

OWNER'S MANUAL

ENFORCER[®]

SLI 840 (315 MHz) / ***SLI 840-4*** (433.92 MHz)

Remote Controlled
Keyless Entry System with Alarm

SLI[®]

SECO-LARM[®] U.S.A., INC.

16842 Millikan Avenue,
Irvine, California 92606

CONGRATULATIONS

From the moment you purchased this ENFORCER Vehicle Security System, you became a part of the SECO-LARM family. You started taking advantage of over 30 years of advanced engineering. You joined a team of engineers, technicians, designers, and people like yourself who know how important protecting your car is. You discovered the SECO-LARM difference.

This difference is important because the ENFORCER is more than just an alarm. It is a complete security and convenience system. It is like having your personal security guard and butler on call in your car, 24 hours a day.

Keep in mind that the best security systems will not work properly without careful installation. Therefore, the ENFORCER is designed for installation by your professional SECO-LARM dealer. He understands both his alarms and your needs, and will work hard to ensure the ENFORCER does its job for you. Welcome to the family: SECO-LARM, your dealer, and you!

IMPORTANT

This ENFORCER security system contains many innovative features and unique functions. Please read this Owners Manual carefully in order to understand all of this alarm's security and convenience features. Some features may require the addition of sensors or accessories not included with this alarm. Please consult your professional SECO-LARM dealer.

NOTICE

The information and specifications printed in this manual are current at the time of publication. However, the SECO-LARM policy is one of continual development and improvement. For this reason, SECO-LARM reserves the right to change specifications without notice. SECO-LARM is also not responsible for misprints or typographical errors.

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INSTRUCTIONS TO THE USER

This equipment has been tested and found to comply with the limits for a class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one of more of the following measures:

- * Reorient or relocate the receiving antenna.
- * Increase the separation between the equipment and receiver.
- * Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- * Consult the dealer or an experienced radio/TV technician for help.

This equipment has been certified to comply with the limits for a class B computing device, pursuant to FCC Rules. In order to maintain compliance with FCC regulations, shielded cables must be used with this equipment. Operation with non-approved equipment or unshielded cables is likely to result in interference to radio and TV reception. The user is cautioned that changes and modifications made to the equipment without the approval of manufacturer could void the user's authority to operate this equipment.

FCC ID.: K4E919T4J

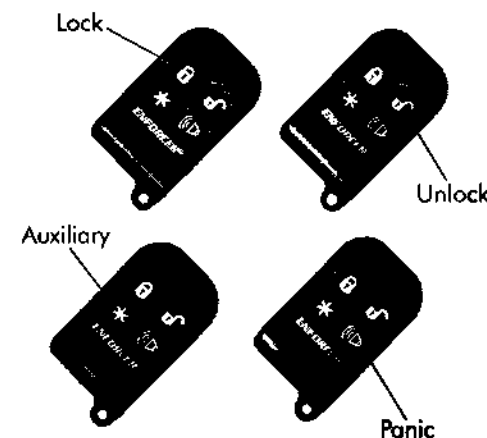
This device complies with FCC Rules Part 15. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference that may be received, including interference that may cause undesired operation.

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TRANSMITTER FUNCTIONS

1. Press the Lock button to:
 - Arm the alarm.
 - Lock power door locks.
 - Bypass an open zone.
2. Press the Unlock button to:
 - Disarm the alarm.
 - Unlock power door locks.
3. Press the Auxiliary (*) button to:
 - Operate channel 2 (such as popping the trunk or rolling up the windows).
 - Silently arm or disarm the alarm.
 - Bypass the alarm's sensors.
4. Press the Panic button to:
 - Turn the siren ON in an emergency.



These features and functions are explained in this Owner's Manual.

ARMING

There are two different ways to arm your alarm. Tell your dealer which is best for you:

□ Active Arming

Turn your ignition OFF. Close all the doors. Then press the Lock button. If the siren chirps and parking lights flash once, the alarm is fully armed.



If the siren chirps 3 times, the alarm is either waiting for the vehicle's delayed domelights to turn OFF (if your vehicle is so equipped), or it is telling you that one of the alarm's zones (a door, or the hood or trunk) is either open or is not functioning properly. (See ZONE BYPASS, page 5). Also, check to make sure your car's domelight switch was not left in the ON position.

□ Passive arming

Turn the ignition OFF, and open a door to exit the car. When the last door is closed (and the domelight turns OFF, if your car has delayed domelights), the siren chirps and the parking lights flash once. The LED flashes quickly during the 30-second arming countdown, after which the siren chirps and parking lights flash once more to confirm the alarm is completely armed.

If you wish, you can open a door during the arming countdown, and keep it open for as long as needed. The LED turns OFF while the door is opened. Close the last door, and the siren will chirp and parking

lights flash once to show the 30-second arming countdown has started again. The LED will also begin to flash quickly again.

If you close the last open door, and the siren does not chirp and parking lights do not flash, you know that one or more openings are not closed properly. This is SECO-LARM's patented Quick and Quiet Testing (Q.Q.T.™), and it prevents you from thinking your alarm is armed when it may not be. In this case, double-check that all the doors, as well as the hood and trunk, are closed properly, and that your vehicle's domelights are OFF. If you cannot locate the problem, but need to arm the alarm, then press the Lock button to immediately arm the alarm and bypass whatever zone is open (see ZONE BYPASS, page 5).

Door Locks — The system can be programmed to automatically lock the doors when armed. Ask your dealer.

NOTE — Under passive arming, you can force your alarm to arm immediately any time during the 30-second arming countdown by pressing the Lock button.

NOTE — Make sure your car's domelight switch is not in the ON position when you arm your alarm either actively or passively. The alarm may not arm properly if the domelight switch is left ON.

NOTE — There are references to opening or closing a door throughout this manual. "Door" also includes your hood and trunk, if they are protected. Ask your dealer.

ARMED

When the 30-second arming countdown ends, or when the Lock button is pressed, the siren chirps and parking lights flash once, and the LED starts flashing to show the alarm is armed.



ZONE BYPASS

When you press the Lock button to arm the alarm, and the alarm responds with three chirps and three light flashes, there are two possibilities:

- Delayed domelights** — If your domelights do not immediately turn OFF when you close your car door (in other words, your vehicle has delayed domelights), this is normal. The alarm should protect all the openings once the domelights go OFF.
- A zone was bypassed** — In other words, the alarm has armed, but a door may not be protected (either because it is open, or

because its pin switch is broken). If the bypassed door is later closed, it will be restored.

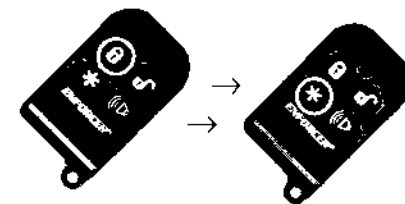
If your alarm indicates a bypassed zone, find the cause as soon as possible to ensure your vehicle is completely protected. For instance, if your driver's door is not properly closed when you arm your alarm, a thief may be able to open any door without setting off the alarm.

NOTE — The chirps to confirm zone bypass will not sound if chirp delete is engaged. However, the parking lights will still flash three times. See CHIRP DELETE, page 7.

SENSOR BYPASS

This is useful if you know, based on experience, that your shock sensor (or other add-on sensors) will false trigger, such as when you park near a construction site.

Should you wish to bypass your alarm's sensors, first press the Lock button to arm the alarm (even if the alarm is set for passive arming). The siren chirps and the parking lights flash once (three times if a zone is bypassed) to confirm armed. Within three seconds, press the Auxiliary (*) button. The siren chirps three times and the parking lights



flash three times to confirm sensors are bypassed. The sensors are automatically restored the next time the Lock button is pressed.

NOTE — The chirps to confirm zone bypass will not sound if chirp delete is engaged. However, the parking lights will still flash three times. See CHIRP DELETE, page 7.

EMERGENCY CALL FOR HELP (PANIC)

To trigger the alarm in an emergency, press the Panic button for 1 seconds. The siren sounds and the parking lights flash for about 30 seconds. Stop the siren and the parking lights any time by pressing the Panic button again.



TOTAL PROTECTION

While your alarm is armed, your car is protected in the following ways:

- Potential thieves or vandals should be deterred by the flashing LED.
- If anyone opens a door, the alarm will immediately sound the siren and flash the parking lights for up to three 30-second cycles, after which the alarm will rearm, bypassing any open doors.
- Turning the ignition key ON will trigger the alarm for 30 seconds.
- The starter disable prevents the car from being started.
- If the shock sensor detects light taps on the car, it will trigger the pre-intrusion alert (the siren chirps three times and the parking lights flash three times) to warn potential thieves and vandals. However, if the shock sensor detects a strong shock to the car, such as shock caused by prying the trunk open, it will trigger the alarm for 30 seconds. (See DUAL-STAGE SHOCK SENSOR, page 8.)
- Optional SECO-LARM shock, motion, glass-break, and microwave sensors will offer your alarm additional protection. Ask your SECO-LARM dealer.

DISARMING

To disarm the alarm, press the Unlock button. The siren chirps twice, the parking lights flash twice then turn steady ON for 6 seconds (or until you turn the ignition ON), and the LED turns OFF. What happens next depends on how your alarm is set (ask your dealer):



prevents accidental disarming. During this 30-second period, the LED flashes quickly.

□ Alarm set for passive arming

The system will automatically rearm itself 30 seconds later. If a door is opened, the system temporarily disarms. Closing the open door will again cause the system to enter the 30 second rearm period.

if set for **Secure Lock™**, the doors will lock when the system rearms. Otherwise, the doors do not automatically relock.

□ Alarm set for active arming with Secure Lock™ off

The alarm is now completely disarmed.

□ Alarm set for active arming with Secure Lock™ on

The system will automatically rearm and relock the doors 30 seconds later unless a door is opened during this time. This

PATENTED STAY-SAFE DISARM™

Any time your alarm is triggered (the siren is sounding and the parking lights are flashing), press the Lock button once to shut the siren and flashing parking lights OFF while the alarm stays completely armed.

NOTE — If a door was open when you pressed the Lock button, the siren chirps three times and the parking lights flash three times to confirm it is not protected (see ZONE BYPASS, page 5).

EMERGENCY DISARM

If you lose your transmitter, you can disarm your alarm with the ignition key and "VEPLe" switch. While your alarm is either armed or triggered, turn the ignition switch ON. Within 15 seconds, press and release the VEPLe switch 3 times. The siren and the flashing lights stop if the alarm was triggered, and then chirp and flash three times. The alarm is now



in valet (see VALET on page 8). (Ask your dealer where the switch is hidden.)

TRUE TRIGGER™

True Trigger stops repeated false triggers from becoming a nuisance. Alarm sensors (except pre-intrusion) which trigger five times while the alarm is armed are automatically bypassed. The rest of the alarm, however, continues to protect the vehicle. All such bypassed sensors automatically reset when the alarm is disarmed, or if 30 minutes pass after the sensor was tripped for a fifth time with no further triggering of any sensors or the pre-

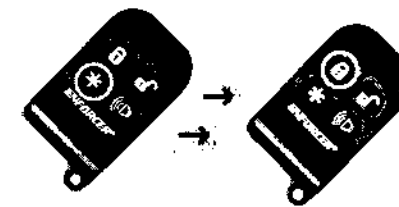
intrusion. However, if any sensor or the pre-intrusion is triggered during the 30-minute countdown, the countdown restarts.

(This feature can be programmed on or off — ask your dealer.)

CHIRP DELETE (silent arm/disarm)

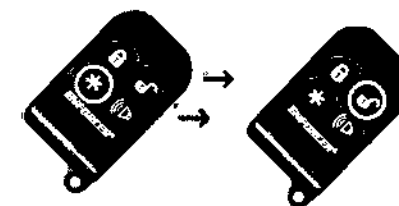
There are times, especially at night, when you may not want to hear the siren chirps. There are 2 ways to delete chirps:

Silent Arm



- A. **One-time delete** — Just press the Auxiliary (*) button any time before you need the chirps deleted. For instance, press the Auxiliary (*) button before you press the Lock button to arm the alarm, and the chirps will not sound, but the parking lights will still flash. The chirps are restored the next time you press a transmitter button.

Silent Disarm



- B. **Permanent delete** — Your dealer can program your alarm to delete the chirps on a permanent basis.

NOTE — Either method deletes the arm, disarm, pre-intrusion, zone bypass, sensor bypass, emergency disarm, valet, and tamper chirps. However, they do not affect the flashing parking lights.

VALET

Sometimes you may not wish your alarm to arm when you leave your vehicle. (For instance, if you leave your car with a valet attendant, you may not want to teach him how the alarm operates.) If your alarm is set for active (manual) arming, this is easy — don't press the Lock button, and the alarm will not arm. However, if your alarm is set to arm passively, use the valet mode to prevent it from arming.

To enter valet, first disarm the alarm and turn the ignition ON. Within 15 seconds, press and release the VEPL button three times. The alarm is now in the valet mode. The siren chirps and the parking lights flash once to confirm. (Your alarm also goes into valet

when you use emergency disarm. See EMERGENCY DISARM on page 7).

To exit valet, just turn the ignition ON and, within 15 sec., press and release the VEPL button three times. The siren chirps twice and the parking lights flash twice to confirm that valet is exited and the alarm is now disarmed.

If you press the Lock or Unlock button while the alarm is in valet, the doors will lock or unlock, and the parking lights will flash four times. The alarm's emergency call for help and 2nd channel output operate normally.

TAMPER INDICATORS & TRIGGER ZONE ID

If your alarm was triggered when you were away, the siren will chirp four times and the parking lights flash four times then turn ON for six seconds when you disarm your alarm. The LED flashes in quick cycles to show where the car was violated as follows:

- 2 flashes — The alarm was triggered via emergency call for help (panic), or the ignition switch was turned on.
- 3 flashes — Shock sensor or other add-on sensor was triggered.

- 4 flashes — A door was opened.
- 5 flashes — The hood or trunk was opened.

These "memory" flashes automatically reset when the ignition is turned ON.



DUAL-STAGE SHOCK SENSOR

Your alarm can be installed with an optional dual-stage shock sensor.

The first stage (pre-intrusion alert) warns thieves the alarm is armed. For instance, the alarm will chirp three times and the parking lights will flash three times if the sensor detects a light bump to the vehicle. However, if the

thief attacks the car with sufficient force, the alarm will trigger. (Your dealer can make the shock sensor more or less sensitive to attack, depending on your vehicle.)

NOTE — The shock sensor will not be ready to trigger the alarm until five seconds after the alarm is armed.

STARTER DISABLE

With this optional feature, while your alarm is armed, your car will not start, even if a thief has your keys.

Your alarm also has Automatic Starter Disable (ASD™). If your alarm is set for active arming, and you do not arm your alarm, ASD

automatically engages the starter disable 10 minutes after you turned the ignition switch OFF. The LED stays ON constantly to show ASD is engaged. Once engaged, you must press the Lock button to disengage ASD before the car will start. (Programmable — ask your dealer.)

2nd CHANNEL OUTPUT

Your transmitter has an extra channel to control optional accessories.

2nd channel is commonly used to "pop" the trunk. To use, press the Auxiliary (*) button for two seconds, either while the ignition is ON and any door is opened, or while the ignition is OFF. The alarm will disarm first to prevent the siren from sounding. (NOTE — If no doors are connected directly to your alarm, the 2nd channel will not operate with the ignition ON. Ask your dealer for details.)



POWER DOOR LOCKS

With this optional feature, your alarm can automatically lock the doors when armed and unlock the doors when disarmed. The doors lock when you press the Lock button and unlock when you press the Unlock button.

For extra security, they lock automatically if the alarm is triggered. (Exception — See EMERGENCY CALL FOR HELP, page 5.)

Your alarm can be programmed for ignition-controlled operation (doors lock when you turn the ignition ON, and/or unlock when the ignition is turned OFF). It can also be programmed to lock the doors every time the alarm passively arms (be careful not to leave the keys and transmitters in the car, though!). Ask your dealer.

DOMELIGHT SUPERVISION

With this optional feature, whenever you disarm the alarm, your car's domelights turn ON for 30 seconds. This helps find your car

at night and make sure no one is hiding in it. If the alarm is triggered, your car's domelights will continuously flash.

Appendix 1 — UNDERSTANDING THE SIREN CHIRPS AND LIGHT FLASHES

- A. **1 chirp/flash:**
- When the Lock button is pressed, the alarm is armed.
 - When a door is closed, the alarm will arm in 30 sec. (passive arming).
 - 30 sec. after ignition switch is turned OFF and all doors are closed (or delayed domelights turn OFF), the alarm is armed (passive arming).
 - Successfully entered the valet mode.
- B. **2 chirps/flushes:**
- When the Unlock button is pressed, the alarm is disarmed. (After the two flashes, the parking lights turn steady ON for 6 sec.)
 - Successfully exited the valet mode.
- C. **3 chirps/flushes:**
- Pre-intrusion warns potential thieves or vandals who trigger the first stage of any dual-stage sensor that your car is protected by an alarm.
 - When pressing the Lock button to arm the alarm, indicates the alarm arms even though it is not set properly (door
- not closed, or broken switch, or domelight is still ON, see ZONE BYPASS on page 5).
- When pressing the Lock button followed by the Auxiliary (*) button, indicates sensor bypassed (see SENSOR BYPASS on page 5).
 - Completed emergency disarm.
- D. **4 chirps/flushes:**
- When the alarm is disarmed, indicates the alarm was triggered while you were away.
 - When the Lock or Unlock button is pressed, indicates the alarm in valet (flashes only, no chirps).

NOTE — The chirps for arm, disarm, pre-intrusion, zone bypass, sensor bypass, emergency disarm, valet, and tamper can be deleted (see CHIRP DELETE, page 7).

Appendix 2 UNDERSTANDING THE LED FLASHES

- A. **Arming indicator** — Flashes quickly during the 30-second rearm or passive arming countdown.
- B. **Door open indicator** — OFF when a hardwired door is opened during the 30-second rearm or passive arming countdown.
- C. **Armed indicator** — Flashes when the alarm is armed.
- D. **Disarmed indicator** — OFF when the alarm is disarmed.
- E. **Tamper and triggered zone ID** — Flashes one or more times after alarm disarmed to indicate which zone triggered. (see page 8.)
- F. **RF reception indicator** — ON while transmitter button is pressed.
- G. **Valet mode indicator** — Flashes slowly if the ignition switch is turned OFF (no flash if ignition is ON).
- H. **Automatic Starter Disable (ASD™) engaged** — Steady ON, starting 10 minutes after ignition switch turned OFF.

Appendix 3 — PROGRAMMABLE FEATURES

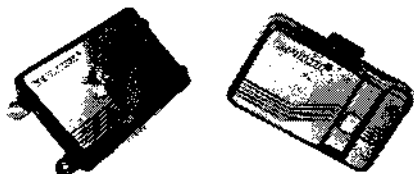
Programmable features allow you to customize your alarm. Your dealer can program them when the alarm is installed.

- **Passive/active arming** — In passive arming, the alarm arms itself when you turn the ignition OFF and close the last open door. In active arming, press the Lock button to arm the alarm.
- **Permanent chirp delete** — Permanently enables or disables the siren's chirps.
- **Manual/auto door locks in passive arming mode** — If your alarm is set for passive arming, it can be set to lock the doors automatically when it arms (don't forget to take your keys!). Otherwise, you must press the Lock button to lock the doors.
- **Ignition-controlled door locks** — The doors can be set to automatically lock and/or unlock when the ignition is turned ON/OFF.
- **Ignition-controlled domelights** — When you turn the ignition OFF, do you want the domelights to come on for 30 seconds? Ask your dealer.
- **Siren and/or horn output** — Instead of, or in addition to, a siren, ask your dealer to connect the alarm to honk your car's horn. In this case, the horn functions similarly to the siren, except that the siren sounds steady and the horn honks when the alarm is triggered.
- **Secure Lock** — When enabled, the system will rearm/relock itself if you do not open a door within 30 seconds of disarming. This prevents accidental system disarming.
- **True Trigger™** — Enable True Trigger, which bypasses a sensor that repeatedly trips to help stop false alarms.
- **Automatic Starter Disable (ASD™)** — Enables ASD, which disables the starter 10 minutes after you turn the ignition OFF, even if the alarm is not armed!

Don't forget the ACCESSORIES!



SK-919T4J or SK-939TS4J
Spare transmitter — Get one for everyone who drives your car (2 included with alarm)



SECOPAGE® 35E
Vehicle security pager pages you if your car is broken into



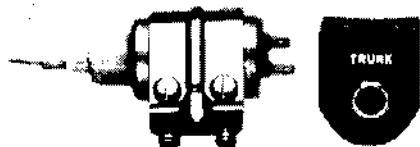
SS-052BA or SS-052BB
Dual-stage shock sensor - detects physical attacks on the vehicle, warns potential vandals.



SR-5220 or SR-5440A
Window roll-up modules for 2-door or 4-door cars



SS-051ME
Dual-stage glass-break sensor — Detects the high-frequency sound of glass breaking



SR-5911
Power trunk release — Adds convenience to cars without power trunk release



SLI® 259A
Dual-stage microwave sensor — Detects movement inside car, protects open-top vehicles

NOTE — The accessories on this page are optional.

Make your alarm YOUR alarm!

Your dealer has a wide variety of other accessories which can increase your alarm's security and convenience. Ask for more information. And insist on **GENUINE SECO-LARM accessories!**

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(315 MHz)

SLI 840-4

(433.92 MHz)

**RF REMOTE CONTROLLED
KEYLESS ENTRY SYSTEM
WITH ALARM**

INSTALLATION MANUAL

SLI[®]

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GENERAL CONSIDERATIONS

IMPORTANT: THIS ALARM IS INTENDED FOR INSTALLATION BY QUALIFIED PROFESSIONALS ONLY.

READ BOTH THIS MANUAL AND THE OWNERS MANUAL COMPLETELY BEFORE BEGINNING THE INSTALLATION

1. Make sure all electrical connections are securely soldered.
2. Do not run wires too tightly. Allow some slack in case the wires are accidentally pulled by someone servicing the vehicle in the future. Remember that wires may shrink or break due to impact, heat, and so on.
3. Do not allow wires to rub against sharp edges which could cause short circuits. Use grommets when wires are run through holes in the car body or firewall.
4. Protect and hide wires with flexible tubing or by wrapping with electrical tape if possible. Ideally, the wires should be indistinguishable from the vehicle's factory wiring.
5. Mount all plastic components away from sources of extreme heat such as exhaust manifolds or turbocharger to prevent melting. Also mount all components away from areas that receive water directly.
6. Mount all components in such a way that they do not impair or interfere with the normal operation of the car's moving parts.
7. Mount all components and run all wires so they cannot be easily reached from underneath the vehicle.

BEFORE YOU START, DON'T FORGET:

Ask the customer where to install the LED. It should be visible from the right and left sides of the car. It should not be exposed to direct sunlight.

2. Ask the customer where to install the push-button switch. It should be inconspicuous, yet easy to reach in case of an emergency.
3. Turn the domelight OFF, or remove the domelight fuse, to save car battery power during the installation. (But turn the domelight ON or replace the fuse before testing using current sensing.)

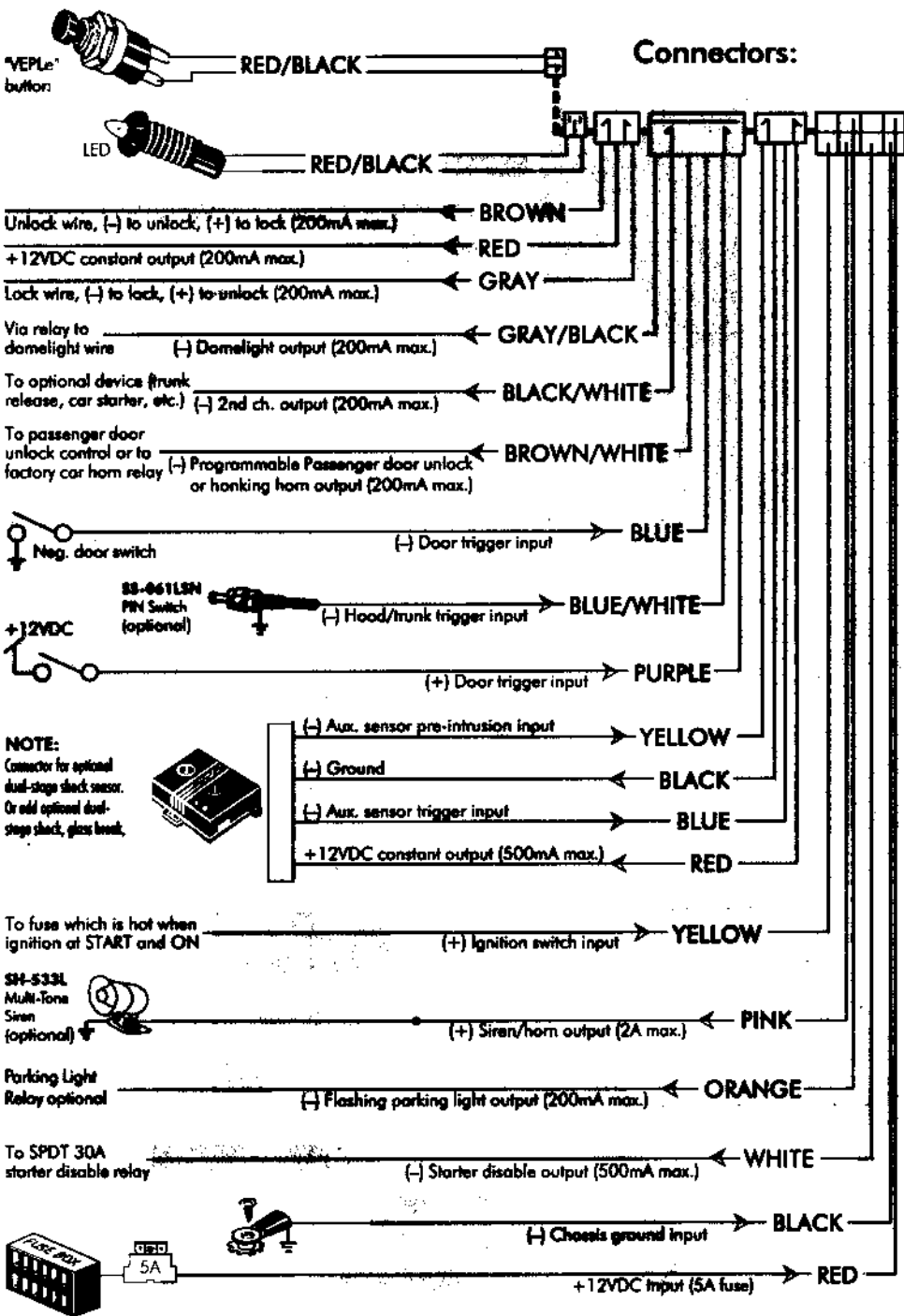
IMPORTANT:

THIS MANUAL OFFERS GENERAL GUIDELINES ONLY. INSTALLATION WILL VARY FROM VEHICLE TO VEHICLE. SECO-LARM IS NOT RESPONSIBLE FOR INJURIES OR DAMAGES WHICH RESULT FROM INCORRECT INSTALLATION OF THIS ALARM SYSTEM.

DISCONNECT THE FUSES FROM THE ALARM'S RED AND ORANGE WIRES BEFORE BEGINNING THE INSTALLATION. PLUG BACK IN ONLY AFTER THE INSTALLATION IS DONE AND CHECKED.

TEST ALL WIRES CAREFULLY BEFORE CUTTING OR SPLICING. TO AVOID DAMAGING THE VEHICLE'S ELECTRICAL EQUIPMENT, USE A TEST METER, NOT A TEST LIGHT.

IF THE VEHICLE IS EQUIPPED WITH AN ANTI-THEFT RADIO OR AN AIR BAG, DO NOT DISCONNECT THE BATTERY.



SPECIFICATIONS

Alarm outputs

Siren/horn:	+12VDC, 2A, programmable steady/pulse
Parking lights:	200mA transistor ground
Starter disable:	500mA transistor ground
LED output:	15mA, +5VDC, transistor
Door lock:	3 wires (2 flip-flop positive/negative), max 200mA output
Channel 2:	200mA transistor ground
Passenger unlock/horn:	200mA transistor ground to unlock passenger doors, or pulsed horn output
Domelight:	200mA transistor ground

Transmitter/receiver

Modulation:	AM
Impedance:	50 ohm
Frequency:	315MHz
Digital coding:	Over 68 billion possible codes
Power (pmtrr):	+12VDC battery

Alarm inputs

RF panic:	N.O. negative for door
N.O. positive for door:	N.O. positive for door
N.O. negative for hood/trunk:	N.O. negative for hood/trunk
N.O. negative for aux. sensor trigger:	N.O. negative for aux. sensor trigger
N.O. negative for aux. sensor pre-alert:	N.O. negative for aux. sensor pre-alert
Ignition switch sensing:	Ignition switch sensing

General

Power:	+12VDC (9V to 14V), negative chassis ground
Current drain:	Under 10mA (disarmed) Under 35mA (armed, LED flashing)
Exit delay:	30 seconds (passive arming)
Entry delay:	None
Alarm duration:	30-second cycle, max. 3 cycles

MOUNTING THE ALARM BRAIN

The alarm's main brain, which controls all the alarm's functions, is very sophisticated, and care must be taken when mounting. Note:

- A. **DO NOT MOUNT THE ALARM BRAIN UNTIL ALL CONNECTIONS HAVE BEEN MADE AND THOROUGHLY TESTED.**
- B. Do not mount the alarm brain where it is exposed to extreme heat or moisture. **DO NOT MOUNT IT IN THE ENGINE COMPARTMENT.**
- C. Mount the alarm brain out-of-sight under the dashboard. Securely tie-wrap it in place so it cannot be easily reached by thieves or disconnected by accident.
- D. Make sure the alarm brain does not disrupt the normal operation of any moving parts under the dash.
- E. Do not mount in front of the heater, defroster, or air conditioning ducts.

F. RF considerations — Transmitter range will vary. For greatest range:

- (1) Metal blocks RF transmission, while glass and plastic have no effect. The higher the alarm brain is mounted (the closer to the windshield), and the farther from metal, the greater the transmitter range. Never mount in the trunk.
- (2) Do not mount near pagers, CB radios, car horns, or air horns.
- (3) Do not lengthen or cut the black antenna wire or mount the antenna wire to the metal car body, unless in an area of excessive RF interference (see below).
- (4) RF interference — Difficulties arming and disarming in areas of strong RF interference, such as near an airport or a military base, may occur. In this case, tape the black antenna wire to the car's metal body, or roll or fold it (do not cut it). This may reduce range, but it should reduce arming and disarming difficulties.

WIRE CONNECTIONS

1. Connector (8-pin connector)
RED WIRE (5A fuse, to +12VDC)

Remove the 5A fuse, and connect this wire to constant (unswitched) source of +12VDC. Connect directly to the vehicle's fuse box, or to the battery (+) terminal.

IMPORTANT — FOR SAFETY, DO NOT INCREASE THE LENGTH OF THE RED WIRE.

IMPORTANT — DO NOT PLUG IN THE FUSE UNTIL ALL OTHER CONNECTIONS ARE MADE.

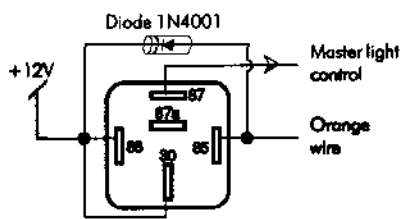
2. Connector (8-pin connector) ORANGE WIRE (to flash parking lights) Fig. 1

A. Determine if the parking lights are positively or negatively switched — Using a VOM meter, test the wires coming from the parking light switch. Look for a wire which changes polarity when the parking lights are turned ON:

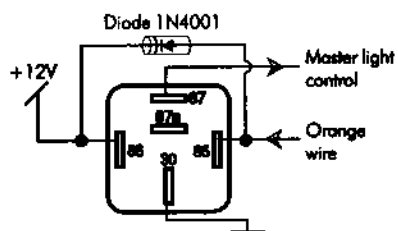
- (1) Positive (+) parking light system — If a wire goes to +12VDC when the parking lights are turned ON, but does not show any voltage with the parking lights turned OFF, this is the (+) parking light wire.
- (2) Negative (-) parking light system — If a wire goes to ground when the parking lights are turned ON, but does not show any ground with the parking lights turned OFF, this is the (-) parking light wire.

Fig. 1:
Orange wire to flash parking lights

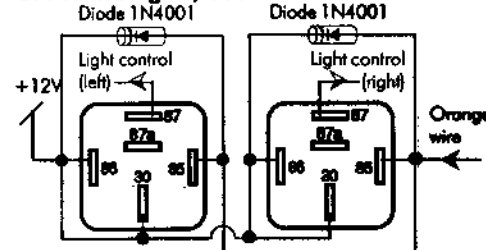
a. Positive lights, single-wire



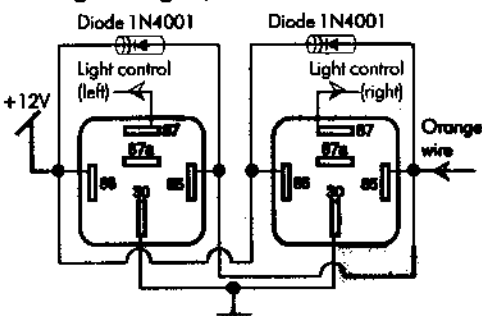
c. Negative lights, single-wire



b. Positive lights, dual-wire



d. Negative lights, dual-wire



(3) NOTE:

- a. Most vehicles have (+) parking light systems. A few (mainly Japanese) have (-) parking light systems (the (-) signal usually triggers a relay to send +12VDC to the parking lights).
- b. If the voltage on the (+) or (-) parking light wire varies when you dim or brighten the interior lights, then this is not the correct wire.

B. Determine if the parking lights use a single-wire or dual-wire system:

- (1) Single-wire parking light systems — Most vehicles have a single circuit which controls all parking lights. In this case, one relay is needed.
- (2) Dual-wire parking light systems — A few vehicles (mainly European) have separate circuits for the parking lights on the right and left sides of the vehicle. In this case, two relays are needed.

C. Connect the orange wire to the relay or relays (see diagrams 1a, 1b, 1c, and 1d.)

3. Connector (8-pin connector) PINK WIRE (to siren or honking horns) Fig. 2

The PINK WIRE can be programmed to either sound the siren (steady output) or honk the vehicle's factory horns (pulsed output):

A. For siren (see fig. 2):

- (1) Mount the siren under the hood to the vehicle's metal body. Mount as close to the grill as possible for best sound. The siren must not touch the engine. Mount with the mouth facing down so water will not collect inside the siren.
- (2) Connect the siren's BLACK WIRE directly to the vehicle's metal chassis. Scrape paint from the metal surface, and use a factory grounding bolt or a star washer.
- (3) Connect the alarm's PINK WIRE directly to the siren's RED WIRE.
- (4) Program the siren output to STEADY (see PROGRAMMING, pages 17 & 18).

B. For honking horns (see fig. 2):

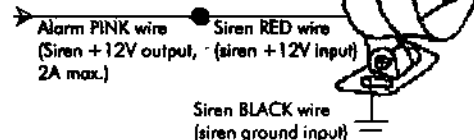
- (1) Find the wire which feeds +12VDC or chassis ground to the car's factory horns or the factory horn relay.
- (2) Connect a 30A relay to the PINK WIRE and to the factory horn wire.
- (3) Program the siren output to PULSED (see PROGRAMMING, pages 17 & 18).

C. NOTE:

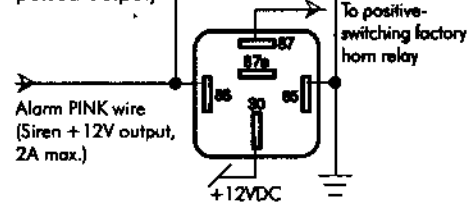
- (1) For negative-triggered relay horns, see the BROWN/WHITE WIRE, page 10.
- (2) To sound the siren and honk negative-triggered relay horns together, connect the siren as shown in Fig. 2, and connect the BROWN/WHITE WIRE as shown on page 10.

Fig. 2 — Siren/honking horn output

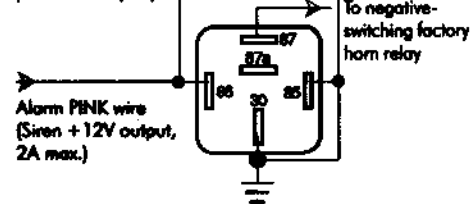
Connecting to siren:
(program for steady output)



Connecting to car horn relay (positive):
(program for pulsed output)



Connecting to car horn relay (negative):
(program for pulsed output)



4. Connector (8-pin connector)
BLACK WIRE (to chassis ground)
 Fig. 3

Choose a good chassis ground location. This is the most important point of a successful installation. A poor ground connection will cause the siren to continuously emit a low siren sound whenever the alarm is armed.

Use one of the car's factory bolts to connect to chassis ground. If none is available, scrape paint and dirt from the metal surface, and use a grounding lug and star washer.

Fig. 3 — Connecting to chassis ground

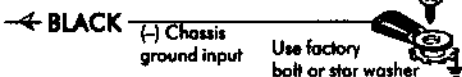


Fig. 4a — N.C. Starter disable output

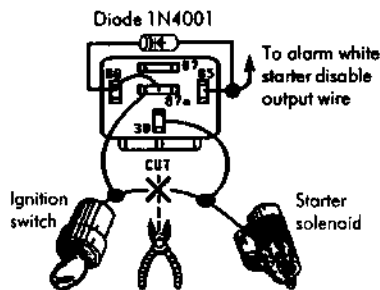
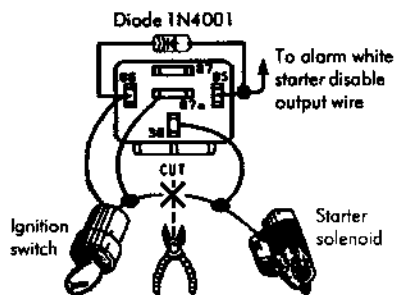


Fig. 4b — Alternative N.C. starter disable



5. Connector (8-pin connector)
WHITE WIRE (to starter disable)
 Fig. 4a and 4b

Connect to an optional 30A relay to prevent the car from starting when the alarm is armed.

- A. Locate the starter solenoid wire (carries power from the ignition switch to the starter solenoid). This wire must show +12VDC only when the ignition is in the start position.
- B. Cut the starter solenoid wire.
- C. Test the starter solenoid wire as follows:
- (1) If the wire is cut before the engine is started, the engine should not turn over.
 - (2) If the wire is cut while the engine is running, it should not affect the engine's operation.
- D. Connect the WHITE WIRE and the two halves of the cut starter solenoid wire to the relay as shown in fig. 4a.

- E. If the engine still starts, connect terminal 86 to a wire which shows +12VDC when the engine is both starting and running (fig. 4b).

- F. NOTE regarding Automatic Starter Disable (ASD) — ASD can be programmed ON or OFF (see PROGRAMMING, pages 17 and 18). Discuss with your customer before programming it ON. Make sure he/she understands that, with ASD engaged, the engine cannot be started even with the key 10 minutes after leaving the car, unless he/she uses the RF transmitter or does emergency disarm. THE CUSTOMER MUST FULLY UNDERSTAND ASD AND HOW TO DO EMERGENCY DISARM.

- G. NOTE regarding N.O. output — The starter disable output is programmable for N.C. or N.O. operation. Default is N.C. (See PROGRAMMING, pages 17 and 18.) If N.O. starter disable output is required, connect the ignition switch side of the starter solenoid wire to terminal 87 of the starter disable relay instead of 87a. All other connections are the same.

6. Connector (8-pin connector) **YELLOW WIRE** (ignition switch voltage input)

Connect to a fuse or wire which outputs +12VDC when the ignition key is in the ON and START position, but not the ACC position. **This wire must be connected at all times** to ensure proper arming and disarming, as well as to operate the "VEPLe" push-button switch for valet, emergency disarm, programming, and code learning.

7. Connector (6-pin connector) **GRAY/BLACK WIRE** (to domelights) Fig. 5

- A. Output — Supplies a 200mA transistor ground output in one of two situations:
- (1) When the alarm is disarmed, the GRAY/BLACK WIRE outputs steady 200mA for 30 seconds, or until the ignition key is turned ON.
 - (2) When the alarm is triggered, the GRAY/BLACK WIRE pulses with the parking light flashes.

- B. Connection — Connect the GRAY/BLACK WIRE via a 30A relay to the domelights. NEVER CONNECT THE GRAY/BLACK WIRE DIRECTLY TO THE DOMELIGHTS, AS THIS WILL BURN OUT THE DOMELIGHT OUTPUT, AND POSSIBLY THE ENTIRE ALARM BRAIN.

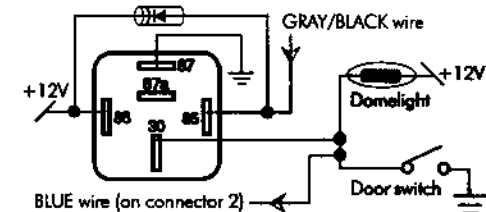
8. Connector (6-pin connector) **BLACK/WHITE WIRE** (2nd ch. output) Fig. 6

- A. Output — Disarms alarm and supplies a 200mA transistor ground output for 1 second if the Auxiliary (*) transmitter button is pressed for 3 seconds. For safety, 2nd channel output operates only:
- (1) If the ignition switch is OFF; or
 - (2) If a car door is open while the ignition switch is ON.

- B. Connection — Connect the BLACK/WHITE WIRE to a 30A relay to control trunk release or other accessory. NEVER CONNECT THE BLACK/WHITE WIRE DIRECTLY TO AN OPTIONAL ACCESSORY, AS THIS WILL BURN OUT THE 2ND CHANNEL OUTPUT, AND POSSIBLY THE ENTIRE ALARM BRAIN.

Fig. 5 — Connecting to the domelights (positive or negative)

Negative-triggered domelights:



Positive-triggered domelights:

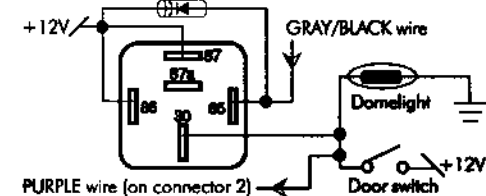


Fig. 6 — 2nd channel output

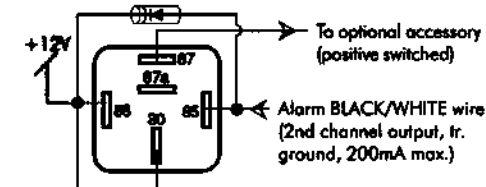
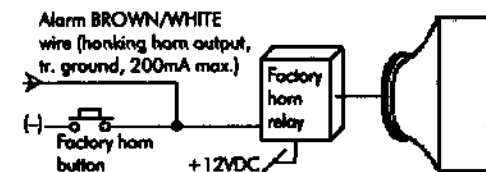


Fig. 7a — Passenger door unlock wire (negative)



Fig. 7b — (-) Honking factory horns



NOTE — If there is no factory horn relay, or if such a relay draws more than 200mA, a separate optional 30A relay must be used with the BROWN/WHITE wire.

9. Connector (6-pin connector) **BROWN/WHITE WIRE** (programmable passenger door unlock or (-) factory honking horn output) Fig. 7a and 7b

Programmable — Supplies either a momentary 200mA transistor ground output when the Unlock transmitter button is pressed a second time within 15 seconds of disarming the alarm (passenger door unlock output), or a pulsing 200mA output to drive a (-) factory car horn relay (horn honk).

- A. Passenger door unlock output (see fig. 7a):

(1) Operation — Outputs 200mA transistor ground pulse if the Unlock transmitter button is pressed within 15 seconds of disarming the unit to unlock the passenger doors in vehicles with separate circuits for driver and passenger doors.

(2) Connection — Connect the **BROWN/WHITE WIRE** to the wire which triggers a relay or relays to unlock the passenger door(s). **DO NOT CONNECT DIRECTLY TO THE DOOR LOCK ACUATORS.**

Fig. 8 — Connecting to negative door triggers (connector 2, BLUE wire)

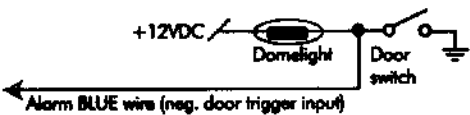
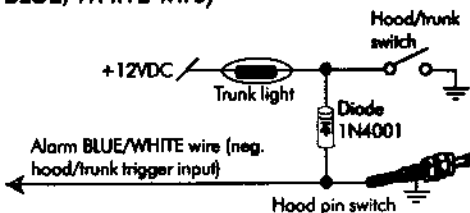


Fig. 9 — Connecting to trunk light & hood pin switch (connector 2, BLUE/WHITE wire)



- B. (-) Factory horn relay output (see fig. 7b):

(1) Operation — When the alarm is triggered, this wire outputs pulsed 200mA to activate the (-) factory horn honk relay found in most vehicles. This allows the alarm to honk the horns and blast the siren at the same time.

(2) Connection — Connect the **BROWN/WHITE WIRE** directly to the negative input of the vehicle's factory horn relay (it should show (-) when the vehicle's horn button is pressed). Make sure this input draws less than 200mA of current. If not, you must connect the **BROWN/WHITE WIRE** to a 30A relay to honk the horns.

IMPORTANT — THE BROWN/WHITE WIRE CANNOT DO BOTH FUNCTIONS AT THE SAME TIME. PROGRAM THE CORRECT OUTPUT, THEN CONNECT THE FEATURE (see PROGRAMMING, pages 17 and 18).

10. Connector (8-pin connector) **BLUE WIRE** (neg. door trigger input). Fig. 8

A. Existing car door switches — Use a VOM meter to locate a wire (usually in the driver's kick panel) which shows ground when any vehicle door is opened, and which is not ground when all the doors are closed. Connect to the **BLUE WIRE**. (NOTE — If this wire shows +12VDC when a door is opened, see **PURPLE WIRE** below.)

B. In vehicles with a domelight delay circuit, there is usually a wire that is unaffected by the delay circuitry. Connect to that wire if possible.

C. If the vehicle (such as a delivery van) has no existing car door switches — Mount a pin switch in every door you wish to protect. Connect each switch to the **BLUE WIRE**.

11. Connector (6-pin connector) **BLUE/WHITE WIRE** (negative hood/trunk trigger input). Figs. 9 & 10

A. If the vehicle has a trunk switch, but no hood switch — Use a VOM meter to locate the wire which shows ground when the trunk is opened, and which is not ground when the trunk is closed. Mount a pin switch in the hood. Connect both to the **BLUE/WHITE WIRE** as shown in fig. 9.

B. If the vehicle has no existing hood or trunk switches — Mount a pin switch in both the hood and the trunk. Connect both switches to the **BLUE/WHITE WIRE** as shown in fig. 10.

12. Connector (6-pin connector) **PURPLE WIRE** (pos. door trigger input). Fig. 11

Existing car door switches — Use a VOM meter to locate a wire (usually in the driver's kick panel) which shows +12VDC when any vehicle door is opened, and which is not +12VDC when all doors are closed. Connect to the **PURPLE WIRE**.

13. Connector (2-pin **RED** connector) **PLUG-IN LED**. Fig. 12

A. Determine where to mount the LED. The LED should be easily seen by potential thieves and vandals. However, do NOT mount where the LED is easily exposed to sunlight. Discuss the LED location with the customer before starting.

B. Drill a 1/4" hole in the LED location.

C. Run the LED connector through the hole, and then plug into the alarm brain's 2-pin **RED** connector.

14. Connector (2-pin **WHITE** connector) **PLUG-IN VEPLe BUTTON** (push-button). Fig. 12

A. Determine where to mount the VEPLe switch. Location is not important for security, as the VEPLe switch cannot be used without the ignition key. It should be hidden from view, yet easily accessible by the user in an emergency. **IT IS IMPORTANT THAT THE**

Fig. 10 — Connecting to trunk & hood pin switches (connector 2, BLUE/WHITE wire)

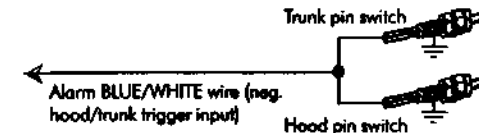


Fig. 11 — Connecting to positive door triggers (connector 2, PURPLE wire)

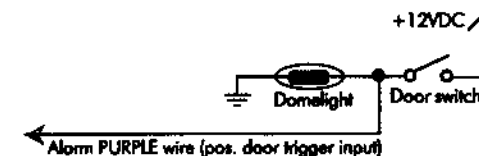
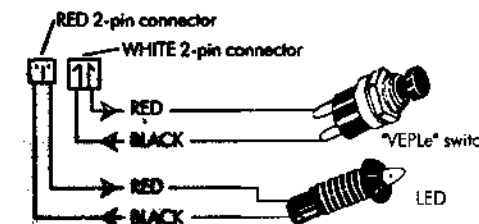


Fig. 12 — Plugging in the LED and VEPLe switch



USER CAN EASILY REMEMBER THE LOCATION OF THE VEPLe SWITCH.

- B. Drill a 9/32" hole where the VEPLe switch will be mounted.
C. Run the VEPLe switch connector through the hole, and then plug into the alarm brain's 2-pin **WHITE** connector.

15. Connector (3-pin connector)
GRAY WIRE (ground output to lock, +12VDC output to unlock)
RED WIRE (+12VDC output)
BROWN WIRE (ground output to unlock, +12VDC output to lock)
 Figs. 13 to 19

These 3 wires allow the alarm to control the power door lock/unlock systems of most vehicles without external relays. However, one or two relays may be required in some cases.

The alarm has a built-in timer which is programmable for 0.7 or 3.5 seconds. Most vehicles require a 0.7- second setting. See PROGRAMMING, pages 17 and 18.

Types of door lock/unlock systems — At the time this manual was completed, there were seven common types of power door lock/unlock systems in use:

A. Negative relay switching to factory actuators — The factory door lock switch has 3 wires. One wire always shows ground. The LOCK WIRE becomes ground when the door is locked, and sends a pulse to a factory relay to lock the doors. The UNLOCK WIRE becomes ground when the door is unlocked, and sends a pulse to a factory relay to unlock the doors. Most Japanese cars use this type of system. THIS IS THE MOST COMMON TYPE OF POWER DOOR LOCK SYSTEM. See fig. 13.

B. Positive relay switching to factory actuators — The factory door lock switch has 3 wires. One wire always shows +12VDC. The LOCK WIRE becomes +12VDC when the door is locked, and sends a pulse to a factory relay to lock the doors. The UNLOCK WIRE becomes +12VDC when the door is unlocked, and sends a pulse to a factory relay to unlock the doors. Most General Motors cars use this type of system. See fig. 14.

C. Positive reversal switching to factory actuators — The factory door lock switch

typically has 5 wires. Two wires always show ground, and one always shows +12VDC. The LOCK WIRE shows ground at rest and during unlock, but shows +12VDC when the door is locked. The UNLOCK WIRE shows ground at rest and during lock, but shows +12VDC when the door is unlocked. Many GM trucks, Fords, and Chryslers use this type of system. See fig. 15.

D. Single wire, polarity switching — The factory door lock switch uses a single wire to control the door lock and unlock operation. The single LOCK/UNLOCK WIRE shows ground when the doors lock, and +12VDC when they unlock. This is found on most Mercedes Benz and on some other European cars. See fig. 16.

E. Single wire, positive shunt switching — This system uses a single wire to activate the door locks. Applying +12VDC on the LOCK/UNLOCK WIRE causes the doors to unlock, and removing the +12VDC (not applying ground) causes the doors to lock. Found on some Ford Probes. See fig. 17.

Fig. 13 (power door lock/unlock outputs) — Negative relay switching to factory actuators

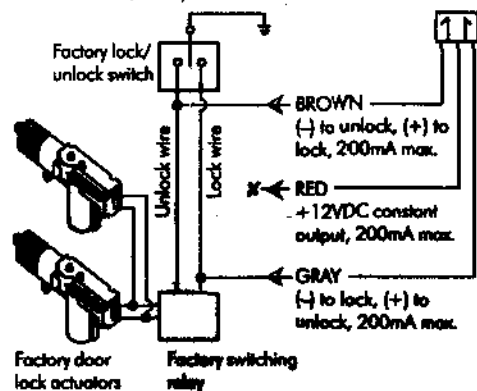


Fig. 14 (power door lock/unlock outputs) — Positive relay switching to factory actuators

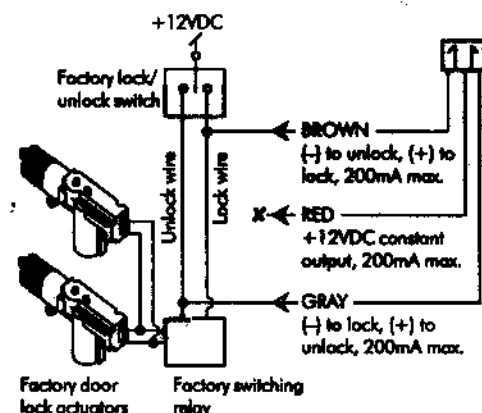


Fig. 15 (power door lock/unlock outputs) — Positive reversal switching to factory actuators

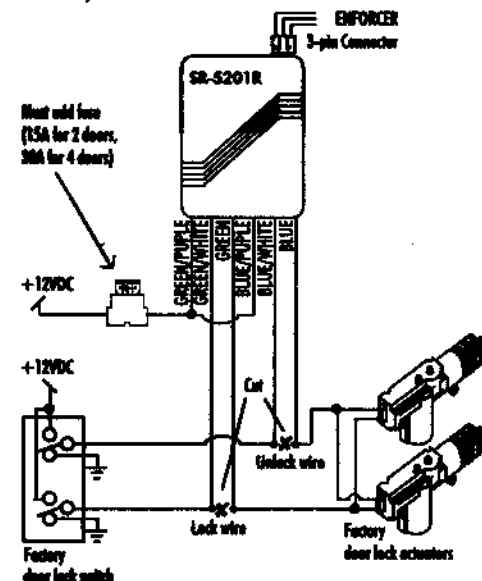


Fig. 16 (power door lock/unlock outputs) — Single wire, polarity switching

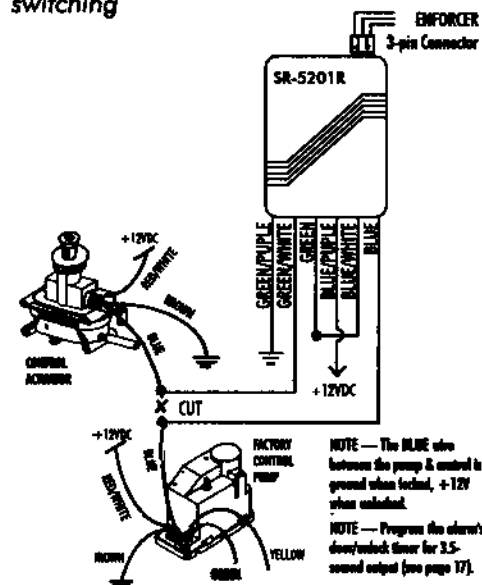
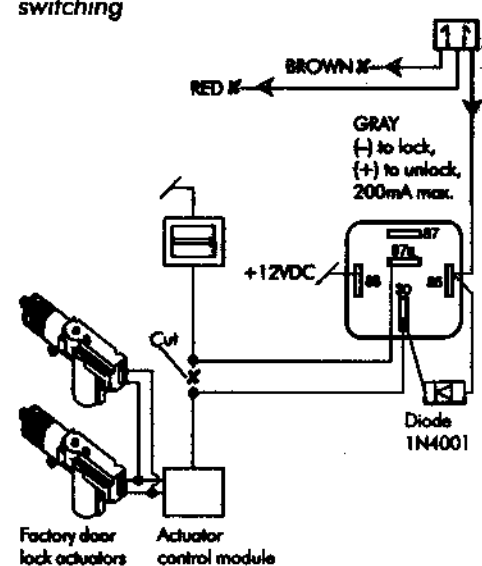


Fig. 17 (power door lock/unlock outputs) — Single wire, positive shunt switching

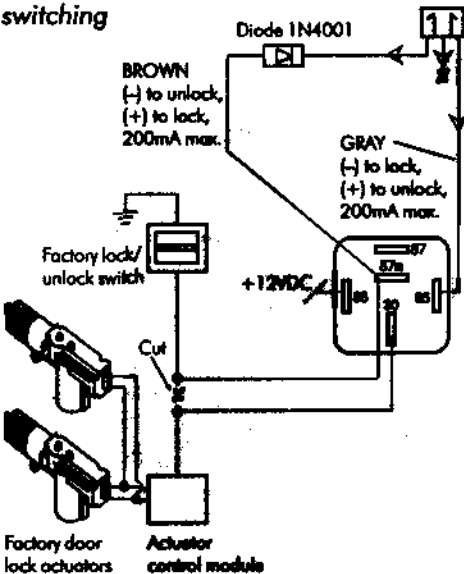


F. Single wire, negative shunt switching — This system uses a single wire to activate the door locks. Applying ground on the LOCK/UNLOCK WIRE causes the doors to unlock, and removing the ground (not applying +12VDC) causes the doors to lock. Found on some Mazdas and Nissans. See fig. 18.

G. Aftermarket door lock actuators — If the vehicle does not have power door locks, install aftermarket actuators according to the supplier's instructions. (If the vehicle has power door locks on all doors except the driver's door, install one aftermarket actuator on the driver's door. Includes some Volvos, SAABs, and assorted Japanese models.) See fig. 19.

Note: for vehicles with a separate passenger door unlock function, see the BROWN/WHITE wire on page 10.

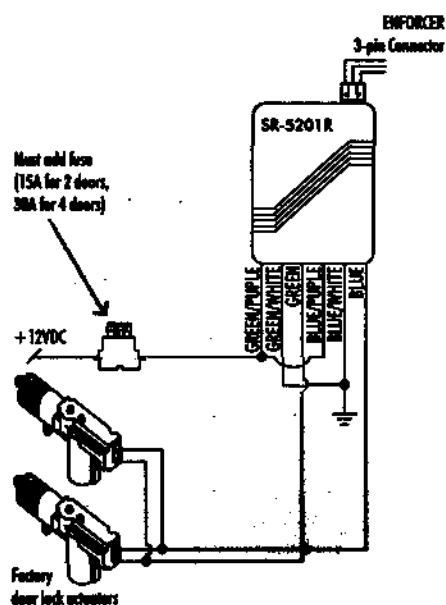
Fig. 18 (power door lock/unlock outputs) — Single wire, negative shunt switching



16. Connector (4-pin connector) DUAL-STAGE SHOCK SENSOR
YELLOW WIRE (pre-intrusion alert input)
BLACK WIRE (ground output)
BLUE WIRE (aux. sensor trigger input)
RED WIRE (+12VDC output)
 Figs. 20 to 22

- A. To install the optional patented dual-stage electromagnetic shock sensor:**
- (1) Cable-tie the sensor securely to at least two points under the dash. Do not screw it to metal. Mount so you can reach the adjustment pods. (NOTE — The shock sensor is omnidirectional. It can be mounted at any angle.)
 - (2) Plug the sensor into the alarm brain's 4-pin connector.
 - (3) Set the sensitivity:
 - a. Turn the pre-intrusion (1st stage) sensitivity to maximum (clockwise).

Fig. 19 (power door lock/unlock outputs) — Aftermarket actuators



- b. Test the trigger (2nd stage) sensitivity by rapping hard on the vehicle to simulate an attack. (Do not hit the window.) Adjust the sensitivity by turning the trigger adjustment pod clockwise (more sensitive) or counterclockwise (less sensitive).
- c. Once trigger sensitivity is set, test pre-intrusion (1st stage) sensitivity by lightly knocking on the vehicle to simulate someone bumping the car. Adjust the sensitivity by turning the pod clockwise (more sensitive) or counter-clockwise (less sensitive).

- d. NOTE:**
- Changing trigger sensitivity also affects pre-intrusion sensitivity.
 - When trigger sensitivity is set to minimum, the shock sensor cannot trigger the alarm (equivalent to turning the shock sensor OFF). Pre-intrusion is also turned OFF.
 - When sensitivity is set to maximum, the shock sensor is very sensitive. This may cause unnecessary chirps and/or false alarms.
 - To prevent false alarms, the shock sensor and auxiliary sensors will not trigger the alarm until 5 seconds after the alarm is armed and no further motion is detected.

- B. To connect more than one SECO-LARM dual-stage shock, microwave, or glass break sensor, use an SR-199-315 Y-connector. (See fig. 21.)
- C. To install non-SECO-LARM auxiliary sensors — Splice into the shock sensor's wire harness as shown in fig. 22. NOTE — For single-stage auxiliary sensors, do not use the YELLOW WIRE.

IMPORTANT — These four wires are transistor +12VDC or transistor ground inputs and outputs with max. ratings of 500mA. Take care when connecting accessories to these wires.

Fig. 20 — Plugging the shock sensor into the alarm brain

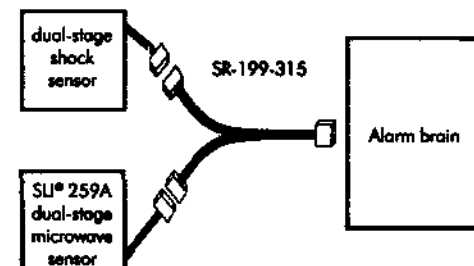
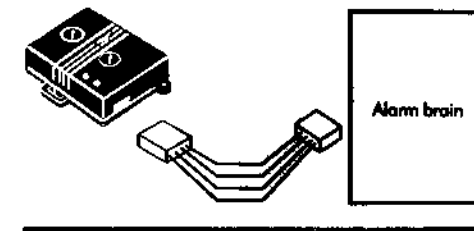
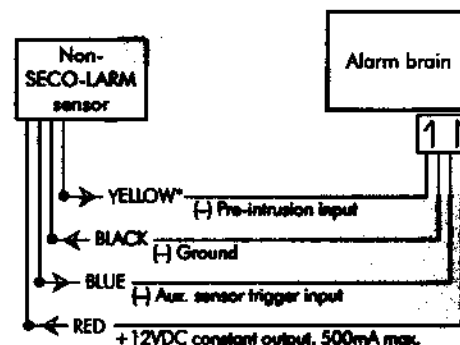


Fig. 22 — Adding a non-SECO-LARM auxiliary single- or dual-stage sensor



* NOTE — Ignore the YELLOW wire if installing a single-stage sensor.

CODE LEARNING

The alarm can learn a max. of 4 remotes. RF Code Wash™ deletes all previous remotes when any new remote is learned. This prevents unauthorized use of lost or stolen transmitters, and, because the user's transmitter no longer works, alerts the user if someone has secretly code learned a new transmitter. However, it also means that, when code learning is being done, ALL THE USER'S TRANSMITTERS MUST BE CODE LEARNED AT THE SAME TIME.

A. Procedure:

- (1) Disarm the alarm.
- (2) Turn the ignition switch ON, then OFF, then ON, then OFF.
- (3) Press the VEPLe button three times within 15 seconds of turning the ignition OFF. The siren chirps once.
- (4) Within 15 seconds, push the Lock button of the first transmitter to be learned. At this time, all previous codes are deleted, and the alarm learns this transmitter's code. 1 chirp confirms code learned. (If no button is pressed within this 15-second period, code learning is exited, and old codes are retained.)

(5) Within 15 seconds, push the Lock button of the second transmitter to be learned (if applicable). 1 chirp confirms learned.

(6) Repeat step (5) until all transmitters are learned. The siren chirps once for each transmitter when its code is successfully learned.

B. Exit the code learning procedure — The alarm chirps the siren two times, exits the code learning mode, and is disarmed after learning the fourth transmitter's code, or if you turn the ignition switch ON, or if you do nothing for 15 seconds.

VEPLe BUTTON (push-button)

The VEPLe button is a 4-function push-button switch. It is used for entering and exiting the valet mode, emergency disarm, programming, and code learning.

Table A shows how the VEPLe button is used.

Table A — Chart of VEPLe button operations:

Step	V: Valet mode enter and exit		E: Emergency disarm	P: Programming (enter code learning mode)	Lc: Learn codes (enter code learning mode)
	Enter Valet mode	Exit valet mode			
Initial status	Disarmed	Valet mode	Armed or triggered	Disarmed	Disarmed
Ignition sw.	Turn from OFF to ON	Turn from OFF to ON	Turn from OFF to ON	Turn ON, then OFF	Turn ON/OFF/ON/OFF
VEPLe button	Press 3 times within 15 sec. of ignition ON	Press 3 times within 15 sec. of ignition ON	Press 3 times within 15 sec. of ignition ON	Press 3 times within 15 sec. of ignition OFF	Press 3 times within 15 sec. of ignition OFF
Siren/light confirm	Chirp once and flash once after VEPLe pressed 3rd time	Chirp twice and flash twice after VEPLe pressed 3rd time	Chirp 3 times & flash 3 times after VEPLe pressed 3rd time	Chirp once after VEPLe pressed 3rd time (then turn ignition ON)	Chirp once after VEPLe pressed 3rd time
Status	The alarm is now in the valet mode	The alarm is now disarmed	The alarm is now in the valet mode	Now in the programming mode	Now in the code learning mode
LED	Slow flashes	OFF	Slow flashes	OFF	OFF
Note			Same procedure to enter the valet mode	See PROGRAMMING procedure for next step	See CODE LEARNING procedure for next step

PROGRAMMING AND TRIGGER RECALL

A. Procedure:

- (1) Disarm the alarm.
- (2) Turn the ignition switch ON then OFF.
- (3) Within 15 seconds, press and release the VEPLe button three times. The siren chirps once. Then turn the ignition ON again. (NOTE — The time from the ignition switch OFF to the ignition switch ON again should total no more than 15 seconds.)
- (4) At this point, the LED is flashing in a certain pattern. The number of flashes indicates which zone was last triggered. See TIPS FOR TESTING THE ALARM below.
- (5) Choose the feature to program — Within 15 seconds, press and release

the VEPLe button the number of times needed to select the feature to be programmed. The siren chirps once each time the button is pressed and released to indicate which feature is selected. (NOTE — If the VEPLe button is not pressed within 15 seconds, the alarm exits the programming mode.)

- (6) Toggle the feature ON/OFF — Within 15 seconds, press and hold the VEPLe button to turn the feature ON or OFF. The siren continually alternates between 1 and 2 chirps to confirm whether the feature is ON or OFF. Release the VEPLe button after you hear 1 chirp (feature ON) or 2 chirps (feature OFF). (NOTE — If the button is not pressed within 15 seconds, the alarm exits the programming mode.)

Table B — Alarm feature programming using the VEPLe button

Choose feature chirps	Description of feature	Confirm chirps when press VEPLe button		Default
		1 chirp (on)	2 chirps (off)	
1	Passive/active mode	active	passive	active
2	Alarm chirps	on	off	on
3	Ignition off, dome light turns on	off	on	off
4	(Reserved - no function)	-	-	-
5	Secure Lock™	off	on	off
6	Ignition-controlled door lock	disabled	enabled	disabled
7	Ignition-controlled door unlock	disabled	enabled	disabled
8	Siren or pulsed horn output (on siren wire)	siren	horn	siren
9	(Reserved - no function)	-	-	-
10	True Trigger™	no	yes	no
11	Automatic Starter Disable (ASD™)	no	yes	no
12	Door lock/unlock timing	0.7 sec.	3.5 sec.	0.7 sec.
13	Double-pulse unlock	off	on	off
14	Passenger unlock or pulsed horn (brown/white wire)	Pulsed horn	P. unlock	Pulsed horn
15	(Reserved - no function)	-	-	-
16	Starter disable output type	N.C.	N.O.	N.C.
17	Exit program procedure (no feature)	n/a	n/a	n/a

(7) To program other features, press and release the VEPLe button the number of times to reach the next feature. For instance, if you just programmed feature no. 2, and now want to program feature no. 4, press and release the VEPLe button 2 more times. Then press and hold the VEPLe button to turn the feature ON or OFF as per step (6). (NOTE — You must press the VEPLe button within 15 seconds of the last press of the button.)

- (8) Exit programming mode — Three ways:
- No VEPLe button activity for 15 seconds; or
 - Turn the ignition switch OFF; or
 - Press and release the VEPLe button to choose the 17th feature.

B. NOTE:

- When the programming mode is exited, the siren chirps twice.
- Programming chirps are not deleted under the one-time or permanent chirp delete.

TIPS FOR TESTING THE ALARM

A. Testing RF reception and range — To test if the alarm brain is receiving signals from the RF transmitter, and to test range, watch the alarm status LED. The LED should turn ON steady as long as any button on the RF transmitter is being pressed. If the LED does not turn ON, this means the alarm brain is not receiving the transmitter signal.

B. Testing wire connections — Often, when trying to trace a problem between a trigger input, wiring, and the alarm brain, one place to test is at the alarm brain itself. Set the VOM for (+) or (-), depending on the trigger, then probe the appropriate wire near the alarm brain while testing the trigger. For instance, to determine why a (-) door trigger is not working, probe and test the BLUE WIRE of the 6-pin connector near that connector. If the BLUE wire shows (-) when the door is opened, then the problem may be caused by the user not arming the alarm correctly, or the alarm brain may be defective. But if the BLUE wire does not show (-) when the door is opened, the problem may be a loose or defective pin switch or wire connection.

C. Sensor delay times — The various sensors have a short delay from the time the alarm is armed until the sensor can be triggered. Therefore, after arming the alarm, wait until after the delay period before testing the sensor to be sure that sensor is operating properly:

- Hardwired triggers — 5-second delay.
- Shock and auxiliary sensors — 5-second delay.

D. Triggered zone recall — After performing step (3) of the programming procedure, the LED starts flashing in a certain pattern. The number of flashes indicates which zone was last-triggered, regardless of when it was triggered:

- 2 flashes — The alarm was triggered via emergency call for help (panic).
- 3 flashes — Shock or auxiliary sensor was triggered.
- 4 flashes — A door was opened.
- 5 flashes — The hood or trunk was opened.

This memory is deleted only after 15 seconds of inactivity or if you precede to the next programming step.

Table C — Troubleshooting Guide (see page 18 for more information)

SITUATION	POSSIBLE PROBLEM	SOLUTION
Engine does not start and LED is steady ON after car has set for some time with the alarm disarmed.	Automatic Starter Disable is engaged.	Remind customer how ASD works, or program it OFF.
Poor transmitter range.	1. Low or dead transmitter battery. 2. Metal of car body reflecting RF waves. 3. RF interference.	Replace the battery. Mount alarm brain in another location. Fold or roll up (do not cut) alarm brain antennas.
Transmitter LED doesn't flash when button pushed.	1. Loose battery connection. 2. Low or dead transmitter battery. 3. Defective transmitter.	Make sure battery contact with clip is tight and clean. Replace the battery. Replace the transmitter.
Transmitter does not work when siren is sounding.	Alarm brain too close to siren or honking horns.	Increase the distance between siren and alarm brain, and make sure the two are not grounded together.
Alarm doesn't respond to pressing transmitter button.	Transmitter not code-learned to alarm.	Code-learn the transmitter.
Under passive arming (switch sensing), siren does not chirp when the last door/hood/trunk is closed.	Door/hood/trunk pin switch not connected, or broken, or its height is not adjusted properly.	Check blue or blue/white wire (depending on which switch) at brain with VOM. If ground when door or hood or trunk open, and not when closed, then problem with wire harness or brain. Otherwise, check switch, wire, or connection.
Alarm triggers fine a few times, then a particular zone suddenly stops working.	Zone Trigger™.	Turn ignition ON to reset Zone Trigger, or program it OFF. This is a programmable feature, not a problem.
Not all doors trigger the alarm.	Door switches are isolated by diodes.	Connect trigger wire to under-dash courtesy lights, or connect individual pin switches to each door.
Too many false alarms.	Check sensor or door pin switches.	Reduce shock sensor trigger sensitivity, and double-check all door and hood/trunk pin switches.
When alarm triggered, pressing transmitter shuts siren and lights OFF, but alarm stays armed.	Patented Stop-Safe Alarm.	This is a feature of the alarm, and not a problem.
More than one chirp when arming (active mode).	Alarm detects open circuit, does zone bypass.	Check all openings to see which is not closed properly.
Siren does not chirp.	Set for chirp delete.	Reprogram to restore chirp.
Siren chirps or LED flashes while driving.	Yellow wire of 8-pin connector loose.	Check the connection.
Siren continuously emits a strange quiet sound.	Four main brain ground.	Check the main brain ground, make sure good contact, and not grounded together with siren.
Programming or code learning does not work.	Waited too long for the next step.	Watch the timings. Each step must be done within 15 sec. of the preceding step, or else the procedure is exited.
Testing of hardwired zone or auxiliary sensor does not trigger alarm.	Tried to test the triggers too soon after the alarm was armed.	Wait 5 sec. after arming before testing.

SECO-LARM's ENFORCER SLI 840/840-4 is protected by the following patents:

U.S. pat. nos. 5483225, 5473305, 4975678, 4980666, 4835518, 4810998, 4550229, 4543568, 4546629, 4679033, 4700332, 4706064, 4761631, 4926160, 4507945, D314791, D319196

Taiwan pat. nos. 105843, 100701, 94510, 84396, 74872, 50612, 43239, 40938, 35097, 33687, 75669, 66042, 59176, 40938, 37977, 33201, 33687, 52421, 19593, 12398, 21111, 30897, 37422, 40244, 30905, 30060, 32844, 32409, 28883, 31633, 26690, 22073, 20786, 46459, 17724, 18971, 20380, 24477, 39225, 16021, 2271009, 2215895, 2179482, 2177529, 2177797, 2141480

U.K. pat. nos. 29600370.0, G9203003.3, G9203004.1, G9212809.2

German pat. nos. 85927

Hungary pat. no. 1882619

Japan pat. no. 1882619

China pat. no. Z194300564.7

Korea pat. nos. 32332, 35097

Other international patents are pending.