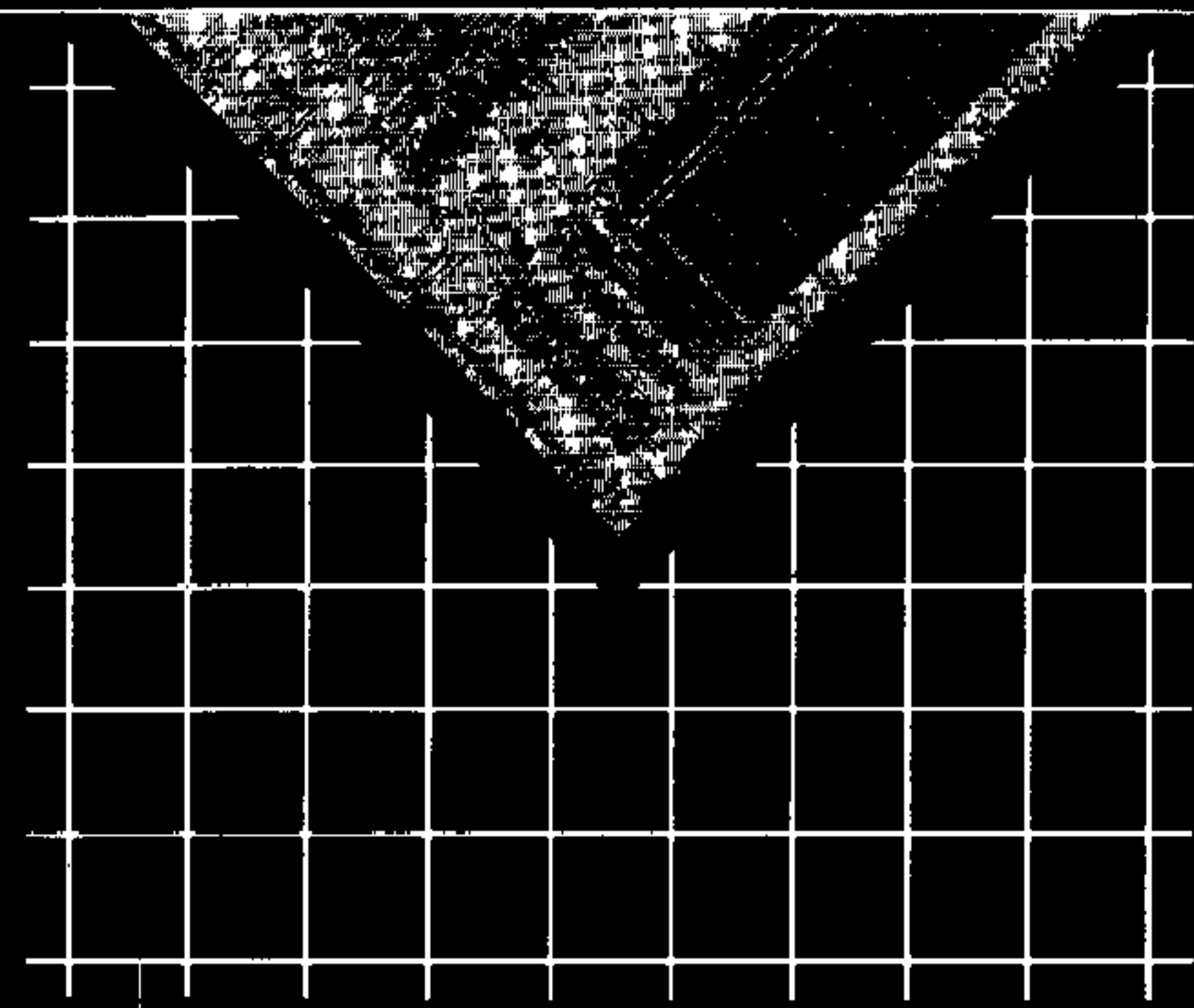


CLIFFORD
ELECTRONICS, INC.



SPECIAL EDITION
SE 1010
Installation Manual

Table of Contents

Standard Features..... 1

Optional Accessories.....2

Required Installation Tools.....3

Important Information.....4

Wiring Description.....5

Wiring Diagram.....6

Sequence of Installation.....7

Passenger Compartment Components

 Control Unit.....7

 Antenna.....7

 Wireloom.....8

 Starter Disable Relay.....9

 Ignition Input.....10

 LED Status Indicator.....10

 Valet Switch.....11

 Magnetic Resonance Sensor™.....12

 Door Trigger.....13

Engine Compartment Components

 Siren.....14

Final Wiring Connections.....15

System Check.....15

Power Resetting Procedure.....16

Remote Control

 How to Add Remote Controls.....16

 How to Disarm the System Without the Remote Control... 16

CLIFFORD
THE ULTIMATE IN AUTO SECURITY

All Clifford vehicle security systems are designed, developed and manufactured in the U.S.A. to the most rigorous standards

Standard Features

- Advanced CMOS Microcomputer**—Large scale integration (LSI) microprocessor commands and monitors all system functions at the rate of more than 10,000 instructions per second, yet draws less power than the vehicle's clock.
- Dual-Button Remote Control**—Button I arms, disarms and panics the system from a typical range of 75 feet. Button II can control the owner's electric garage door opener with the optional Garage Door Programmable Receiver.
- AutoArming™**—The system automatically arms itself if the owner forgets to arm their system with the remote control.
- Magnetic Resonance Sensor™**—Converts vibrations caused by forced entry attempts into electromagnetic flux to deliver reliable electronic detection.
- Prior Intrusion Attempt Alert**—Audibly alerts the owner—from a distance—if an intrusion attempt was foiled while he was away.
- Starter Disable**—Prevents an intruder from starting the engine.
- Remote Panic Feature**—Lets the owner remotely activate the siren from inside or outside the vehicle.
- High-Output Siren**—Loud 120dB+ siren scream.

Continued

- Noise Abatement**—SE 1010 electronics limit alarm sounding to five cycles of the programmed siren duration, thus ensuring against excessive battery drain or towing due to noise pollution.
- LED Status Indicator**—Bright red LED adds visual deterrence and identifies armed, disarmed and valet modes.
- Valet Mode**—Permits vehicle servicing and valet parking without relinquishing the remote control.

Optional Accessories

- Additional Remote Controls**—For other drivers of the vehicle, you can code as many additional remote controls as the owner wishes.
- Garage Door Programmable Receiver (#60-215NX)**—Lets the owner individually command an electric garage doors with button II on the SE 1010 remote control. It's more than just a matter of convenience. For unbreachable security, the garage will now be impervious to the electronic scanners used by professional burglars. The customer can install it in minutes with just a screwdriver—no special skill or technical knowledge needed.
- IntelliSensor™**—World's most advanced, fully automatic window tampering sensor detects and verifies intrusion attempts *before* the glass can be broken. The IntelliSensor is self-calibrating, so there's no sensitivity adjustment. Just connect it and you're ready to go.
- 125dB Dual Air Horns**—The loudest, most distinctive vehicle siren available

Continued

- **OmniSensa™**—World's only all-electronic, microprocessor-controlled, *user-programmable vibration/impact sensor. No adjustment screw! Just tap the valet switch a few times and "thump" the windshield. That's all there is to it! Only the OmniSensa allows the owner to adjust its sensitivity any time, any place, without any tools and without even knowing where the sensor is mounted!* For unprecedented accuracy, the OmniSensa digitally analyzes the critical exponents of all registered signals. It will unerringly detect all genuine threats and unfailingly ignore the non-threatening conditions that cause other sensors to false alarm.

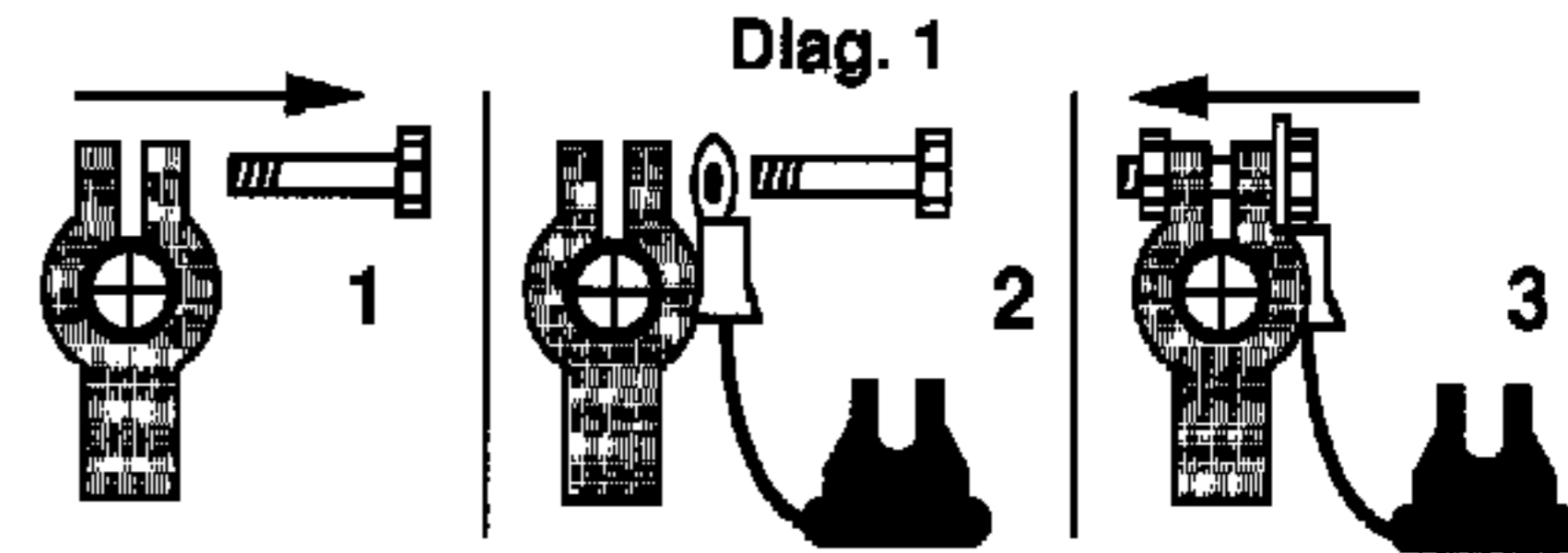
- **Parking Light Flasher**—Flashes the parking lights when the alarm sounds to specifically identify the vehicle and draw even more attention from passersby.
- **Door-Mounted LEDs**—Flashing LEDs provide an extra level of deterrence to thieves and vandals.
- **Audible Status Indicator**—Emits subtle but distinct beeping tones when the system is armed to provide an extra level of deterrence to thieves and vandals.

Required Installation Tools

- | | |
|-------------------------|--|
| Wire crimpers | Crescent wrench |
| Wire strippers | * Convoluted tubing
(GM split tubing) |
| 12-volt test light | * Solder gun and shrink tube |
| Voltmeter | * Electrical tape |
| Electric drill and bits | |
| Phillips screwdriver | * Optional supplies |

IMPORTANT INFORMATION

1. DO NOT disconnect the battery cables! Make battery connections by removing the lug nut from the cable clamp without detaching the clamp (diagram 1).

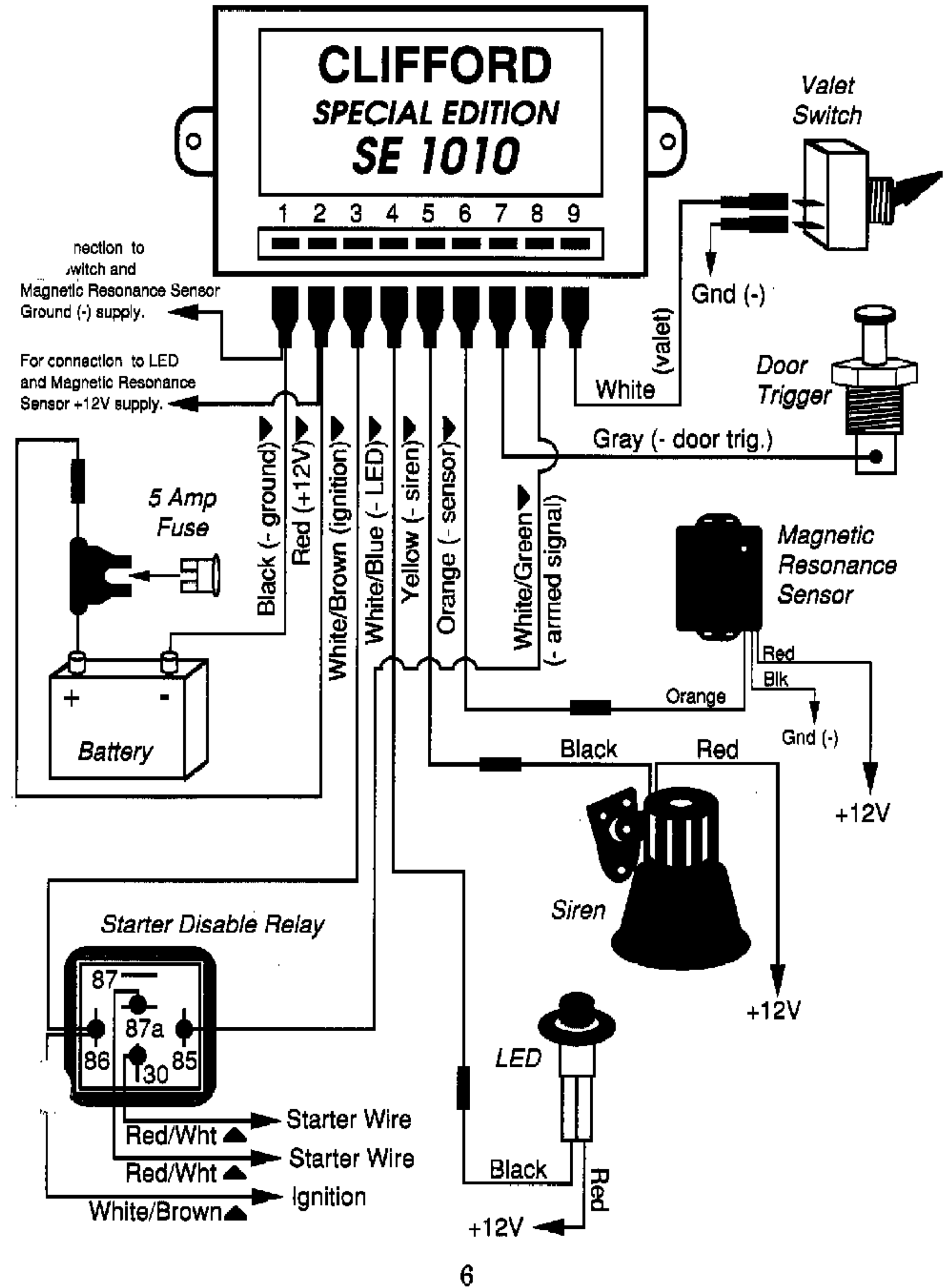


2. Turn off the interior light before starting the installation. Leaving the door(s) open during the entire installation will drain the battery.
3. Test all vehicle circuits with a voltmeter. Do not use a test light on vehicles with on-board computers since the test light has a current drain that may cause damage.
4. Make all wire connections with the supplied butt connectors. DO NOT twist wires together. DO NOT use wire nuts or "scotch lok" connectors. For maximum dependability, solder and shrink tube all wire connections.
5. Route the RED and BLACK wires *directly* to the battery.
6. Use same gauge wire for short extensions. Use larger gauge wire for long extensions. DO NOT use speaker wire. **Extensions should be as short as possible.**
7. Discuss with the vehicle owner before installation the placement of the LED indicator, valet switch and window decals.
8. Do not mount components or route wires near hot or moving vehicle parts. Clifford components must not impede vehicle servicing or operation.
9. DO NOT mount the Magnetic Resonance Sensor in the engine compartment.
10. Follow the sequence of installation (page 7) to ensure proper installation and testing.
11. Place the owner's manual in the glove compartment.

Wiring Description

Color	Connect it to	See Page #
Black (long)	Battery negative terminal	15
Black (short)	Valet switch and Magnetic Resonance Sensor ground (-) supply	11,12
Red (long)	Battery positive terminal	15
Red (short)	LED and Magnetic Resonance Sensor +12V supply	10,12
White/Brown stripe	Ignition input (pre-wired to the starter disable)	10
Yellow	Siren output (-)	14
White/Blue stripe	LED (-)	10
White	Valet switch input	11
Gray	Door trigger (-)	13
Orange	Sensor input (-)	12
White/Green stripe	Starter disable output (-) (pre-wired to starter disable relay)	9

Wiring Diagram



Sequence of Installation

1. Passenger Compartment

- Select a suitable location to mount the **control unit**.
- Wire the **starter disable** relay and **ignition input**.
- Mount and wire the **LED** indicator.
- Mount and wire the **valet switch**.
- Mount and wire the **Magnetic Resonance Sensor**.
- Wire the **door trigger**.
- Mount and wire optional **passenger compartment accessories**.

2. Engine Compartment

- Select locations to mount the **siren and engine compartment accessories**.
- Route and connect wires to each component using the supplied connectors **or** solder and shrink tube.
- Make final wiring connections at the battery.
- Adjust the sensor (page 12).
- Test the system (page 15).
- Secure the underdash control unit and wiring.

Passenger Compartment Components

Control Unit

- Install the control unit in the passenger compartment, NOT in the engine compartment.
- Identify where the control unit will be installed. Route wires from this point, leaving slack in the wiring for ease of service. Do not connect the control unit until the installation wiring is complete.
- To achieve maximum remote control range, mount the control unit high up under the dash and as far as possible from metal

Antenna

The heavy GRAY wire extended out of the control unit is the antenna. The position and location of the antenna will affect operating range of the remote control. When mounting the

Continued

control unit and antenna, follow these rules to achieve maximum range:

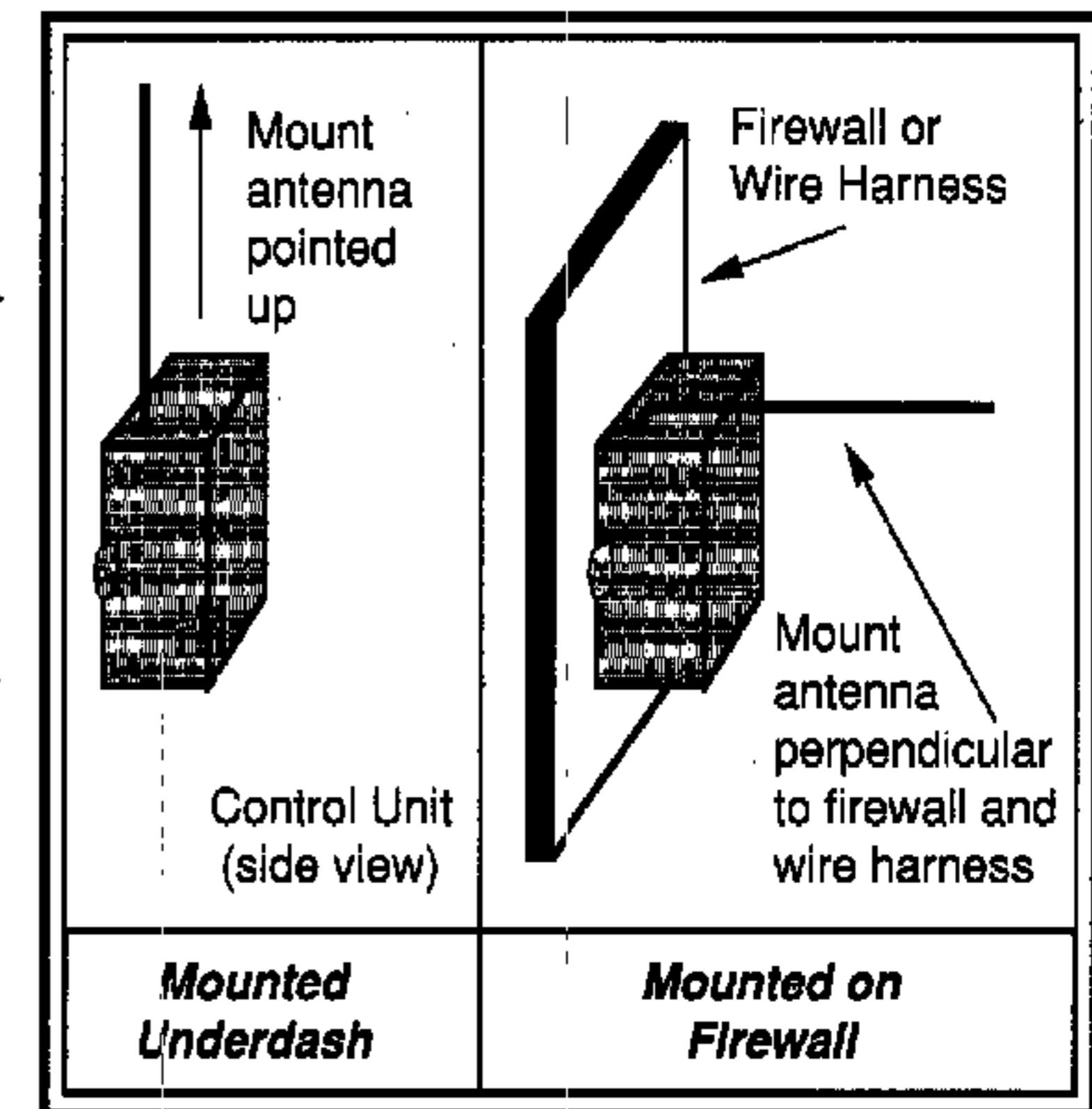
- Do not shorten or extend the antenna wire.
- Position the antenna wire away from the control unit (see diagram 2).

- Avoid positioning the antenna parallel to any wiring harness.**

- Keep the antenna wire as far as possible from metal. Metal near the antenna will interfere with the remote control signal and reduce operating range.

- The antenna is best positioned perpendicular from the largest metallic surface near the control unit.

Diag. 2
Antenna



Wireloom

All Clifford systems are designed to be wired FROM the control unit TO each component. Route power and ground connections directly to the battery. Power and test the control unit before powering any optional accessories.

- Separate the **long RED**, **long BLACK** and **YELLOW** wireloom wires (inside the vehicle, use the **short RED** wire for the LED indicator and Magnetic Resonance Sensor +12V supply, use the **short BLACK** wire for the valet switch and Magnetic Resonance Sensor ground supply).

Continued

- Sleeve these wires in vinyl tubing and pass them through an existing grommet into the engine compartment. If a new opening is drilled, add a rubber grommet to prevent shorts and fire hazards.

NOTE: Do not route wires through the firewall without a rubber grommet.

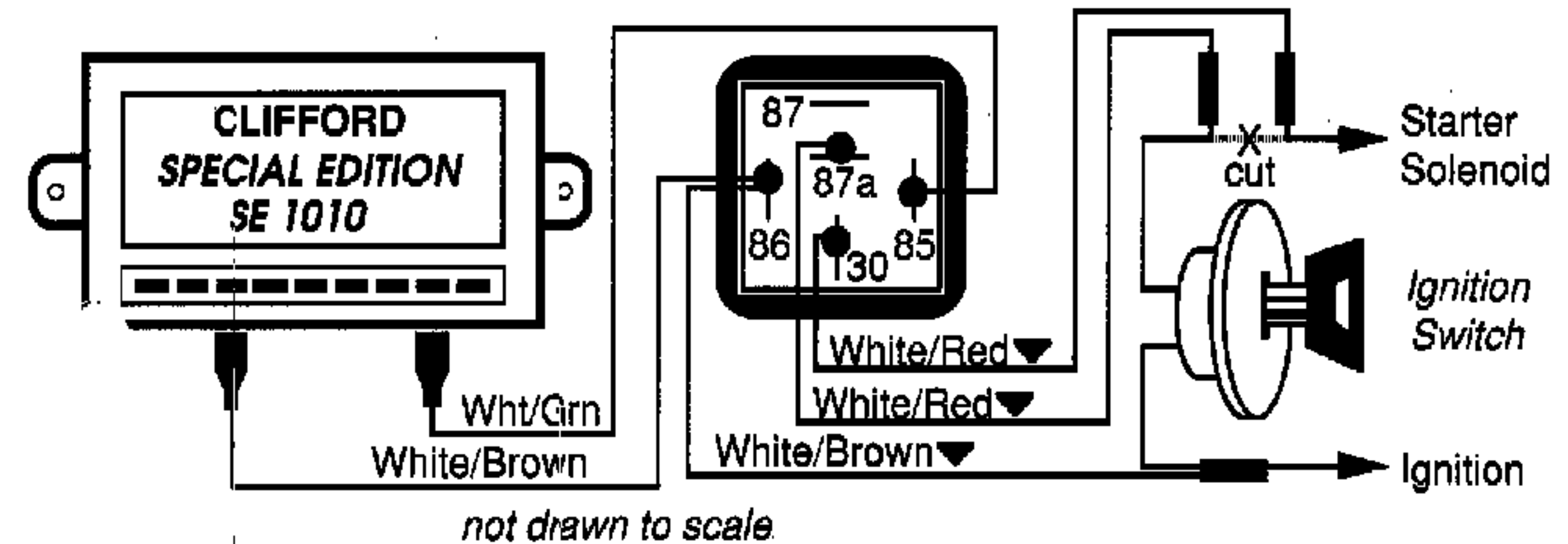
Starter Disable Relay

The starter disable relay is part of the SE 1010 wireloom. When the relay is connected, it is "in-line" with the vehicle's starter circuit. When a theft attempt occurs, the starter disable relay "opens" the vehicle's starter circuit and prevents the vehicle from starting.

- If the vehicle has an automatic transmission, disable the starter.
 - If you do not connect the starter disable relay, **you must still connect the WHITE/BROWN wire to the ignition circuit.**
 - If the vehicle has a manual transmission, use the optional Clifford Ignition Controller (#60-010) to disable the ignition circuit.
 - 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 these connections.
- Locate the ignition switch wireloom under the dash.
 - Use a test light or voltmeter to locate the one wire in the ignition switch wireloom that carries +12V during the cranking cycle only. This is the starter solenoid wire.
 - Cut the starter solenoid wire.
 - Attempt to crank the starter with the ignition key. If the vehicle does not crank, you have found the starter solenoid wire.
 - Make connections to the starter solenoid wire as noted in diagram 3.

Continued

Diag. 3
Starter Disable



Ignition Input

The WHITE/BROWN wire of the disable relay connects to the vehicle's ignition circuit. The ignition circuit supplies electrical information to the SE 1010 for its proper operation. **You must connect the WHITE/BROWN wire to the vehicle's ignition wire.**

- Use a test light or voltmeter to locate the one wire that carries +12V throughout **BOTH the cranking and engine running cycles**. This is the ignition wire.
- Connect the WHITE/BROWN wire to the ignition wire as illustrated in diagram 3.

LED Status Indicator

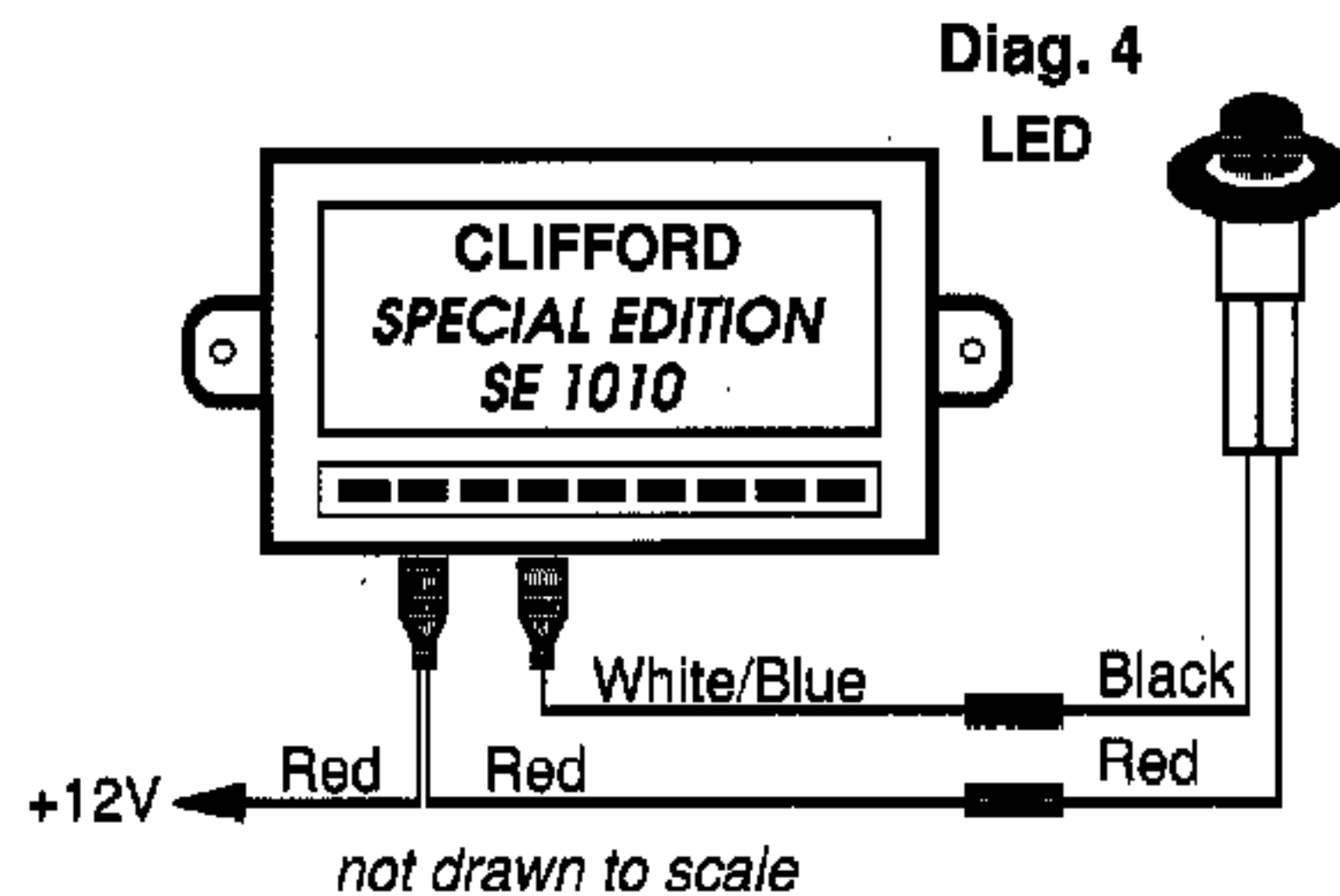
Select a prominent mounting location on the dashboard or center console that is visible from both passenger and driver windows. Discuss placement with the vehicle owner. The LED is **off** when the system is disarmed, **flashes** when the system is armed and **glows** when the system is in the valet mode.

- Verify there is adequate space on both the front and back surfaces to accommodate the LED.
- Drill a 5/16" mounting hole.
- Remove the shipping grommet from the LED housing.
- Route the wires through the hole.
- Connect the LED's RED wire to the **short RED (+12V)** wire in

Continued

the wireloom.

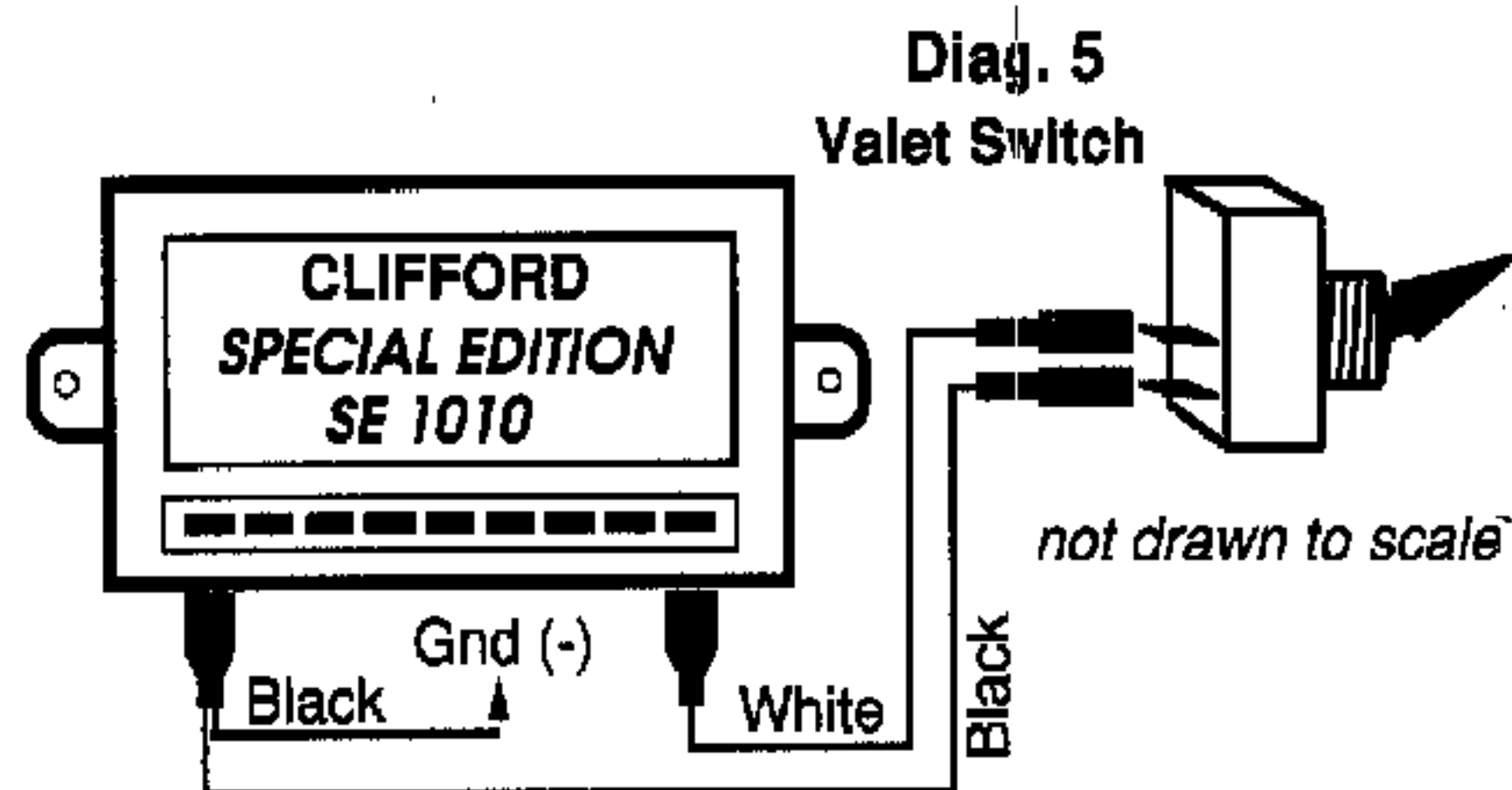
6. Connect the LED's BLACK wire to the WHITE/BLUE wire in the wireloom.
7. Thread the LED and its wires into the hole.
8. Press the LED into place.



Valet Switch

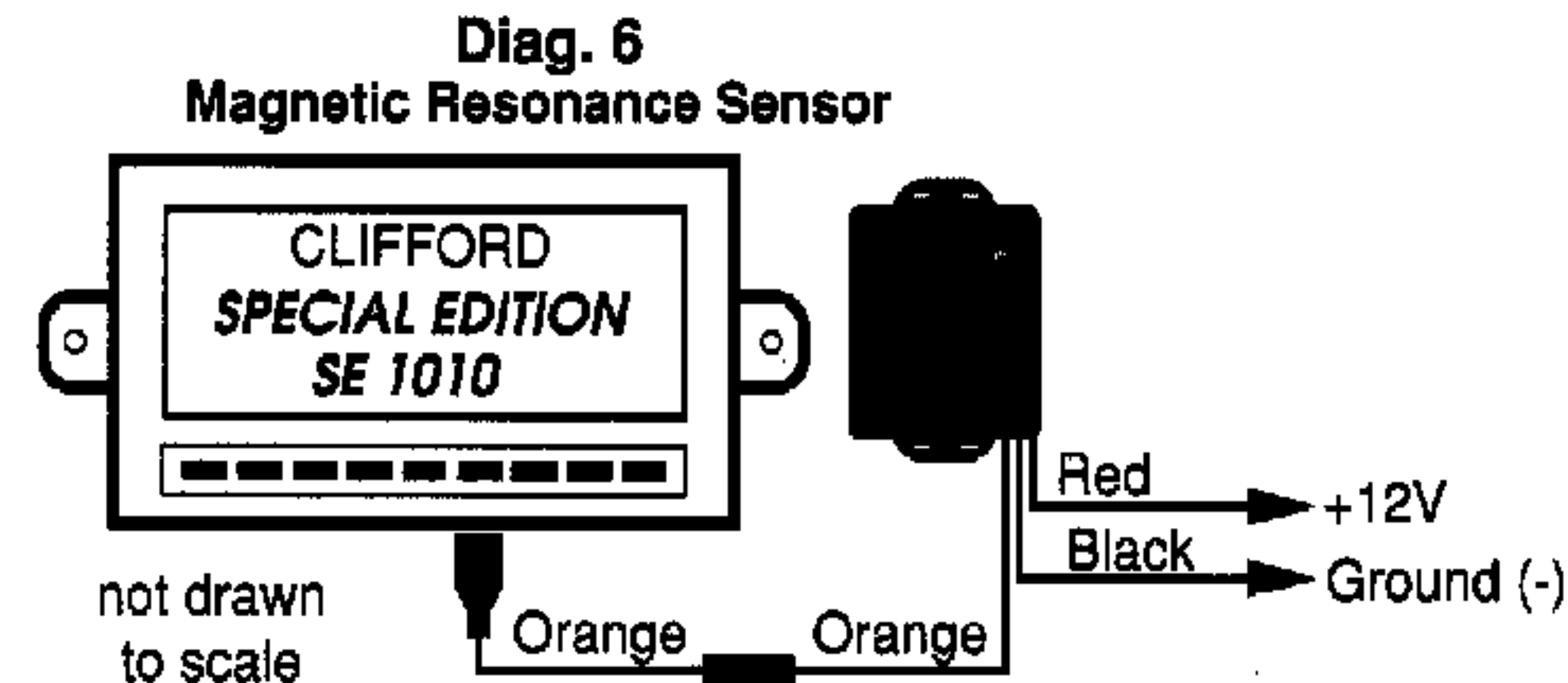
The valet switch is used for entering and exiting the valet mode. Mount the valet switch in a concealed but accessible location. Two common locations are inside the glove box or hidden in the under dash panel. Discuss placement with the vehicle owner. Avoid placing the switch where it may be accidentally toggled or damaged.

1. Verify there is adequate space on both front and back surfaces to accommodate the switch.
2. Drill a 1/2" mounting hole and thread the switch and wires into the hole.
3. Connect the control unit WHITE wire to either of the two terminals on the rear of the valet switch (see diagram --).
4. Connect the other terminal to the BLACK (ground) wireloom wire.
5. Mount the valet switch.



Magnetic Resonance Sensor

The Magnetic Resonance Sensor is a vibration/impact detector. It must be **mounted on a solid surface inside the vehicle**. **DO NOT** mount the Magnetic Resonance Sensor in the engine compartment. The sensor must not be mounted where it will be exposed to water or heat. **DO NOT** connect the Magnetic Resonance Sensor if you install the optional OmniSensor™.



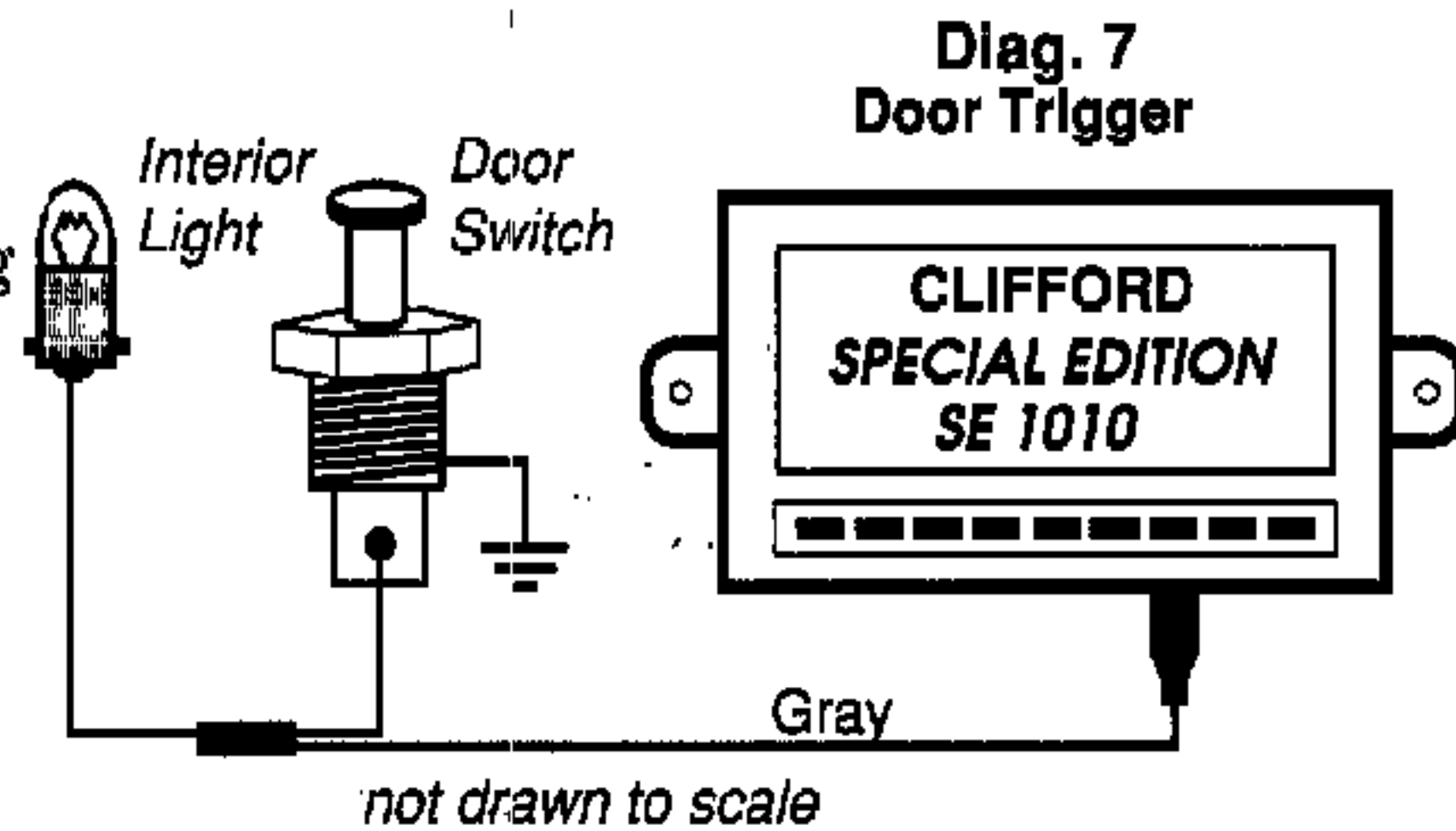
Typical mounting locations: Interior firewall, center console, behind kick panel or in the trunk (centered on the panel between the trunk and the rear seat).

1. **Firmly** mount the Magnetic Resonance Sensor on a solid surface. Make sure the sensitivity adjustment screw is accessible.
2. Connect the sensor ORANGE wire to the control unit ORANGE wire.
3. Connect the sensor RED wire to the **short** RED (+12V) wire in the wireloom.
4. Connect the sensor BLACK wire to the **short** BLACK (ground) wire in the wireloom.
5. Carefully adjust the Magnetic Resonance Sensor when the installation is complete:
 - a) Firmly strike a fender or window pillar with the palm of your hand. Each strike should illuminate the LED on the sensor.
 - b) Arm the system, **wait 5 seconds** and repeat the above procedure. "Thumping" the window glass with your open hand should trip the sensor (be careful not to break the glass). If the sensor is overly sensitive, turn the adjustment screw counterclockwise.

Door Trigger

The GRAY wire signals the control unit when the **doors** are open. SE 1010 connects directly to negative door triggers (most cars are equipped with negative door triggers). If the vehicle has positive door triggers (Ford vehicles), use the Clifford Universal Trigger/Sensor Converter (#60-515). To wire the door trigger just follow these easy steps:

1. Remove, but do not disconnect, the vehicle door switch.
2. Attach a wire (temporarily) from an exposed metal housing of the switch to ground. The area where the switch is installed in the door is usually the switch ground.
3. Determine the door switch polarity using step 4 or 6.
4. Connect a test light clip or voltmeter test lead to +12V.
5. Probe the switch wires while at the same time you push the switch in. If the probe is connected to the correct wire, the test light will not illuminate (voltmeter = zero volts). When the switch is released, the test light will illuminate (voltmeter = 12 volts). This identifies a **negative** polarity door switch. Record the color code of this wire. If you can't get the indications listed in this step it means that the door switch has a positive polarity, proceed to the next step. Otherwise, go to step 7.
6. **For positive switch**—Perform step 5 with the test light clip or voltmeter test lead connected this time to ground. Remember to note the color code of the wire.
7. Replace the switch and locate the same color wire under the dash (in the kick panel or near the window pillar).
8. Use the test light or voltmeter to verify the switch wire is connected to all doors. The test light should light when each



door is opened.

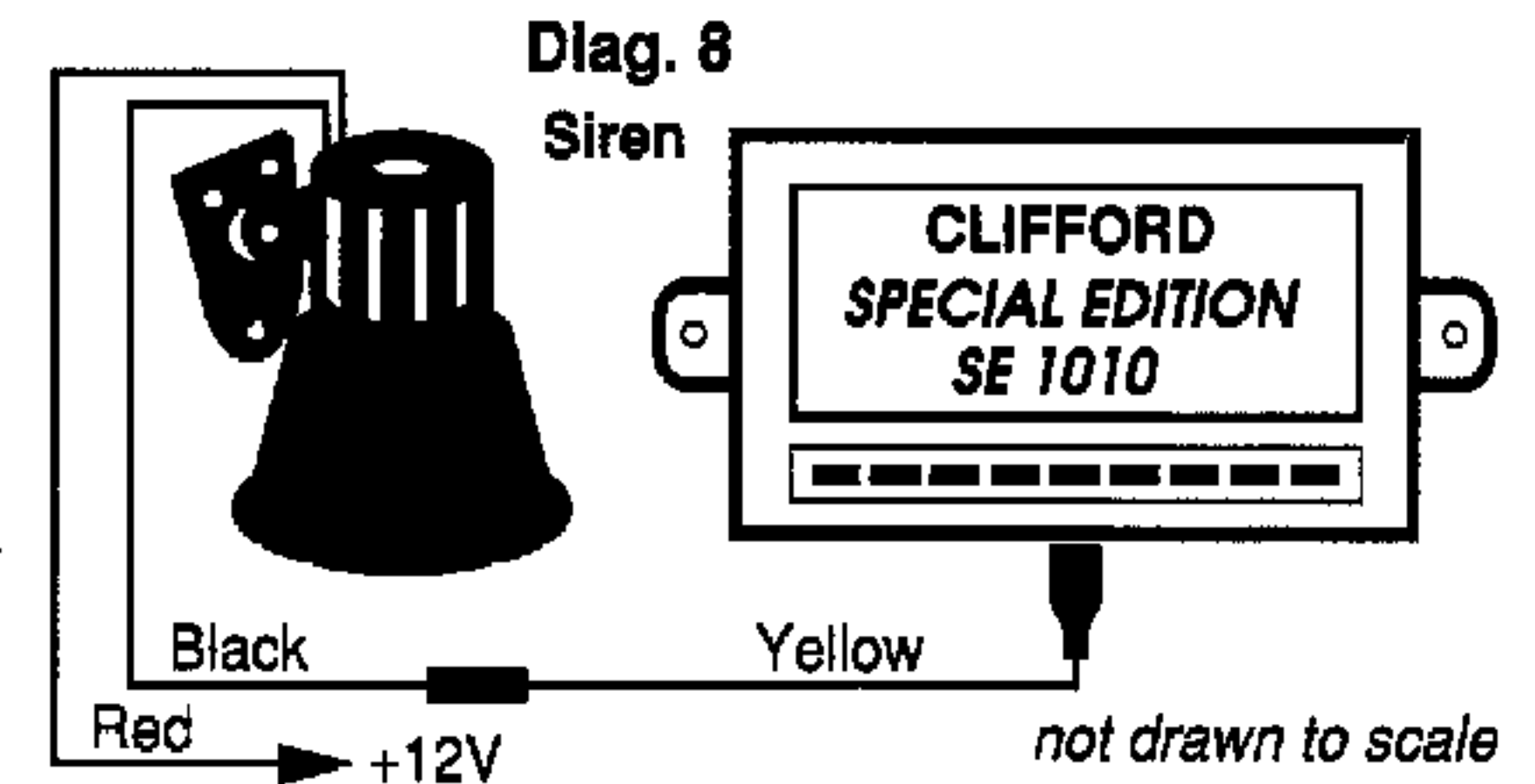
9. **If the switch polarity is negative**—Connect the GRAY wire to the door switch wire (see diagram 7). This completes the wiring of a negative polarity switch.
10. **If the switch polarity is positive**—Install the Clifford Universal Converter (#60-515) as shown in the installation instructions supplied with the converter.

Engine Compartment Components

Siren

Mount the siren in the engine compartment away from moving or heat producing components. Whenever possible, mount the siren on the opposite side of the exhaust system. It must not be accessible or visible from outside or underneath the vehicle. Point the siren downward to avoid water collection and to enhance sound projection (diagram 8)

1. Mount the siren using all three sheet metal screws supplied.
2. Connect the siren **BLACK** wire to the control unit **YELLOW** wire.



Connect the siren **RED** wire to +12V.

Final Wiring Connections

1. Connect the 9 female slide-on connectors to the control unit as illustrated in the wiring diagram on page 6
2. Connect the fuse holder to the RED +12V wire on the control unit.
3. Connect the fuse holder to the +12V battery lug without removing the battery terminal from the battery post (see page 4).
4. Connect the BLACK control unit wire to the negative (-) battery lug without removing the battery terminal from its post.
5. The siren will sound. Disarm the system with the remote control.

NOTE: Power accessories after the basic system has been tested. Individually fuse all accessory power connections. ***Fuse ALL +12V connections made to the battery.***

System Check

1. Close all vehicle doors. Arm the system with the remote control. The siren will ***chirp twice*** and the LED will begin to ***blink***.
 - a) If all is O.K., proceed to step 2.
 - b) If ***immediately*** after arming the siren sounds, the SE 1010 is telling you the door trigger is not operating properly.
 - c) If ***5 seconds after*** the system is armed the siren sounds, the SE 1010 is telling you that the Magnetic Resonance Sensor (or optional sensor) trigger is not operating properly.
2. ***Disarm*** the system with the remote control. The siren will chirp one time.
3. Open and close a door. After 30 seconds, the LED indicator should begin flashing.
4. Open a door. The siren should sound immediately. Disarm the system with the remote control. Close the door, re-arm the system with the remote control and test each remaining door.
5. Set the Magnetic Resonance Sensor sensitivity (page 12).

Continued

6. Arm the system, wait 5 seconds and strike the vehicle with an open hand. The siren should sound immediately. If you also installed the optional IntelliSensor, tap on the car window with a coin (such as a quarter).
7. Mount the control unit high up under the dash.
8. Position the heavy GRAY antenna wire as illustrated on page 8.
9. Secure all wiring.

Power Resetting

power is temporarily removed from the SE 1010, the system's power connection must be reset:

1. Disconnect the control unit BLACK wire from the negative (-) battery terminal.
2. Wait 5 seconds, then reconnect the BLACK wire to the negative terminal. The siren will sound. Disarm the system with the remote control.

Remote Control

How to Add Remote Controls

The SE 1010 responds to Clifford 16,000 code remote control (#60-322), with a matched code:

To duplicate another remote control - Open the remote control case and ***match*** the new remote "trace cuts" to the remote control supplied with the system.

To code a replacement of lost or stolen remote control - Locate the control unit and write down its serial number. An ***Authorized Clifford Dealer*** must then contact the Customer Service Department, they will supply the correct information for coding the replacement remote control.

For coding information, follow the instructions supplied with the new remote control.

How to disarm the system without the remote control

1. Enter the car and turn the ignition key on.
2. Flip the valet switch to its latched position.
3. The system is now disarmed.