion Siren

Yet another great Clifford innovation. You will find the exclusive MultiSound Medallion Siren easy to mount, easy to program, a personalized siren sound 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.

Hood Trigger

Vehicles with a hood pin switch will interface directly with IntelliGuard 900 if switch polarity is **ground**. If the hood light does ***not*** operate unless the parking lights are on, install Clifford isolation diode #46-005.

1. Use a voltmeter to determine switch polarity.
2. If negative, connect the WHITE/BLACK wire to the hood pin wire.

> ***NOTE: If switch polarity is positive, use a relay. Vehicles with no hood switch require Clifford pin switch #74-035.***

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. **SmartPowerUp**—Turn the **ignition on**, plug in the 18-pin connector, then plug in the 22-pin connector. This causes the IntelliGuard 900 to power-up silently.
7. Reset the courtesy lighting.

> ***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™

SmartPowerUp eliminates siren noise whenever IntelliGuard 900 is installed and powered up. Yet if a burglar disconnects battery power, as soon as he reconnects the battery IntelliGuard 900 will instantly arm and sound. To SmartPowerUp the system, simply turn the ignition to the "ON" position and plug in the 5-amp fuse.

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:
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. *IntelliGuard 900 can be set to automatically adjusts for delayed courtesy lighting, so 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 5.

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

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

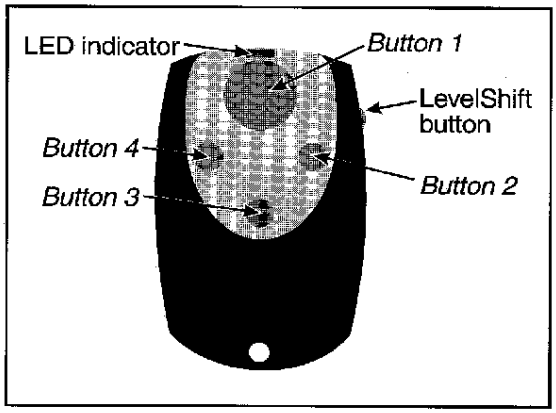
MANDATORY RPM Programming

This ***MANDATORY*** programming step must be completely in order for the IntelliGuard 900's anti-carjacking features 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 to the momentary side until you hear one siren chirp and the LED turns on to acknowledge program mode entry.
4. Toggle the switch 6 times between the latched and center position. After a one-second pause, the system will confirm with 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 off the ignition. You'll hear 3 chirps to confirm program mode exit and the LED will turn off.

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'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:

To Set and Test Sensitivity

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). You may now either 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, be sure to turn on the High/Low feature (column 6, feature 6) as noted on pages 14–15.

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 hit the vehicle with your open palm.
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 1–5 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 sensor is often activated, decrease its sensitivity. If, for example, a trigger was activated several times, check the pin switch operation and/or check the wire for possible shorting.

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

Programmable Features

IntelliGuard 900 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. 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 Matrix on the next page and note of the column and row numbers of the feature(s) you wish to program.
2. Turn the ignition to the **"ON"** position, 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 momentary side of the PlainView switch twice,** then **press to latched, then press and hold to the momentary side 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 matrix. From this position, you will first select the feature's column, then the feature's row.
4. To select the column you wish, **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). After a one-second pause, you will hear the same number of chirps as the column number you have selected, audibly confirming your selection.
5. To select the row, tap the momentary side of the switch the same number of times as the row number. You will hear a single chirp confirmation each time you press the momentary side to help you count.
   a. ***VERY IMPORTANT:*** If there is a ***NOTE*** number listed in the selected feature of the matrix, perform the actions listed for that note. Once you have completed the ***NOTE*** instructions, skip step 6 below and go to step 7.
6. After a one-second pause you will hear either one chirp to indicate that the feature you selected is now turned off, or two chirps to indicate that the feature is now on (for siren duration, one chirp = 30 seconds, two = 60 seconds).
7. You have now completed the programming of the desired featured. You may select another feature, or you may exit program mode:
   a. To program another feature in that same column, you must repeat step 5 within the next 3 seconds (if longer than 3 seconds, you will hear three chirps to indicate that you are now in the *"Feature Select"* position).
   b. To select a different feature column, repeat steps 4 and 5.
8. When done, turn the ignition off (you'll hear 3 chirps and the LED will turn off to indicate program mode exit).

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!*

Programmable Features Matrix

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***	Test/adjust primary (normal) zone of the OmniSensor ***NOTE 3***	Anti-carjacking: on/**off**	Smart AutoArming: **on**/off	**MANDATORY RPM PROGRAMMING** *see page 11*
Row 2 2nd momentary	Sound 2: **on**/off	Add new remote to channel 2 ***NOTE 1***	Test/adjust secondary (high) zone of the OmniSensor ***NOTE 4***	Remote control button/channel sequence for anti-carjacking	AutoArm & Lock: on/**off**	Channel 2 headlight timer: 1sec–2.5min (**30sec**) ***NOTE 7***
Row 3 3rd momentary	Sound 3: **on**/off	Add new remote to channel 3 ***NOTE 1***	NightVision: **on**/off	Add a dedicated anti-carjacking remote control ***NOTE 5***	15-second entry delay: on/**off**	Channel 4 and 5 timer: 1sec–2.5min (**30sec**) ***NOTE 8***
Row 4 4th momentary	Sound 4: **on**/off	Add new remote to channel 4 ***NOTE 1***	SilentNight: on/**off**	RPM dependent anti-carjacking: **on**/off	Siren duration: **30**/60 seconds	Channel 4 output: **pulsed**/timed/latched (1/2/3 chirps) ***NOTE 9***
Row 5 5th momentary	Sound 5: **on**/off	Add new remote to channel 5 ***NOTE 1***	Long-term chirp silencing: on/**off**	**Pulsed**/constant (1/2 chirps) ground output (YELLOW wire) upon panic ***NOTE 6***	FACT: **on**/off	Channel 5 output: **pulsed**/timed/latched (1/2/3 chirps) ***NOTE 9***
Row 6 6th momentary	Sound 6: **on**/off	Erase all channels ***NOTE 2***	QuietChirps: on/**off**	Set a new secret disarming/valet code	AutoLock/UnLock: **on**/off	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 two chirps to indicate that the remote has been programmed.
- ***NOTE 2:*** When you hear the two chirps, 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 system).
- ***NOTE 3:*** Turn off the ignition, exit the vehicle and close the doors. To test the current sensitivity, press remote control button 4. Firmly "thump" the window pillar with the side of your fist. You should hear a chirp to confirm activation of the sensor's primary zone. To change sensitivity, press button 2, then thump with the amount of force you want to trigger the primary zone. A single chirp will acknowledge the impact. Press button 4 and retest. Repeat until the sensor is set to the sensitivity you wish, then press button 1 to end program mode.
- ***NOTE 4:*** Use the same procedure as NOTE 3, but strike the window pillar lightly.
- ***NOTE 5:*** Transmit the channel that the owner will use on the dedicated remote control (either a Clifford ACG 4-button/12-channel or 3-button/3-channel remote control may be used for this purpose). You will hear two chirps to indicate that the channel you transmitted will now turn off the 20-second anti-carjacking countdown. Be sure to advise the customer to carry this remote control on his or her person, since a carjacker will undoubtedly take the usual remote control and purse.
- ***NOTE 6:*** This output is ideal for use with air horns, a pager and/or an internal siren. On certain accessories, such as SmartWindows, that require a siren output connection, connect the accessory's siren input to this line and set the output to ***constant ground.***
- ***NOTE 7:*** The timer starts as soon as you enable this feature (6 latches, 2 momentaries). When the duration you wish has been reached, press button 1 on the remote control. You will hear two chirps to confirm the new channel 2 duration.
- ***NOTE 8:*** The timer starts as soon as you enable this feature (6 latches, 2 momentaries). 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 9), it will now have this duration.
- ***NOTE 9:*** 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, to remotely activate the headlights for a preset length of time, or for use with hydraulics. 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 indicated latched operation.

Programming Example #1

In this example, you will set the system's channel 4 and 5 timer to a 10-second duration and change the channel 5 output from its factory preset pulsed output to the 10-second timed output.

1. Turn the ignition key to the ON position.
2. Enter the valet code on the PlainView valet switch (momentary, momentary, latched, center), then immediately press and hold the momentary side until you hear a chirp.
2. Select feature column 6 by flicking the switch between latched and center 6 times. Wait 3 seconds. The system will sound 6 chirps to confirm feature column 6.
4. Press and release the momentary side 3 times to select feature row 3. You will hear 1 chirp to indicate that the timer has started. When 10 seconds have passed, press remote control button 1 (you'll hear a chirp to confirm this).
5. *Immediately* press and release the switch's momentary side 5 times (you'll hear a chirp each time you press the momentary side) to select feature row 5. (NOTE: Since the system was already in feature column 6, immediately tapping the momentary side 5 times selects feature row 5 without having to re-select feature column 6).
6. Wait 3 seconds. You will hear two chirps to confirm that the channel 5 output will now use the system's timer, which you've already set to 10 seconds. If you immediately tap the momentary side 5 times again, 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 the digital code transmitted by a car alarm remote control. The code grabber records it, and the thief can retransmit the code at will. When an individual arms or disarms his car alarm, the thief's code-grabber records the remote control's digital code from up to several hundred feet away. When the vehicle owner leaves, the thief simply plays it back and gets the car. 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 IntelliGuard systems. Clifford's proprietary Anti-CodeGrabbing (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. Thus the code played back by the thief's code grabber will never deactivate an IntelliGuard 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 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 14–15 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.