Standard Features of the Concept 400

- ❑ ***Lifetime Warranty***
- ❑ ***His & Hers Remote Controls***
- ❑ ***ACG™ 2 (Anti-CodeGrabbing™)***
- ❑ ***Extended Range Receiver***
- ❑ ***Audible Low-Battery Warning***
- ❑ ***Built-In Two-Point Immobilizer™***
- ❑ ***Optional Wireless Immobilizer™***
- ❑ ***Digital Dual-Zone Proximity Sensor 4***
- ❑ ***Optional Remotely Adjustable OmniSensor***
- ❑ ***Patented UltraSecure Coded Valet Mode™***
- ❑ ***Eight-Event TotalRecall™***
- ❑ ***Enhanced User-Selectable AutoArming***
- ❑ ***User-Selectable Remote Valet Mode Entry/Exit***
- ❑ ***Built-In BlackJax Anti-Carjacking System***
- ❑ ***Optional DataPort™ Interface and CliffNet Wizard Pro™ Software***
- ❑ ***FACT — False Alarm Control and Test***
- ❑ ***Prewired LED, Sensor, Extended Range Receiver and PlainView 2 Switch Connectors***
- ❑ ***High Output Medallion Siren***
- ❑ ***Dual-Mode "Chirp" Silencing***
- ❑ ***Remote Siren Silencing***
- ❑ ***Remote Door Locking/Unlocking with Built-in Relays***
- ❑ ***User-Selectable AutoLock***
- ❑ ***User-Selectable AutoUnLock***
- ❑ ***Integrated Electronic Timer***
- ❑ ***Turbo Timer Output***
- ❑ ***CliffNet DataPort Accessory Interface***
- ❑ ***Remote Keyless Entry and Accessory Activation Even in Valet Mode***
- ❑ ***Remote Panic with Smart Locking/Unlocking***
- ❑ ***Smart Remote Trunk Release***
- ❑ ***Built-In Dual Parking Light Flasher with Onboard Relay***
- ❑ ***Remote-Controlled Courtesy Lighting***
- ❑ ***Patented Smart AutoTesting™***
- ❑ ***Patented Malfunction AutoBypass™ with AutoReMonitoring***
- ❑ ***Patented Smart Prior Intrusion Attempt Alert***
- ❑ ***Patented Remote Control Code Learning and MultiRemote Recognition***
- ❑ ***Clear All Remotes***
- ❑ ***Multiple-Car Control***
- ❑ ***High-Luminescence LED Status Indicator with Automatic Battery-Saving Mode***
- ❑ ***Multiple Sensor/Trigger Inputs***
- ❑ ***Patented SmartPowerUp™ 2***
- ❑ ***Full-Time SecureAccess™ Programming***
- ❑ ***Advanced CMOS Microcomputer***
- ❑ ***Pre-Loomed Wiring***
- ❑ ***Three Auxilliary Outputs with Selectable Output Types***
- ❑ ***AutoActivation of Auxilliary Output C for Window All-Close***
- ❑ ***Installer-Selectable Door Ajar/Delayed Courtesy Lights***

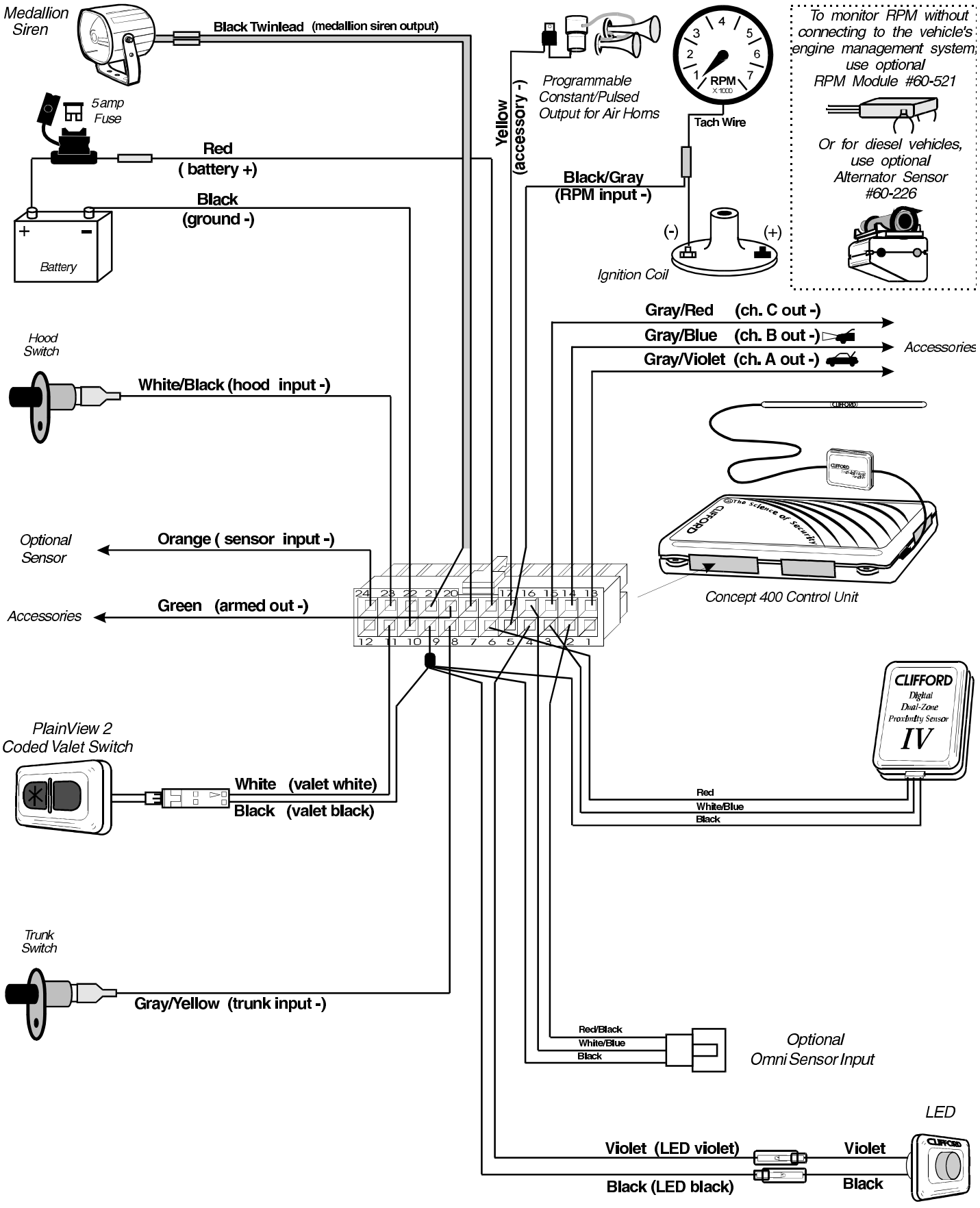
System Components

The Concept 400 kit contains the following components:

One Prewired 24-pin Connector Harness
One Prewired 14-pin Connector Harness
One Concept 400 Control Unit
One Digital Dual-Zone Proximity Sensor 4
Two Remote Transmitters
One Extended Range Receiver
One PlainView 2 Coded Valet Switch
One Medallion Siren
One Hardware Kit
One User's Manual
Two Window Decals
One LED Status Indicator

Wiring Description for the 24-Pin Connector

Pin	Color	Connects to
2	Red/Black	Optional Digital OmniSensor input (5V+)
3	White/Blue	Prewired Digital Proximity Sensor input connector
4	Violet	LED Output (+) 12V
5	Black/Gray	Tach input
6	Red	Proximity Sensor and Tilt Sensor power supply (+) 12V
8	Gray/Yellow	Trunk trigger switch input (-)
9	Black	Sensors, LED and valet switch ground supply (-)
10	Black	Ground
11	White	Valet Switch input (-) multi-plex
13	Gray/Violet	Auxilliary Output A output
14	Gray/Blue	Auxilliary Output B output
15	Gray/Red	Auxilliary Output C output
16	White/Blue	Optional remotely adjustable OmniSensor input
17	Yellow	Optional airhorns or siren output (-)
18	Red	Battery input (+12v)
19	Black twinlead	Medallion Siren output
20	Green	Tilt Sensor armed output
21	Black twinlead	Medallion Siren output
23	White/Black	Hood trigger switch input (-)
24	Orange	Tilt Sensor input (-)

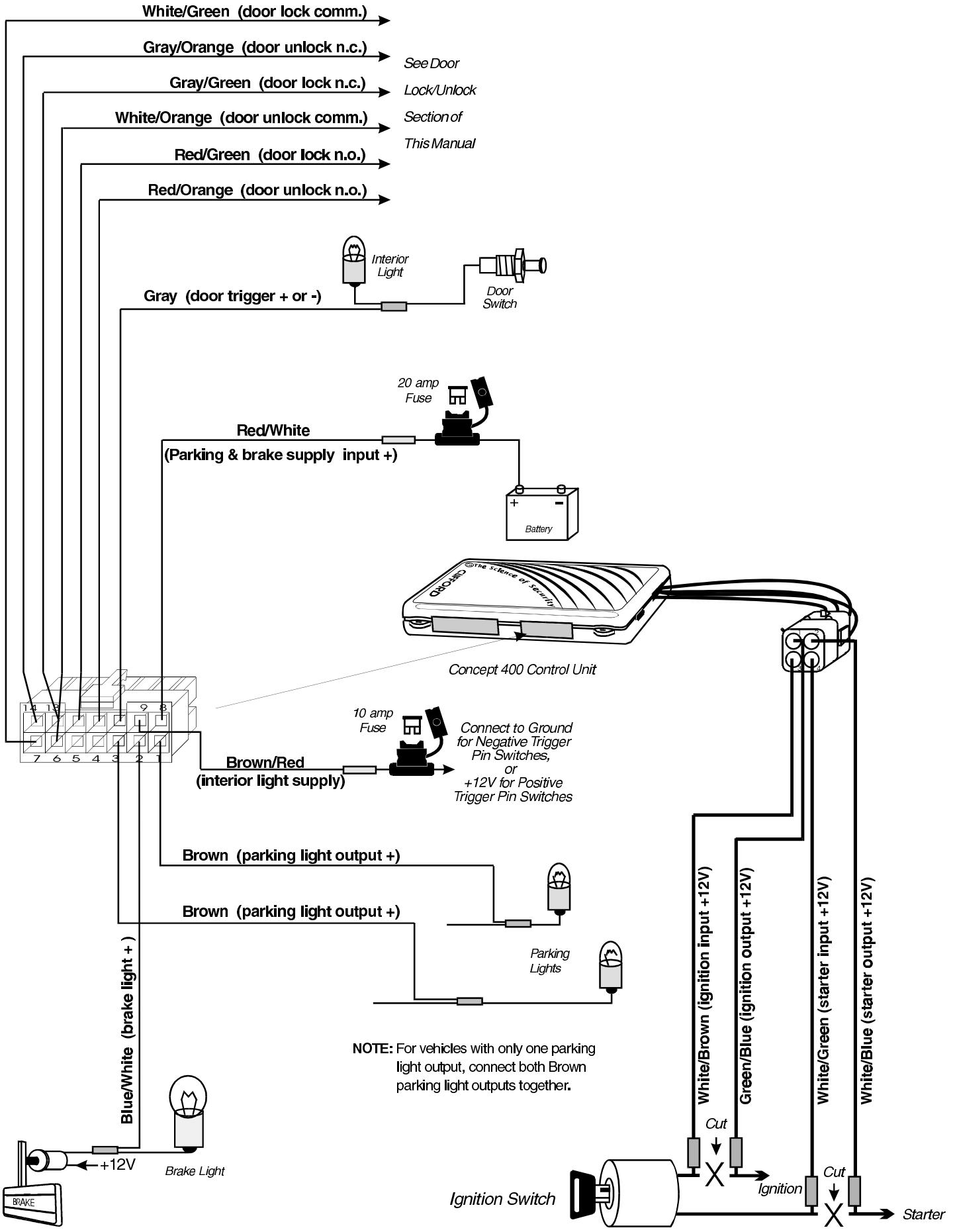

Medallion Siren
Black Twinlead (medallion siren output)
5amp Fuse
Red
(battery +)
Black
(ground -)
Battery
Yellow
(accessory -)
Programmable Constant/Pulsed Output for Air Horns
RPM
Tach Wire
Black/Gray
(RPM input -)
(-)
(+)
Ignition Coil
To monitor RPM without connecting to the vehicle's engine management system, use optional RPM Module #60-521
Or for diesel vehicles, use optional Alternator Sensor #60-226
Gray/Red (ch. C out -)
Gray/Blue (ch. B out -)
Gray/Violet (ch. A out -)
Accessories
Hood Switch
White/Black (hood input -)
Optional Sensor
Orange (sensor input -)
Accessories
Green (armed out -)
Concept 400 Control Unit
PlainView 2 Coded Valet Switch
White (valet white)
Black (valet black)
CLIFFORD
Digital Dual-Zone Proximity Sensor IV
Red
White/Blue
Black
Trunk Switch
Gray/Yellow (trunk input -)
Red/Black
White/Blue
Black
Optional Omni Sensor Input
LED
Violet (LED violet)
Violet
Black (LED black)
Black

Wiring Description for the 14-Pin Connector

Pin	Color	Connects to
1	Brown	Parking light output (+)
2	Blue/White	Brake light input/output (+)
3	Brown	Parking lights output (+)
6	White/Orange	Door lock common
7	White/Green	Door lock common
8	Red/White	Parking & brake supply
9	Brown/Red	Interior light supply
10	Gray	Door trigger
11	Red/Orange	Door unlock normally open
12	Red/Green	Door lock normally open
13	Gray/Green	Door lock normally closed
14	Gray/Orange	Door unlock normally closed

Wiring Description for the Pigtail Connector

Pin	Color	Connects to
1	Green/Blue	Ignition output (+12v)
2	White/Blue	Starter output (+12v)
3	White/Brown	Igntion input (+12v)
4	White/Green	Starter input (+12v)


White/Green (door lock comm.)
Gray/Orange (door unlock n.c.)
Gray/Green (door lock n.c.)
White/Orange (door unlock comm.)
Red/Green (door lock n.o.)
Red/Orange (door unlock n.o.)
See Door Lock/Unlock Section of This Manual
Interior Light
Door Switch
Gray (door trigger + or -)
20 amp Fuse
Red/White
(Parking & brake supply input +)
Battery
Concept 400 Control Unit
10 amp Fuse
Brown/Red
(interior light supply)
Connect to Ground for Negative Trigger Pin Switches, or +12V for Positive Trigger Pin Switches
Brown (parking light output +)
Brown (parking light output +)
Parking Lights
NOTE: For vehicles with only one parking light output, connect both Brown parking light outputs together.
Blue/White (brake light +)
+12V
Brake Light
BRAKE
White/Brown (ignition input +12V)
Green/Blue (ignition output +12V)
White/Green (starter input +12V)
White/Blue (starter output +12V)
Cut
Cut
Ignition Switch
Ignition
Starter

Passenger Compartment Connections

Control Unit and Extended Range Receiver

> ***The Concept 400 control unit must be installed inside the vehicle. Under no circumstances should the unit be installed under the hood or other similarly hostile environment.***

1. Select an area behind the dash to mount the control unit using the supplied wire tires, but do not permanently affix it until all wiring and testing is complete.
2. Plug the extended range receiver in to the control unit. Mount the extended range receiver away from the control unit and run the antenna either up the window pillar and affix it to the windshield, or under the dash, away from metal. The position and location of the receiver will effect remote control range. Do not fold the excess cable or antenna wire. Do not make hard, sharp bends.

Door Trigger/Interior Light Supply

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

Central Door Locking System

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

LED Status Indicator

Select a prominent location on the dash or console visible through all windows. Discuss placement with the owner.

1. Verify there is adequate space to accommodate the LED, then drill a 5/16" (8mm) hole and route the wires through it.
2. Mate the LED connectors to the VIOLET and BLACK wire connectors as shown in the diagram on page 3.
3. Press the LED into place.

PlainView 2 Coded Valet/Programming Switch

1. Discuss placement of the switch with the vehicle owner and avoid placing the switch where it can be pressed accidentally.
2. Verify there is adequate space behind the selected location to accommodate the switch.
3. Drill a 5/16" (8mm) mounting hole, then insert the wires through the hole.
4. Mate the switch's locking connectors to the WHITE and BLACK locking connector.
5. Remove the adhesive backing and press the switch into place.

Remotely Adjustable Dual-Zone Proximity Sensor

This efficient new-generation proprietary radar sensor is immune to the wind and temperature variations that cause ultrasonic sensors to false alarm. The sensor must be mounted onto a metal surface and face outward into the passenger compartment. It should be positioned as close as possible to the center of the passenger compartment. Suggested mounting locations include within the centre console, behind the dash, under the carpeting of the central hump or even in the headlining. When selecting a location, keep in mind that metal as well as metallic paint, metallic-colored plastic and metal-laced window tint material will interfere with the radar field. Be certain not to mount the sensor under a location where the vehicle owner may store coins, CDs or cassettes (iron-oxide tape). The radar waves of the sensor *will* pass through nonmetallic materials such as plastic, fabric and carpet.

1. Temporarily affix the sensor where it will be mounted, but do not yet permanently mount it until after adjusting and testing sensitivity (the sensor may need to be relocated, so do not permanently secure it until it has been thoroughly tested).
2. Join the Proximity Sensor to the connector with the BLACK, WHITE/BLUE and RED wires.

Trunk Trigger

Vehicles with a ground-switching trunk light will interface directly with the Concept 400 (on positive switching vehicles, use a relay to invert polarity). The switch may be located in or near the trunk latch or at the trunk light. If a switch cannot be located, you must add a pin switch in a location away from water channels.

> ***NOTE: If the vehicle has a dashboard trunk ajar indicator, install a 1-amp diode 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).

Passenger Compartment Connections

Brake Switch

The brake switch connection is required for the operation of the Concept 400's anti-carjacking electronics.

1. Turn the ignition to the "ON" position and press the brake pedal to verify that the brake lights are operational.
2. Find the one wire that carries +12V when the brake pedal is pressed, then connect the BLUE/WHITE wire to this wire.

Parking Lights

See the ***Door Trigger/Parking light*** section in this binder.

Starter and Ignition Immobilization Circuits

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 volts when the ignition is off.
2. Start the engine, then cut the ignition wire. The engine should stop running.
3. As shown on page 5, connect the WHITE/BROWN wire to the **key side** of the cut ignition line.
4. Connect the GREEN/BLUE wire to the **engine side** of the cut ignition line.
5. Use a voltmeter to locate the **one** wire that carries +12V during the **cranking cycle ONLY**. Cut this wire, then try to start the engine. It should not crank.
6. Connect the WHITE/GREEN wire to the **key side** of the cut starter line.
7. Connect the WHITE/BLUE wire to the **engine side** of the cut starter line.

NOTE: The starter circuit may carry a very high current. Be certain that the starter wire connections are solid.

Auxilliary Output A with Selectable Output Type

The output (GRAY/VIOLET wire) can be programmed as either pulsed, latched or timed and can be programmed to operate only when the system is disarmed (e.g., for use as a remote trunk release). The output is activated by transmitting channel 2 from the 16-channel master remote control or by pressing the button on the companion remote. The factory setting is pulsed output (0.5 second ground). The latched output stays at ground until channel 2 is activated a second time, and the timed output stays at ground for any selected duration between one second and four minutes. Current is limited to 0.15 amp. See *Installer-Programmable Features* on page 16 for information on programming the output type and/or disabling operation while the system is disarmed.

Auxilliary Output B with Selectable Output Type

The output (GRAY/BLUE wire) can be programmed as either pulsed, latched or timed and is activated by transmitting channel 7 from the 16-channel master remote control or by pressing the and ✶ buttons on the companion remote. The factory setting is pulsed output (0.5 second ground). The latched output stays at ground until channel 7 is activated a second time, and the timed output stays at ground for any selected duration between one second and four minutes. Current is limited to 0.15 amp. See *Installer-Programmable Features* on page 16 for information on programming the output type.

Auxilliary Output C with Selectable Output Type and AutoActivation

The output (GRAY/RED wire) can be programmed as either pulsed, latched, or timed and in addition, can also be programmed to automatically activate every time the system is armed using the remote control. The output is activated by transmitting channel 8 from the 16-channel master remote or by pressing and on the companion remote. Current is limited to 0.15 amp. AutoActivation is perfect when programmed as a timed-output to close the power windows and sunroof on vehicles that have an all-close feature. See *Installer-Programmable Features*on page 16 for more information on programming output type and/or enabling the AutoActivation feature.

Engine Bay Connections

High Output Medallion Siren

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

1. You must firmly secure the siren to the engine bay firewall or an fender well using all three sheet metal screws supplied.
2. Using the supplied connector, fasten the GRAY twinlead wire coming from the siren to the BLACK twinlead from the 24-pin connector on the control unit.

RPM Monitoring

This is required for both RPM-activated automatic door locking and for BlackJax anti-carjacking features. See the **RPM Monitoring** section in this binder for information.

Hood Trigger

Vehicles with a ground-switching hood pin switch interface directly with Concept 400 (on positive switching vehicles, use a relay to invert polarity). If a switch cannot be located, you must add a pin switch in a location away from water channels.

1. Connect the WHITE/BLACK wire to the hood pin wire.

Final Wiring Connections

1. Connect the 18 AWG RED wire to the 5-amp fuseholder as shown on page 3.
2. Connect the 18 AWG RED/WHITE wire to the 20-amp fuseholder as shown on page 5.
3. Attach the two fuseholders to the battery positive cable clamp.
4. Attach the 18 AWG BLACK wire to the battery negative cable clamp.

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

SmartPowerUp™ 2

SmartPowerUp 2 ensures that the system powers up in the same state (disarmed, armed or valet mode) it was in when power was removed. When you first power up the Concept 400, it will silently enter the disarmed state.

Delayed Courtesy Lights

Some vehicles have a courtesy light delay or dimming circuit, which interferes with an alarm being able to detect the door trigger upon remote arming. If the delay or dimming lasts more than 5 seconds, no special connections or testing are needed, simply turn on the *Delayed Courtesy Lights* feature as noted in the *Installer-Programmable Features* section on page 16. Please note that since this feature sets the system to arm the instant the courtesy lights turn off, the Door Ajar Warning feature will not be available.

Mandatory RPM Programming

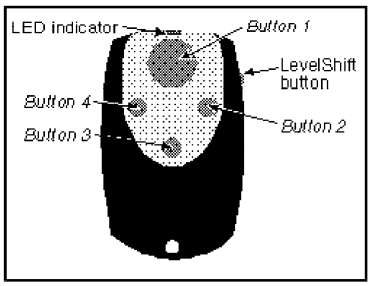
NOTE: This MANDATORY programming step must be completed for the Concept 400 to operate properly.

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** if the vehicle has a manual transmission).
3. Enter the code of "2" valet code using the instructions provided in the *Programmable Features* on page 14. The LED will briefly illuminate. Press and hold the ✶ button for 10 seconds (you will hear one confirmation chirp after three seconds—do not stop holding the button—continue holding the button until you hear a three-chirp confirmation). Release the button.
4. Press the **unmarked** button once. After a three-second pause, the system will sound one chirp to confirm column one selection (see the *Installer-Programmable Features* section on page 16).
5. Press the ✶ button five times (you will hear a chirp each time you press the button) to select row five. After a two-second pause, you will hear two chirps to confirm idle RPM has been set (if you hear just one chirp, check the connection of the BLACK/GRAY wire, then repeats steps 1 - 5).
6. Turn the ignition OFF.

Remote Control Operation

The Concept 400 comes with two ergonomically designed remote controls: a 16-channel master remote and a 10-channel secondary "companion" remote. Up to two more ACG 2 remote controls can be added to the Concept 400 system. Due to the ACG 2 feature on the Concept Series systems, older Clifford ACG and non-ACG remotes are not compatible with the Concept 400.

16-Channel Master Remote Control Operation



To transmit either channel 1, 2, 3 or 4: Press button 1, 2, 3 or 4. The LED indicator on the remote control will flash 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. The LED indicator on the remote control flashes twice, pauses, flashes twice, etc.: this indicates **level 2.**

To transmit channel 9, 10, 11 or 12: Press the LevelShift button twice. This shifts the buttons 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. The LED on the remote control flashes three times, pauses, flashes three times, etc.: this indicates **level 3.**

To transmit channel 13, 14, 15 or 16: Press the LevelShift button three times. This shifts the buttons to level 4 (channels 13–16). Then press the corresponding button within the next 7 seconds. For instance, to transmit channel 14 press the LevelShift button three times, then press button 2. The LED on the remote control flashes four times, pauses, flashes four times, etc.: this indicates **level 4.**

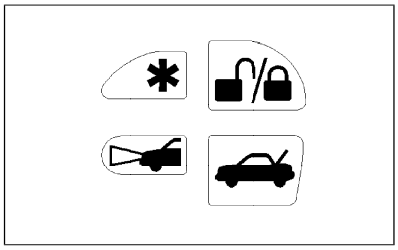
> ***NOTE: One second after you stop transmitting levels 2, 3 or 4 (channels 5–16), the remote control automatically returns to level 1 (channels 1–4).***

Remote Control Channel Assignments

Channel #	*Function*	*Channel #*	*Function*
1	Arm/Disarm	9	Remote Valet
2*	Activate Auxilliary Output A (usually remote trunk release)*	10	Proximity Sensor Override
3	Silent Arm/Disarm	11*	Manual Transmission enable/AutoStart (IS4 required)
4	IntelliStart 4 Activation	12*	Unassigned*
5*	Parking Lot Highlight Activation*	13*	Unassigned*
6*	SmartWindows 4 Accessory*	14*	Unassigned*
7*	Activate Auxilliary Output B*	15	Adjust Sensitivity of Optional OmniSensor
8*	Activate Auxilliary Output C*	16	Adjust Sensitivity of Proximity Sensor

** These channels can be assigned to control other Clifford ACG 2 systems and accessories on multiple vehicles.*

Companion Remote Control Operation



Function	*Press button number(s)*
Arm/Disarm	🔓/🔒
Activate Auxilliary Output A* (usually remote trunk release)*	🚗
Silent Arm/Disarm	🔓/🔒 + ✶
Parking Lot Highlight activation	🔦
IntelliStart 4 Accessory*	✶
SmartWindows 4 Accessory*	🔓/🔒 + 🚗
Remote Valet Mode Enter/Exit*	🔦 + ✶
Activate Auxilliary Output B	🚗 + ✶
Activate Auxilliary OutputC	🚗 + 🔦
Remote Proximity Sensor Override	🔓/🔒 + 🔦

These channels/buttons can be assigned to control other Clifford systems that use ACG 2 technology and accessories on other vehicles.

Sensor Adjustment

Digital Dual-Zone Proximity Sensor 4

The Concept 400 is equipped with our unique Digital Dual-Zone Proximity Sensor that uses digital signal processing to detect movement inside the passenger compartment and very near the vehicle. If a thief were to break a window and either enter or lean into the passenger compartment, the primary zone of this sensor would trigger the full alarm. However, if a thief brought his hands and face to the window a warning tone would sound.

Be aware that the Proximity Sensor uses radar waves to detect movement. These waves pass through nonmetallic materials like plastic, carpet, glass and wood. However, metal and metallic-colored paint, metallic-colored plastic and even some metallic window tinting materials will interfere with or completely block the radar waves. As such, it is not unusual that the Proximity Sensor zones require some adjustment after installation. In some instances, you may need to try a different location for the sensor.

> ***Since any metal objects above or near the Proximity Sensor will have a significant impact on operation, warn your customer never to place coins, CDs, cassettes (due to the iron oxide tape) or other metallic objects above or near where the sensor is mounted.***

1. Turn off any fluorescent lights that may interfere with the sensitivity testing of the Concept 400's radar sensor.
2. **Disarm** the system with the remote control.
3. Transmit channel **16** on the master remote (LevelShift three times, then button 4). You will hear one chirp and the LED will turn on.
4. Test the Proximity Sensor's **primary** zone by rapidly leaning through an open window into the passenger compartment. You will hear a siren chirp when the primary zone is triggered. This should not occur near the window, but instead when you would be in a position to touch the car stereo.

   To change the sensitivity of the primary zone, press and release **button 2 to increase** sensitivity or **button 4 to decrease** sensitivity. To rapidly increase or decrease several steps, press and hold the button. For each sensitivity increase, you will hear a higher and higher pitched confirmation chirp. For each sensitivity decrease, you will hear a lower and lower pitched confirmation chirp. Two LoudChirps indicate minimum and maximum settings of the 32-step range of settings. You may now press **button 3** to adjust the warning zone, or press **button 1** to fully exit the Proximity Sensor adjustment mode (you will hear 3 chirps).

   To change the sensitivity of the **warning** zone, press **button 3** (you'll hear 1 chirp). Then use the same procedure as above, but this time, rapidly bring your hands and face to the window as a thief would to see what's inside. The sensitivity of the warning zone should be set so that it is triggered when your face and hands are within a few inches of the window, no further. When done, press

button 1 to reselect the primary zone (you will hear 2 chirps), then button 1 again to fully exit Proximity Sensor adjustment mode (you will hear 3 chirps).

5. Repeat the preceding steps as required. An improperly adjusted sensor will cause the Concept 400 to false alarm or not respond properly to a genuine threat. Keep in mind that you may need to reposition the sensor, possibly after the customer has had the system for several days.

Remote-Controlled Override of Each Proximity Sensor Zone

Transmitting channel 10 whenever the system is armed will override the warning zone of the Proximity Sensor. This prevents the system from sounding warnings if the vehicle must be parked in an area with heavy pedestrian traffic. A second transmission of channel 10 anytime afterward whilst the system is still armed will override *both* zones of the Proximity Sensor. This comes in handy when a pet or a passenger must be left in the vehicle. The channel 10 warning zone override is visually confirmed with 4 flashes of the parking lights. A second channel 10 transmission to override both zones is confirmed with four more flashes. The sensor zones are automatically restored the next time you arm.

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 Concept 400 with the remote control.
2. Wait 10 seconds after the interior light turns off, then trigger the Proximity Sensor to activate the siren.
3. Do not disarm the system, let the siren complete its cycle.
4. Attempt to trigger the sensor again. The alarm should be silent.
5. Unlock and open a door. The alarm should sound immediately. You may now disarm.

Eight-Event TotalRecall

The system's nonvolatile memory records the identity of the last eight activated or malfunctioning triggers and sensors:

NOTE: The CliffNet Wizard Pro displays the Eight-Event TotalRecall data in a graphical format.

1. With the ignition OFF, press and hold the unmarked side of the PlainView 2 Switch.
2. Use the remote control to arm, and then again to disarm, and then release the button.
3. The LED will flash 1–10 times, pause, then flash 1–10 times, etc. Write down the number of flashes in each cycle.
4. Refer to the following chart. 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.

Number of LED flashes between pauses	*Trigger/sensor indication*
1 flash	Digital Dual-Zone Proximity Sensor
2 flashes	Optional Remotely Adjustable OmniSensor
3 flashes	Optional Digital Tilt/Motion Sensor
4 flashes	Door Trigger
5 flashes	Trunk Trigger
6 flashes	while
7 flashes	An attempt was made to turn on the ignition or start the engine while the system was armed
8 flashes	More than three consecutive incorrect valet codes were entered while the system was in BlackJax mode
9 flashes	BlackJax Activation
10 flashes	System Power Interruption

5. If a sensor is often activated, decrease that sensor's sensitivity (or reposition the sensor, if necessary). If a certain trigger is often activated, check pin switch operation, verify that the pin switch is not exposed to moisture and check the trigger wire for possible shorting.

Programmable Features

Concept 400 comes from the factory with its features preprogrammed as noted in **bold** text in the tables on pages 15 and 16. Some features can be programmed by the installer or the user, others can only be programmed only by the installer. There are two tables provided which define the user-programmable and installer-programmable features.

Using the CliffNet Wizard Pro

The CliffNet Wizard Provides intuitive access to all installer and user-programmable features through a user-friendly, graphical user interface. Because CliffNet Wizard Pro is Windows™-compatible, most operations can be accomplished by simply pointing and clicking a mouse. CliffNet Wizard Pro totally eliminates complicated programming charts and lengthy programming sequences. Please refer to the *CliffNet Wizard Pro User's Guide* for more programming information if you are using the CliffNet Wizard Pro. Otherwise, for manual programming refer to the tables provided in the following sections.

Programming the User-Selectable Features

1. Write down the column (across) number and row (down) number of the feature(s) you wish to program.
2. Turn the ignition to the "ON" position or start the engine.
3. Enter the factory preset valet/programming code of "2" by pressing the PlainView 2 Switch's ✶ button twice, then press the unmarked button.
4. After entering the code, press and hold the ✶ for about 3 seconds until you hear one siren chirp and the LED turns on to acknowledge program mode entry. The Concept 400 is now in the "Feature Select" position for User-Programmable Features.
5. Select the feature column: Press the unmarked button the same number of times as the column number. Pause. You will then hear the same number of chirps as the column number you have selected, audibly confirming your selection.
6. Within five seconds, select the feature row: Press ✶ button the same number of times as the feature's row number. You'll hear a chirp each time you press the unmarked side to help you count.
7. If there is a NOTE for the selected feature, perform the actions noted.
8. Pause. You will hear either one or two chirps: two chirps = ON, one chirp = OFF.
9. You can select another feature, or you can exit program mode:
   a. To select another feature in that same column, repeat step 6 within the next five seconds (after five seconds, three chirps indicate that the Concept 400 is now back in the "Feature Select" position).
   b. To select a different feature column, repeat step 5.
   c. To exit program mode, turn the ignition off (you'll hear three chirps and the LED will turn off to indicate exit of program mode), or wait 60 seconds and the Concept 400 will automatically exit program mode.

It may sound a little complicated, but it really isn't. Briefly, here is all you do: choose the feature you want to change, enter program mode, select that feature's column and row, wait for the on/off chirp confirmation, then turn off the ignition. *That's it!*

User-Programmable Features

User-Programmable Features (1 Chirp = OFF, 2 Chirps = ON)

Feature Select	*Unmarked 1*	*Unmarked 2*	*Unmarked 3*	*Unmarked 4*
✶ 1	AutoProgram New Master Remote ***NOTE 1***	Chirps (Off/LoudChirps/**QuietChirps)** (1 chirp/2 chirps/**3 chirps**)	AutoArming (Off/**On)**	Arm/Disarm with Secondary Remote ***NOTE 5***
✶ 2	Personalized Siren Sounds ***NOTE 2***	***NOT USED***	AutoArm & Lock (**Off/**On)	Trunk Release with Secondary Remote ***NOTE 6***
✶ 3	Play Siren Sounds (**Always**/Trigger Only) (**1 chirp**/2 chirps)	Remote Valet Feature (Off/**On**)	Entry Delay (**Off**/On)	Silent Arm/Disarm with Secondary Remote ***NOTE 6***
✶ 4	Siren Duration (**30**/60/90 Seconds) (**1 chirp/**2 chirps/3 chirps)	AutoStart (Neither/Battery/Temperature/Both**)** (**1 chirp**/2 chirps**/**3 chirps/4 chirps) Requires optional Intellistart 4	FACT (Off/**On)**	Parking Lot Highlight Activation with Secondary Remote ***NOTE 6***
✶ 5	AutoLock (Off/Instant/**RPM-Dependent**) (1 chirp/2 chirps/**3 chirps**)	BlackJax (**Off/**On)	***NOT USED***	Remote Start** with Secondary Remote ***NOTE 6***
✶ 6	AutoUnlock (Off/**On**)	Clear All Remotes ***NOTE 4***	***NOT USED***	Window Rolldown/Venting with Secondary Remote ***NOTE 6***
✶ 7	Reset All to Factory Settings (except remote controls and valet code) ***NOTE 3***	Valet Code **SHOULD ONLY BE PROGRAMMED BY THE VEHICLE OWNER**	***NOT USED***	Remote Valet Mode with Secondary Remote ***NOTE 6***

- ***NOTE 1:*** Press button 1 on the 16-channel master remote, you will hear one chirp. Press button 1 ***again,*** you will hear two chirps.
- ***NOTE 2:*** When this feature is selected, siren sound 1 will play for five seconds. Press marked to turn the siren sound off, press unmarked to activate the sound. Next, siren sound 2 will play for five seconds. Press marked to turn the siren sound off, unmarked to activate it. The system will cycle through all six siren sounds.
- ***NOTE 3:*** You will hear two chirps when all features are reset.
- ***NOTE 4:*** When you hear two chirps, all remote controls will have been erased from the system memory. You must now add the new and/or existing remote controls to the system (i.e., AutoProgram each remote that will be used with the Concept 400).
- ***NOTE 5:*** Programs a 4-channel secondary, 16-channel master, or any other remote control from another Concept system to arm or disarm the vehicle. For instance, to set button 13 of the other car's master remote control to arm/disarm the system, select column 4, row 1, then transmit channel 13 from the remote you are programming. The system will respond with one chirp. Immediately transmit channel 13 again. The system will respond with two chirps. Button 13 of the other vehicle's remote will now arm/disarm the system.
- ***NOTE 6:*** This feature can be programmed onto the remote control of another Concept system, after that remote has been programmed to arm/disarm this system. Select the row and column number, then transmit the unused button on the other remote that you want to use to perform that function. The Concept 400 will respond with the same number of chirps as the row number. Please note that you must first set a button on the remote that will arm/disarm the system (column 4, row 1) before these others will be accepted.

Installer-Programmable Features

To access the installer-programmable features, use the procedure defined in the User-Programmable section, but in step 4, hold and press the ✶ side of the PlainView 2 Switch for 10 seconds. You will hear three confirmation chirps indicating that the system is in installer-program mode.

Table of Installer-Programmable Features (1 chirp = OFF, 2 chirps = ON)

Feature Select	*Unmarked 1*	*Unmarked 2*	*Unmarked 3*
✶ *1*	**Single**/Double Lock Pulse (**1 chirp**/2 chirps)	Auxilliary Output Timer Duration (**10 seconds**) See ***NOTE 1***	**Door Ajar Warning**/Delayed Courtesy Lights (**1 chirp**/2 chirps)
✶ *2*	**Single**/Double Unlock Pulse (**1 chirp**/2 chirps)	Auxilliary Output A Type (**Pulsed**/Timed/Latched) (**1 chirp**/2 chirps/3 chirps)	Auxilliary Output A Interlock (On/**Off**)
✶ *3*	Lock/Unlock Pulse 3 second/**1 second** (1 chirp/**2 chirps**)	Auxilliary Output B Type (**Pulsed**/Timed/Latched) (**1 chirp**/2 chirps/3 chirps)	Auxilliary Output B Interlock (On/**Off**)
✶ *4*	AutoActivate Auxilliary Output C upon Remote Arming (On/**Off**)	Auxilliary Output C Type (**Pulsed**/Timed/Latched) (**1 chirp**/2 chirps/3 chirps)	Auxilliary Output C Interlock (On/**Off**)
✶ *5*	Program RPM See ***Mandatory RPM Programming***	Diesel Engine/**GasEngine** (1 chirp/**2 chirps**) (For IntelliStart 4 only)*	Program optional SmartWindows 4 See ***NOTE 2***
✶ *6*	Auxiliary Siren Output (Constant/**Pulsed**) (1 chirp/**2 chirps**)	Learn PageMate 4 ID	***NOT USED***

* Must program RPM's AFTER changing this feature

■ ***NOTE 1:*** Once this feature is selected, one chirp is provided to indicate that the timer has started. You can set this anywhere from one second to 4 minutes. When the desired duration has been reached, press the unmarked side of the PlainView 2 switch. The system responds with two chirps to confirm the new system timer duration.

System Checklist & Troubleshooting

The following checklist and troubleshooting tips will assure that you have installed the Concept 400 correctly. If the system does not react as noted, follow the troubleshooting tip(s) denoted with a black box below that item, then repeat the step. Each successive step requires that the previous step has been completed as indicated.

The Clifford Wizard simplifies the troubleshooting process by providing system diagnostic information in a graphical format. All system settings are provided at-a-glance, and adjustments to the system settings can be made with a click of a mouse. This reduces the amount of time required for performing the following tests.

Step 1.
Re-enable the courtesy lights.

In step 1 of the ***Important Information*** section in this binder, the interior courtesy lights were disabled. You must now re-enable the courtesy lights by replacing the fuse you removed or reset the courtesy light switch back to its normal "DOOR" position before proceeding.

Step 2.
Test the Immobilization circuits.

Arm the Concept 400 (either from inside or outside the vehicle) and wait 10 seconds. Turn the ignition to the "ON" position.

- ☐ **Engine does not respond.** This is the correct response, proceed to the Immobilization test.
- ☐ **Engine starts or cranks.** The starter/ignition/fuel pump or immobilization circuits have been miswired. Carefully retest the vehicle wires as noted in the *Starter and Ignition Immobilization Circuits* section on page 7. Be sure the ignition input/output is correct!
- ☐ Engine still starts or cranks after retesting all the wiring as noted on page 7, check the power and ground connections. Then make sure the fuses are in the fuseholders, verify the control unit connectors are securely fastened, verify the ignition input and output wires are connected to the true ignition line instead of a 12V or accessory line, and verify that the transmitters are programmed correctly.

Step 3.
Test the chirps.

Close all doors and arm the Concept 400 by pressing button 1 on the remote control.

- ■ **2 Chirps:** This is the correct response. Proceed to step 4.
- ■ **4 Chirps:** If you hear 4 chirps either immediately or 5-10 seconds after the initial two chirps, a trigger or sensor is open or active, or the vehicle has delayed courtesy lights and the Delayed Courtesy Lights feature has not been programmed on. Disarm with the remote control, enter the vehicle and turn on the ignition. The LED will flash 1–10 times, pause, then repeat the same number of flashes (the flash cycle repeats five times for your convenience). Refer to the following chart.

Number of LED flashes between pauses	Trigger/sensor indication
1 flash	Digital Dual-Zone Proximity Sensor 4
2 flashes	Optinal Dual-Zone OmniSensor
3 flashes	Optional Digital Tilt/Motion Sensor
4 flashes*	Door Trigger*
5 flashes	Trunk Trigger
6 flashes	Hood Trigger
7 flashes	An attempt was made to turn the ignition "ON" or start the engine while the system was armed
8 flashes	More than three consecutive incorrect valet codes were entered while the system was in BlackJax mode
9 flashes	BlackJax Activation
10 flashes	Power Interruption

* *If the delayed courtesy lights feature is activated, this trigger/sensor indication will not be provided.*

- ☐ If the *Proximity Sensor* is indicated, check the mounting location and sensitivity setting as noted in the *Sensor Adjustment* section on page 12. If one of the trigger points is indicated, check pin switch operation and check for shorts in the trigger line.
- ☐ If the *tilt sensor* is indicated, check the mounting location and, if necessary, cut the small black wireloop (see diagram on page 3) to enable the two-minute arming delay.
- ☐ If the *door trigger* is indicated, activate the delayed courtesy lights feature.

■ **No chirps.** If there are no chirps, verify that the Chirps feature (column 2, row 1) is "On" and check the wiring connections as noted in the *Medallion Siren* section on page 8.

NOTE: If none of the troubleshooting techniques described in steps 3 - 7 corrects the problem, perform the following diagnostics:

- ☐ Make sure the fuses are in the fuseholders.
- ☐ Check the power and ground connections.
- ☐ Verify that the control unit connectors are properly inserted into the control unit.
- ☐ Verify that the ignition input and output wires are connected to the true ignition line instead of a 12V line. Find the true ignition line by following steps 1-4 of the *Starter and Ignition Immobilization Circuits* section on page 7.
- ☐ Verify that the transmitters are programmed correctly.

NOTE: If the 20-amp fuse blows upon arming:

- ☐ Disconnect the Concept 400's two parking light wires, replace the 20-amp fuse and rearm. If the fuse does not blow, one (or both) of the vehicle's parking light wires is shorting. Find and correct the short(s), reconnect the parking light wires, then rearm.
- ☐ If the fuse blows while the parking light wires are disconnected, the door locks are not wired correctly. Reconnect the vehicle's power locking system to its original condition, then retest the voltages as indicated in the ***Door Locks*** section of this binder and wire the locks as indicated, then replace the 20-amp fuse.

Step 4.
Test the parking lights.

Arm the system by pressing button 1 on the remote control.

- **Two flashes.** This is the correct response, proceed to step 5.
- **One flash.** If the parking lights flash only once, the Concept 400 had previously AutoArmed itself passively and by pressing button 1 the system disarmed (remote disarming is acknowledged with one parking light flash). Repeat step 1.
- **No flashes.** If no flashes, verify the parking light bulbs are operational. If not, they must be replaced. If so, repeat steps 1-5 of the *Parking lights* section in this binder.
- **Only one side flashes.** If only the right or the left side parking lights flash, see the ***Parking Lights*** section in this binder.

Step 5.
Test the door locks.

Arm the system by pressing button 1 on the remote control.

- **Doors lock.** This is the correct response, proceed to step 6.
- **Doors do not lock.** You either selected the wrong door lock diagram or connected the wires incorrectly. Reconnect the vehicle's power locking system to its original condition, then retest the voltages as indicated in the ***Door Locks*** section of this binder and wire the locks as indicated.

WARNING: If the doors do not lock, DO NOT activate the vehicle's lock switches. If the locks have been miswired, doing so may damage the Concept 400 control unit, the vehicle's electrical system and/or the power lock servo motors.

- **Doors unlock.** You either selected the wrong door lock diagram or connected the wires incorrectly. Reconnect the vehicle's power locking system to its original condition, then retest the voltages as indicated in the ***Door Locks*** section of this binder and wire the locks as indicated.
- **Only one door locks.** You either selected the wrong door lock diagram or connected the wires incorrectly. Reconnect the vehicle's power locking system to its original condition, then retest the voltages as indicated in the ***Door Locks*** section of this binder and wire the locks as indicated.

Step 6.
Test the LED.

Arm the system by pressing button 1 on the remote control.

- **Flashes repeatedly.** This is the correct response, proceed to step 7.
- **No flashes.** If the LED does not flash, verify that the LEDs VIOLET and BLACK wires are solidly connected to the same color wires on the Concept 400's wireloom. **Warning:** This is a 2-volt LED, testing with 12 volts will destroy the LED.

Step 7.
Test the Valet Switch.

- Test the valet code and switch operation. Use the instructions provided on page 14 to enter programming mode. If the system enters programming mode, the switch and valet code are in operating order. If not, perform the following tests:
- Test the WHITE/BROWN wire, ignition input and verify it has +12V when the ignition is turned ON and +0V when the ignition if OFF. If not refer to *Starter and Ignition Immobilization Circuits* on page 7.
- Test the WHITE wire at the control unit connector. It should rest at 5 volts. When pressing the marked side, it should read 3 volts and when pressing the unmarked side it should read 0 volts. If any reading is incorrect, move the voltmeter to the BLACK wire at the valet switch. It should read 0 volts at rest, 0 volts when the marked side marked is pressed, and 0 volts when the unmarked side is pressed. If the BLACK wire tests correctly and the WHITE wire does not, replace the switch. If the BLACK wire tests incorrectly, repair the ground circuit. If both wires test correctly, then the valet code has been changed. Use the CliffNet Wizard to reset the valet code.

Step 8.
Test the disarm function.

- ■ Disarm by pressing remote control button 1. The following should occur:
  - ☐ **Siren chirps once**. If the siren does not chirp once, refer to step 3.
  - ☐ **Parking lights flash once.** If the parking lights do not flash once, refer to step 4.
  - ☐ **LED stops flashing.** If not refer to step 6.
  - ☐ **Doors unlock.** If not refer to step 5.
  - ☐ **Immobilizer circuits immediately disengage** (test this by turning the key in the ignition switch; the engine should crank, start and idle normally). If the Immobilizer circuits do not disengage, refer to step 2.
  - ☐ **Interior courtesy light(s) turn on** and stay on for 30 seconds or until the ignition is turned on, whichever occurs first.
    - ☐ If the interior light(s) do not turn on, verify that you replaced the interior light fuse you removed or have turned the lights back on as noted in step 1 of this section.
    - ☐ Check the Concept 400's 10-amp fuse. If the fuse blew when you disarmed, the vehicle uses a positive door trigger and you connected the interior light supply wire to ground instead of +12 volts. Replace the 10-amp fuse and retest.
    - ☐ Check the door trigger circuit. See step 9 for more information on testing the door trigger circuit.

Step 9.
Test the door trigger circuit.

Rearm the system. Wait at least 10 seconds (if the vehicle has delayed or dimming courtesy lights, be sure to wait until the interior lights have turned off). Use the key to unlock and open the driver's door.

- ■ **Siren sounds, parking lights flash repeatedly.** This is the correct response, proceed to step 10. (You can silence the siren by pressing the arm/disarm on the remote control once or disarm by pressing the button twice.)
- ■ **Siren does not sound immediately.** If the alarm does not sound immediately when one of the doors is opened, make sure that that door's pin switch is working properly and, when open, is consistently showing less than 1.5 volts if the vehicle has negative-switching door triggers or more than +11 volts if the vehicle has positive-switching door triggers, also make sure the pin switch is connected to the correct wire. If not, then the door pin switch (or pin switches) is either defective or in need of cleaning.

Step 10.
Test the trunk trigger circuit.

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

- ■ **Siren sounds immediately, parking lights flash repeatedly.** This is the correct response, proceed to step 11. (You can silence the siren by pressing button 1 on the remote control or disarm by pressing button 1 two times.)
- ■ **Alarm does not sound immediately.** If the alarm does not sound immediately, make sure that the trunk pin switch is working properly and, when open, is consistently showing less than 1.5 volts. Also make sure the trunk pin switch is connected to the correct wire. If not, the trunk pin switch must be thoroughly cleaned or replaced.

Step 11.
Test the hood trigger circuit.

Arm the system, then open the hood. The following should occur:

- ■ **Siren sounds immediately, parking lights flash repeatedly.** This is the correct response, proceed to step 12. (You can silence the siren by pressing button 1 on the remote control or disarm by pressing button 1 two times.)
- ■ **Alarm does not sound immediately.** If the alarm does not sound immediately, make sure that the hood pin switch is working properly and, when open, is consistently showing less than 1.5 volts. If not, the hood pin switch must be thoroughly cleaned or replaced.

Step 12.
Test the AutoArming feature.

Turn the ignition "ON" and let the car idle for 10 seconds. Turn the ignition "OFF," then open and close the door. Wait five seconds.

- ■ **Parking lights flash twice.** 25 seconds later, the vehicle is passively armed **indicated by a rapidly flashing LED**. This is the correct response, proceed to step 14.
- ■ **System does not passively arm.**
  - ☐ Make sure that Instant AutoArming has been programmed using the instructions on page 16.
  - ☐ Verify the door trigger connection (see step 9).

Step 14.
Test the BlackJax anti-carjacking feature.

Refer to the *System Check* section in the ***BlackJax*** section of this binder, then proceed to step 15.

Step 15.
Test the Proximity Sensor.

- ■ Turn off any flourescent lights that may interfere with the sensor.
- ■ Arm the system.
- ■ Test the warning zone by bringing your hands and face to the window rapidly.
  - ☐ **The warning buzzer sounds.** This is the correct response, proceed to test the warning zone.
  - ☐ **No response**. Check the mounting position and sensitivity adjustment.
- ■ Test the trigger zone by leaning in to the passenger compartment.
  - ☐ **The full alarm sounds.** This is the correct response, proceed to step 16.
  - ☐ **No response.** Check the mounting position and sensitivity adjustment.

Step 16.
Complete and provide all necessary paperwork including:

- ■ User's Manual must be given to the customer.
- ■ Adhere the Clifford window decals to the vehicle's windows.

Step 17.
Demonstrate Basic System Operation

- ■ Remote Operations:
  - ☐ Arming/disarming and locking/unlocking
  - ☐ Panic Feature
  - ☐ Proximity Sensor Override
  - ☐ Valet Mode Activation/Deactivation
  - ☐ Accessory Activation
  - ☐ Sensor Adjustment
- ■ AutoArming and AutoArming Bypass
- ■ Immobilization
- ■ Valet code entry
- ■ User-programming mode