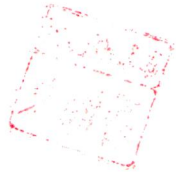


SAAB

1989 9000 Alarm

Parts and Service Training



SAAB

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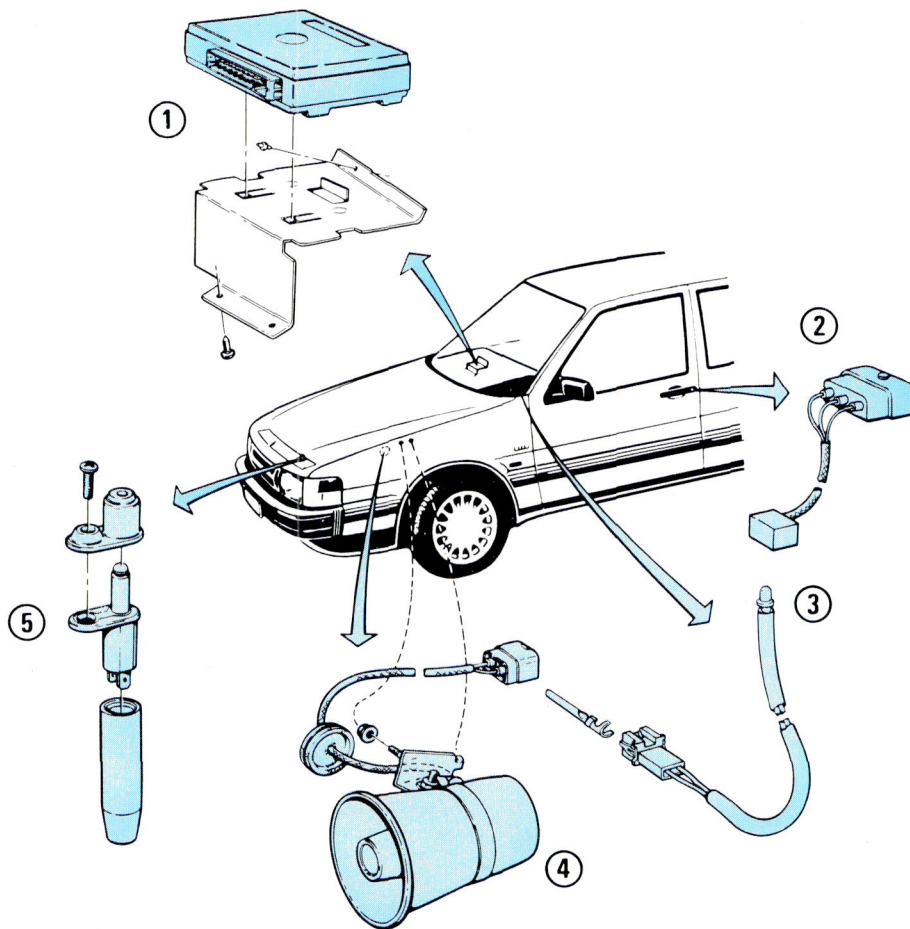
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9000 Alarm

Component Locations

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1. Control Unit with Integral Motion Detector
Mounted in the dash at the lower right hand corner of the glove box.
2. Master Switch
Integrated into driver's door lock/handle assembly.
3. L.E.D.
Traditional location in L.H. speaker grill.
4. Siren
Mounted between inner and outer fender, connector in front of the windshield washer reservoir.
5. Hood Switch
Mounted on the driver's side of the radiator support cross member.

NOTE: Like the interior light door switches the hood switch can be manually locked in the "Off" or "Door Closed" position. This will create problems in both the operation and testing of the alarm.

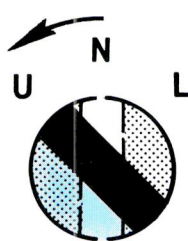
Other Related Components:

- Interior light door switches
- Trunk light switch

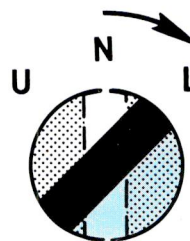
The Key

All 1989 9000 models have a key activated switch integrated into the driver's door lock assembly. This switch is the sole means of arming, disarming and programming the alarm system. The only exception to this will be the addition of an optional remote disarm as a dealer installed option.

The procedures on the following pages are built around the two driver's door lock symbols shown below. All movements begin with the key in the neutral (N) position.



Unlock



Lock

Loss of Programming When Servicing

Motion detector sensitivity may be programmed to meet the individual needs of the owner. Any disruption of power to the alarm control unit will return the system to the manufacturer's preprogrammed setting when the alarm is reactivated, Reset the system to the owner's specification before releasing the car, see page 10.

Warning: Improper operation of the alarm will disrupt critical circuits.

Attempts to bypass the alarm will adversely affect operation of the car. Here are a few of the more commonly tried methods and their consequences.

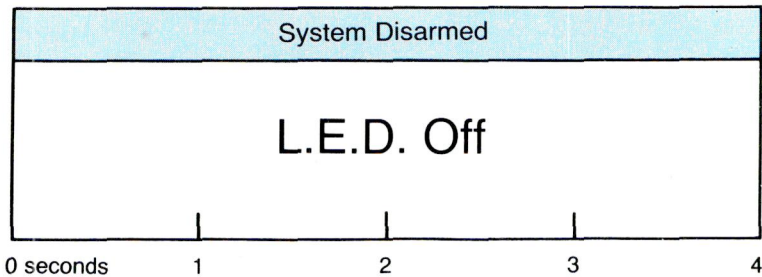
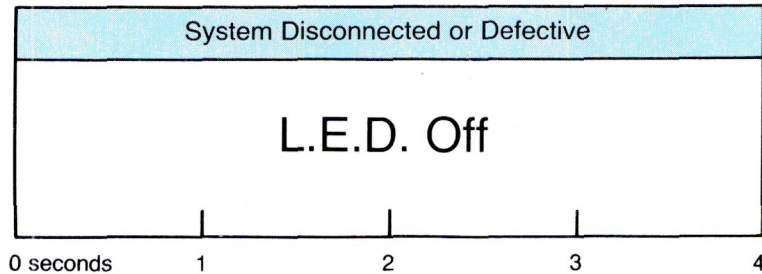
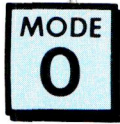
- **Leaving it in Transport Mode:** The factory ships the cars this way, what could be better? This will bypass the alarm but experience has shown that it is possible for the owner to accidentally move from transport to diagnostic mode and deactivate the starter. **Never send a car out in transport mode!**
- **Unplugging the Alarm ECU:** The starter solenoid wire goes through the ECU, you will permanently disable the starter.
- **Pulling Fuse 22:** Now you can start the car but you will lose the turn signals and four way flashers.

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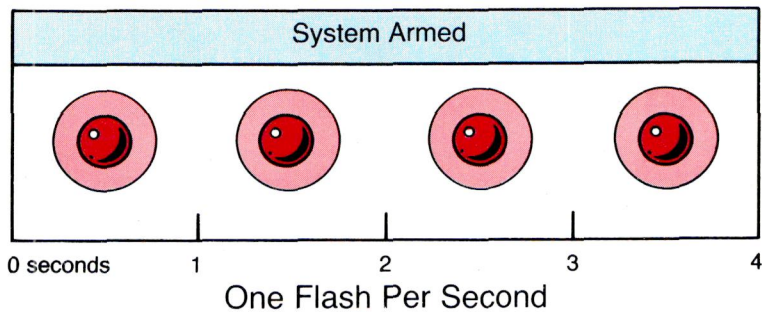


Operating Mode Identification

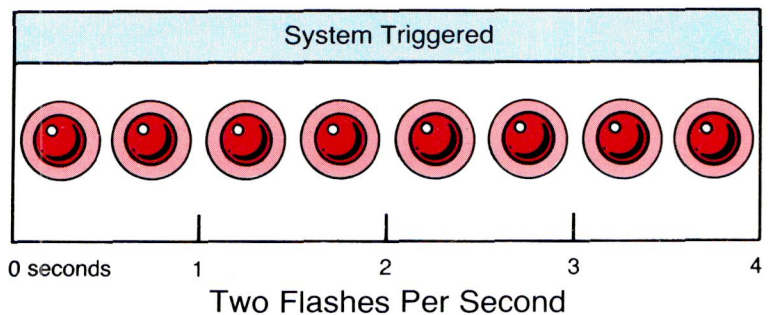
Before beginning any diagnostic procedures check the L.E.D. to determine which of the eight possible operating modes the alarm has entered.



- This is the normal condition if the driver's door is unlocked.
- To confirm that the system is operational lock the driver's door. The L.E.D. should begin to flash 10 seconds after the interior lights go off. If not, check fuse 22.



- This is the normal "armed" condition if the driver's door is locked with the key, interior lights are out, and all doors, hood and trunk are closed.

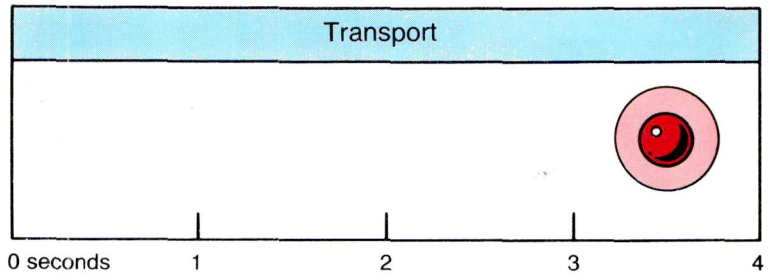


- Siren should sound, parking lights (headlights if on) should flash and the starter should be disabled.

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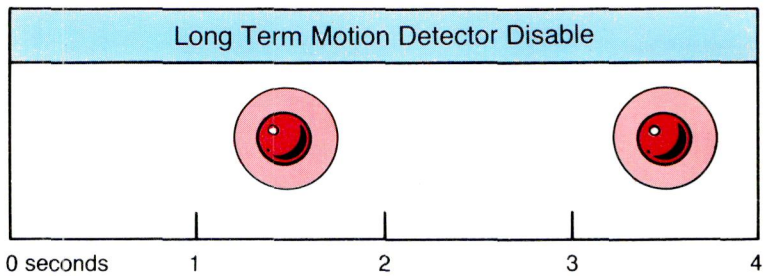


Operating Mode Identification



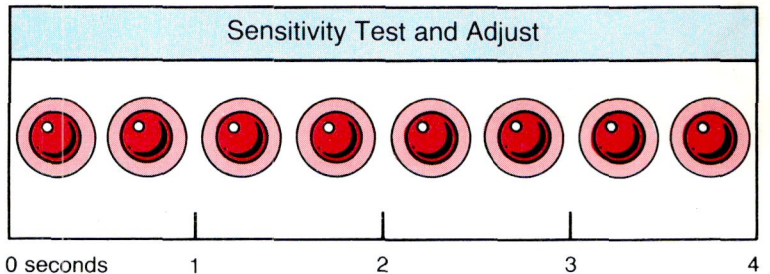
One Flash Every Four Seconds

- Anytime power has been disrupted the system reverts to transport mode, all alarm functions are inoperative. **Do not** allow the car to go out in this mode.



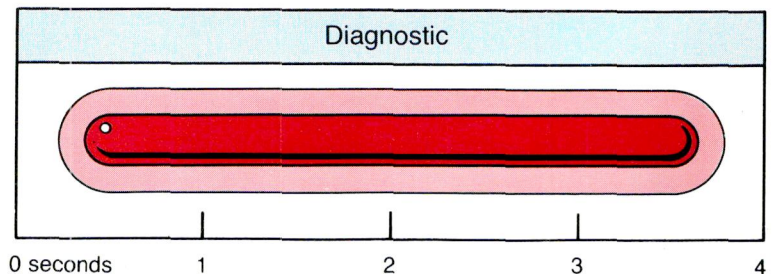
One Flash Every Two Seconds

- If the hood or trunk is opened during the ten seconds the system is in this mode the motion detector is bypassed while retaining all other alarm functions. Removing and replacing fuse 22 will restore the motion detector.



Two Flashes Per Second

- In this mode you can check and adjust the degree of motion detector sensitivity. Unlike mode 3 the siren only sounds when the motion detector is triggered and then immediately shuts off.



Light On Continuously

- When this mode has been selected all individual alarm system inputs and functions may be checked.

9000 Alarm



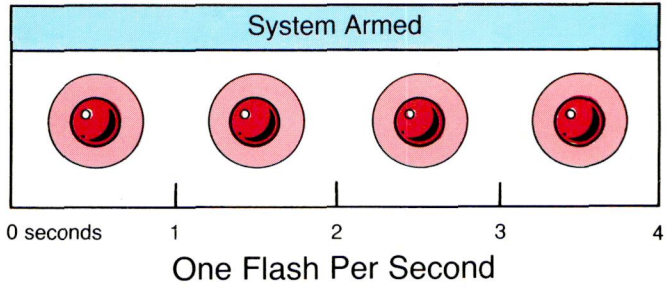
Arming The System

To verify that the alarm is functioning correctly begin your test procedure by arming the system.

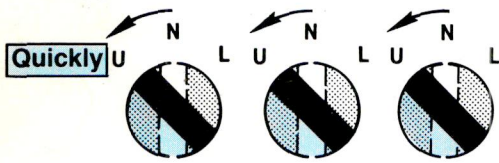
From **MODE 1** System Disarmed, L.E.D. out: Lock the driver's door



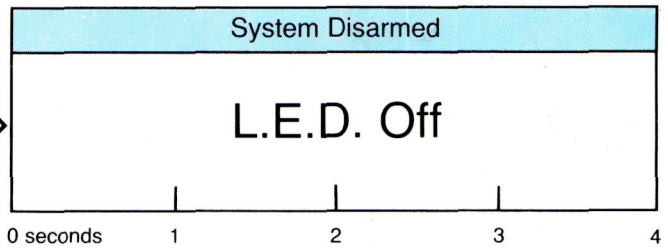
10 Seconds After Interior Lights Go Out



From **MODE 5** Transport, one flash every four seconds: unlock the driver's door three times



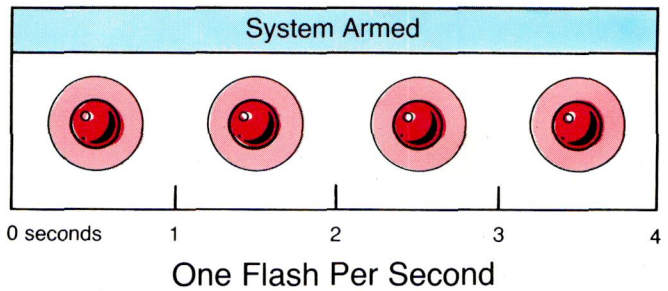
Next



Then: Lock the driver's door



10 Seconds After Interior Lights Go Out



Testing The System

NOTE: The following is a quick operational check to verify basic system operation.
For troubleshooting go to the diagnostic mode on page 12 .

- Roll down the driver's door window, lock the driver's door with the key. The L.E.D. should indicate **System activated**, 1 flash per second, ten seconds after the interior lights go out.

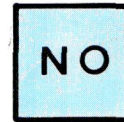
Motion Detector Check

Caution: Shifter must be in park or neutral.

- Tap the dash top 3 – 4 times quickly – Do the following things happen?
 1. Parking lights should flash, headlights also if turned on.
 2. Siren should sound.
 3. Starter should be disabled.



Proceed to next step



The motion detector may be locked out or the sensitivity turned down.
Go to **Programming Motion Detector Sensitivity** on page

- Unlock driver's door to cancel the alarm, lock again to arm it.

Door Lock Check

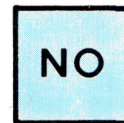
- Using the central locking button unlock the doors.

NOTE: If the alarm is set for extreme sensitivity the motion detector may be triggered by the movement of the door lock motors.

- Open any door – Does the alarm sound, is the starter disabled?



Go to next step



Did the interior lights come on?
Check door switches

- Close the door, cancel the alarm, rearm by locking the driver's door.
- Repeat for other doors, trunk and hood.
- On the final test do not cancel the alarm, it should go off after 60 seconds, If the door is left open the alarm should sound again after 15 seconds. This cycle will occur a total of 5 times.

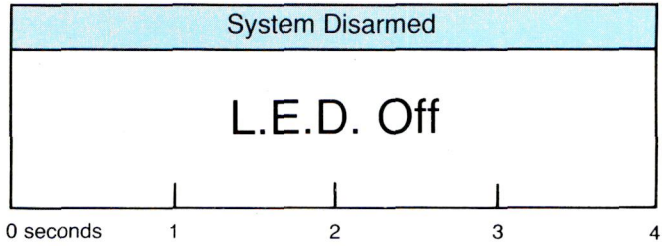
9000 Alarm



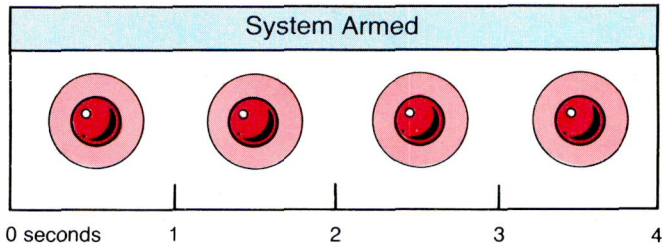
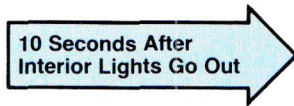
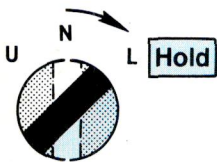
Short Term Bypassing Of The Motion Detector

In this condition the motion detector is eliminated once while retaining all other alarm functions. As soon as the driver's door is unlocked the alarm reverts to normal operation and the motion detector is restored.

BEGIN IN



Next: Lock the driver's door, hold for three seconds.



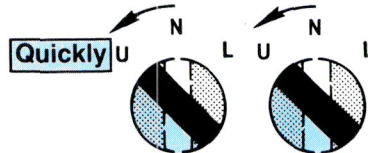
9000 Alarm



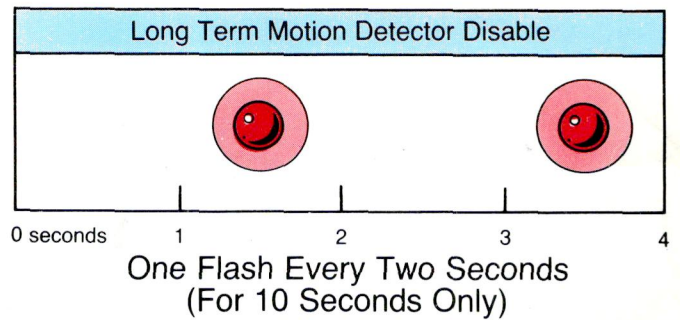
Long Term Bypassing Of The Motion Detector

In this condition the motion detector is eliminated until it is intentionally recalled by briefly pulling fuse 22 which places the system in transport mode and then reactivating the alarm.

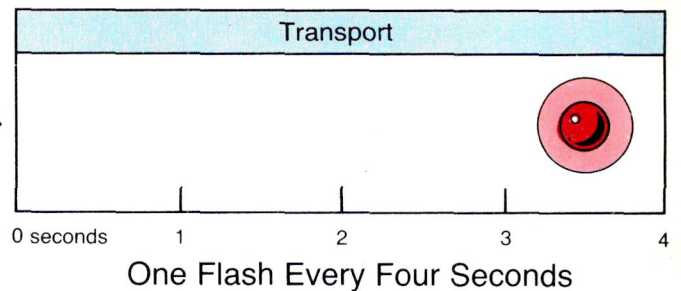
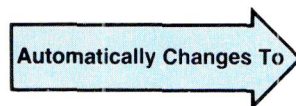
- Open the front windows, close all doors, trunk and hood.
- Remove and replace fuse ¹⁹ 22, the L.E.D. should flash once every four seconds.
- Turn the door key from neutral to unlocked twice.



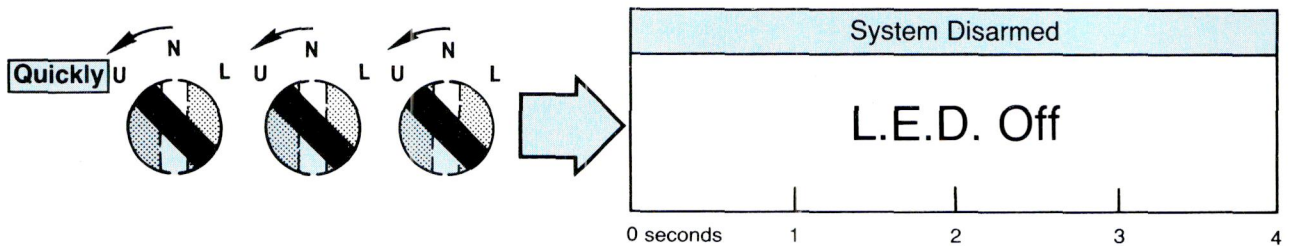
- The siren should beep twice.
- You will now be in :



- Within **10 seconds** open the hood.



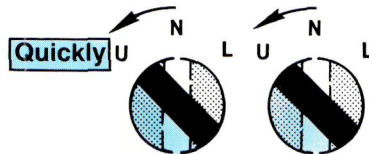
- Activate the system by turning the key to the unlocked position quickly **three** times.



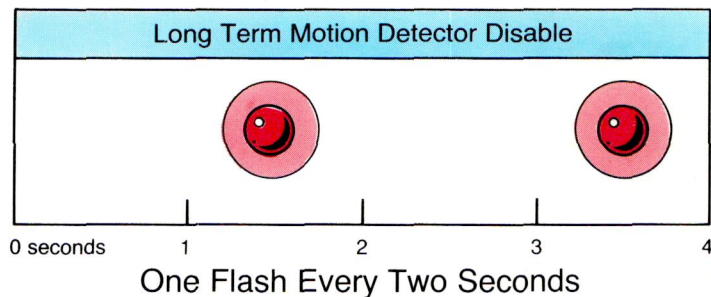
Programming Motion Detector Sensitivity

This mode allows you to test and reprogram the motion detector to a level of sensitivity greater or less than the factory setting.

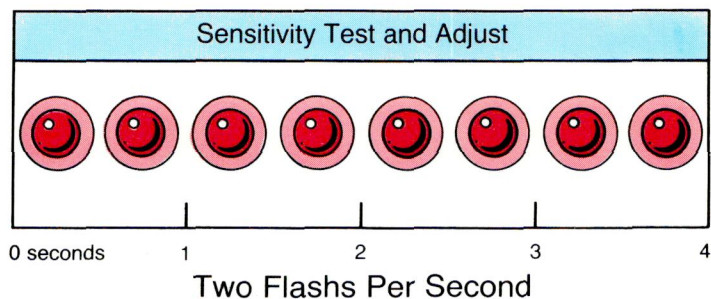
- Open the front windows, close all doors, trunk and hood.
- Remove and replace fuse ¹⁹22, the L.E.D. should flash once every four seconds.
- Turn door key from neutral to unlocked twice.



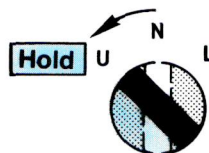
- The siren should beep twice.
- You will now be in:



- After 10 seconds you will change to:



- **To Check Sensitivity** – Tap the dash top several times, the alarm will flash and beep once if triggered.
- **To Increase Sensitivity** – Turn the key to the unlocked position and hold for two seconds or more (4 flashes of the L.E.D.).



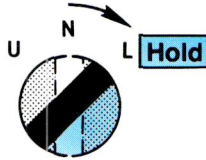
- **NOTE:** You began the test at the preprogrammed level of 3 out of a possible 240 units of sensitivity (1 being the most sensitive). Only a few key cycles to the unlocked position will take you to the most sensitive possible setting.

9000 Alarm

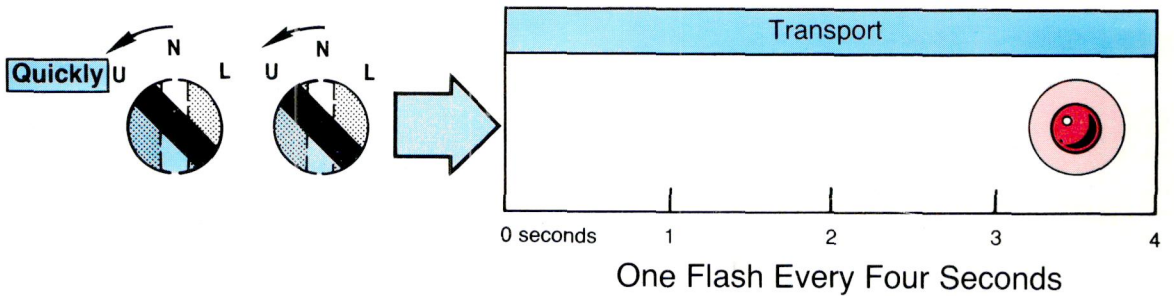


Programming Motion Detector Sensitivity

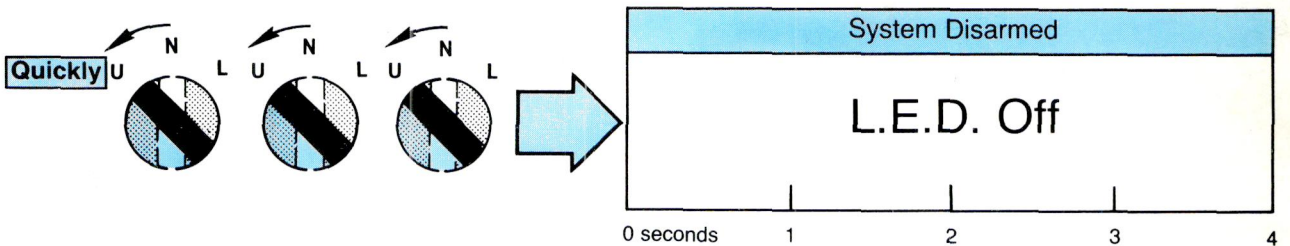
- **To Decrease Sensitivity** – Turn the key to the locked position and hold for **two** seconds or more.



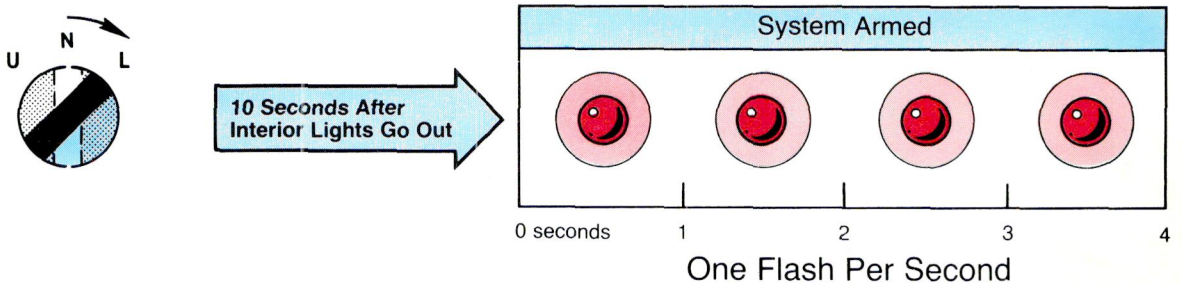
- **Test and Repeat** until the desired sensitivity setting is obtained.
- **To Lock Program in Memory:** Turn the key quickly to the unlocked position **two** times.



- **Next:** Turn the key quickly to the unlocked position **three** times.



- **Lock the driver's door**



- **Confirm the memory setting** – Tap the dash (be careful to always use the same intensity and frequency of blows when testing).

NOTE: Failure to follow these final steps **exactly** will switch the alarm back to the factory preset sensitivity level.

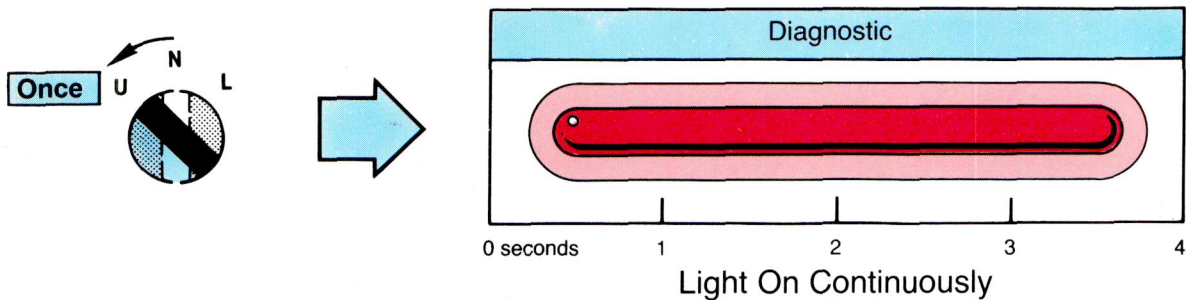
9000 Alarm



Component Diagnosis

In this mode you can check for proper operation of all the individual components in the alarm system.

- Open driver's door – all other doors, hood and trunk must be closed.
- Remove and refit fuse 22.
- Open the hood.
- Turn the key **once** to the unlocked position.



• Check the Motion Detector

1. Tap the dash top.
2. Siren should beep twice, parking lights flash three times.

• Check the Driver's Door Lock Switch

1. Close and lock the driver's door.
2. Parking lights should flash three times.
3. Unlock the door.

• Check the Hood Switch

1. Close the hood.
2. Parking lights should flash three times.
3. Leave hood closed.

• Check the Trunk Switch

1. Open the trunk.
2. Parking lights should flash three times.
3. Close the trunk.
4. Parking lights should flash three times.
5. Leave trunk closed.

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Component Diagnosis

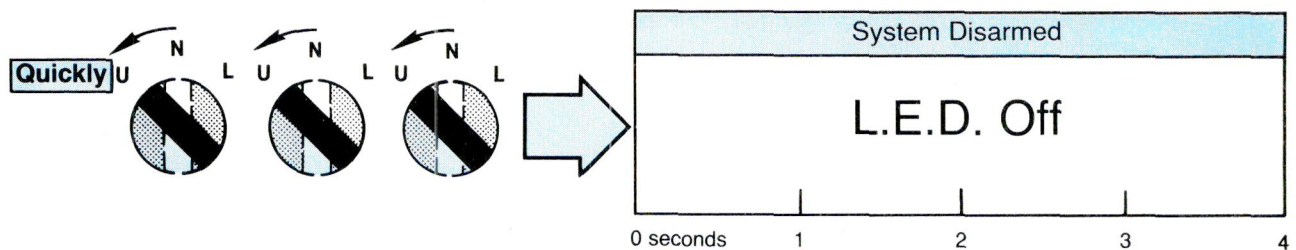
- **Check Door (Interior Light) Switches**

1. Open any door
2. Parking lights should flash three times.
3. Close door, **wait for interior lights to go off.**
4. Parking lights should flash three times.
5. Repeat for all other doors.

- **Check Starter Interlock**

1. Check that shifter is in **park** or **neutral**.
2. Try to start the car.
3. Engine should **not** crank.

- **Return to Normal Operation:** Turn off the key quickly to the unlocked position three times.



- **Reprogram the Motion Detector:** Did the owner have a special setting?

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