

INSTALLATION INSTRUCTIONS

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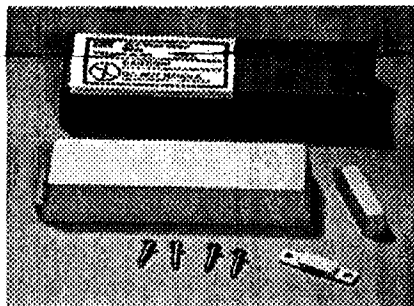


Interactive Technologies Inc.
2266 North Second Street
North St. Paul, Minnesota 55109
(612) 777-2690
Technical Services (800) 777-2624

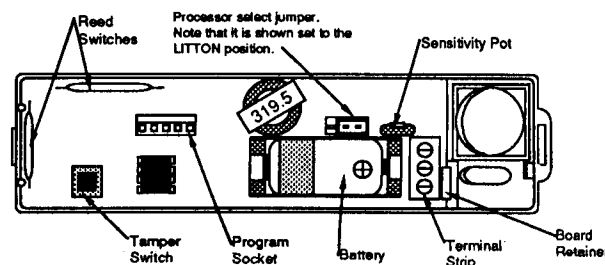
SHOCK SENSOR ITI Part #60-107 & 60-192

OVERVIEW

The Shock Sensor serves a variety of functions: it has two built-in reed switches and may detect openings and closings (like a Door/Window Sensor); it may also be connected to a variety of shock detectors. There is a limit of five detectors (of any kind) per sensor, and one external reed switch. The sensitivity of the detectors can be adjusted by using the built-in adjustment pot on the transmitter. Shock Sensors send a signal to the CPU every 69 minutes. Supervisory problems are detected and reported in the same way as for a D/W Sensor. The Shock Sensor uses a 3.6 Volt lithium battery which should last 5-8 years under normal conditions. If the battery fails, a supervisory indication will be detected and reported by the CPU.



Removing the sensor cover causes the sensor to transmit a "TAMPER" signal to the CPU. If the CPU is armed to a protection level in which the tampered sensor is active, a TAMPER ALARM signal is sent to the Central Station. If the tampered sensor is not active in the current level, the CPU will not go into alarm but will remember the TAMPER signal and "PROTEST" (as if the sensor had been left open) the next time an attempt is made to arm the system. Replacing the sensor cover closes the tamper switch but does not send a signal to the CPU. The CPU will still "PROTEST" until a "RESTORE" signal is heard from the sensor. This can be accomplished by activating the Shock Sensor or reed switch. Temperature Range is 10°F - 140°F.



SENSOR INSTALLATION


IMPORTANT CAUTION!! It is important to be free of all static electricity when handling transmitters. Touch something metal before handling the transmitter circuit board.

1. Remove the sensor cover by pressing on the cover end to disengage the top on the cover from the slot in the sensor base.

NOTE: If only the self-contained reed switches will be used, a jumper must be placed between terminals 2 and 3 on the transmitter circuit board.

2. Remove the circuit board to expose the two mounting holes.
3. Secure the sensor using the two screw holes in the base. One is larger to allow alignment of the sensor. Use #6 pan head screws to mount on wood. Use appropriate fasteners if you are securing the sensor to other material.
4. Put the sensor circuit board back into place, sliding the reed switch end in first then snapping the board in place. Be sure the locking tab is secure and the board is level.
5. Use the Hand-Held Programmer to program the sensor. Be sure the processor select jumper is in the Litton position.

ADJUSTMENTS / TESTING

1. Arm the system to Level 9 - SENSOR TEST.
2. **Sensitivity** - The sensitivity pot in the ITI Shock Sensor is used to select the proper shock detection level for the initial high energy, high frequency impact. **TURN THE ADJUSTMENT POT CLOCKWISE TO INCREASE SENSITIVITY, COUNTER CLOCKWISE TO DECREASE SENSITIVITY.** 
3. **Jumper** - Use jumper selection shown above for Litton detectors.
4. **Level 9 Test Beep** - When armed in Level 9, the SX-V will sound a loud beep when a shock detector receives a high energy impact, or when the reed switches are activated.
5. **Testing** - The sensitivity of the ITI Shock Sensor should be set to a level sensitive to a forceful impact (not to break the glass), but not sensitive to normal ambient vibrations. Check for proper coverage by hitting the window glass two times at the point furthest from the sensor. Use a solid object such as the plastic handle on a screwdriver.

REMEMBER

**WAIT 20 SECONDS BETWEEN EACH TEST.
REPLACE SENSOR COVER AFTER ADJUSTMENT.
TEST SENSOR IN ORDER TO RESTORE SENSOR.**

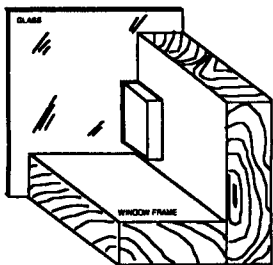
LITTON SHOCK DETECTORS

SP3237 ITI Part #13-005 (white), #13-011 (brown)

The best location for the Litton detector is on the window frame at right angles to the glass being protected. It should be as close as possible to the glass and the wire leads should either go straight up or straight down.

INSTALLATION

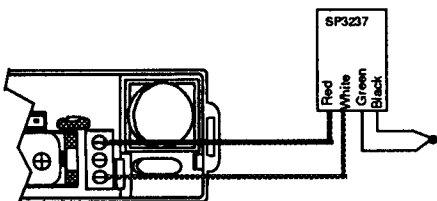
1. Mount the Shock Detector's bracket with a screw or RTV adhesive. Remember the detector leads must be straight up or down in order to work. Keep sensor within two (2) inches of the glass being detected.
2. Install the detector in the bracket.



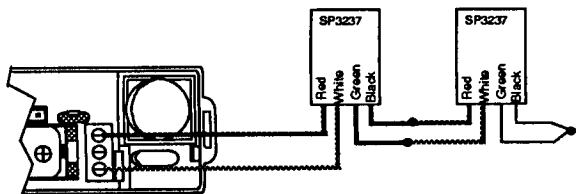
CONNECTING THE DETECTOR

1. Connect a single SP3237 Shock Detector to the Shock Sensor as shown. Be sure to crimp or solder the black and green leads together if you aren't adding any external reed switches. They act as a tamper loop.

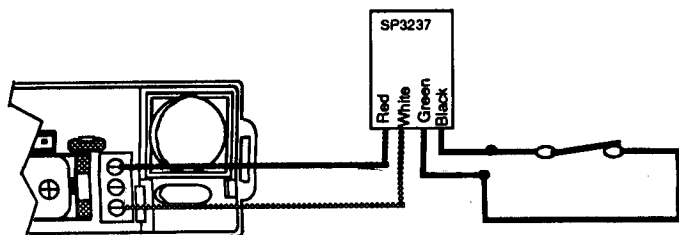
Shown wired for non reed switch use. Red wire would go to #2 if internal reed switches are used.



2. Connect a maximum of five detectors to one SHOCK SENSOR. If using multiple detectors they must all be mounted exactly the same way on a similar surface protecting similar glass areas. This is because the individual detector sensitivity is not adjustable, the only adjustment is on the transmitter itself and thus it will be set the same for all detectors.



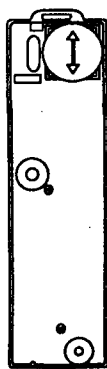
If internal reed switches are not used, connect one or more shocks to 1 & 3 as shown. Always solder or crimp black and green leads of last unit.



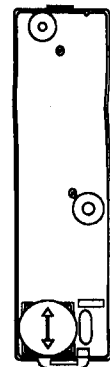
If an external reed switch is to be used, connect the switch in series with the BLACK and GREEN leads as shown.

SP3227 (ITI Part #13-214 (white))

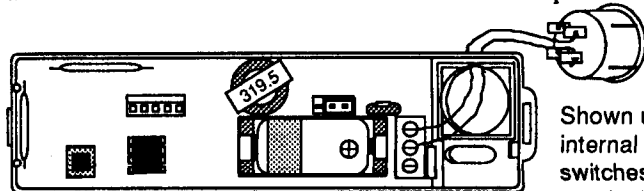
The SP3227 is a recessed shock sensor fitted inside an ITI Shock Sensor. The Recessed sensor can be used inside the shock sensor or can be wired directly to the shock sensor for remote sensor mounting. The same mounting considerations hold true for this version of sensor. It must be within 2 inches of the glass it is detecting.



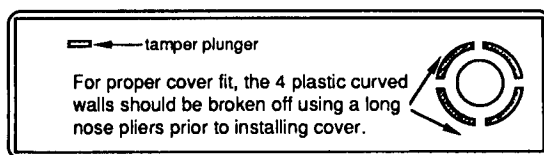
The drawings on the left - right show the proper position on the arrow on the shock detector. The position of the arrow is only a concern when the sensor is mounted vertically. If the sensor is mounted horizontal (flat) the arrow can point in any direction. Having the detector arrow in the position shown will meet most application needs.



Push wires and SP3227 up through the 3/4" hole until the detector seats flush with the bottom of the plastic base.



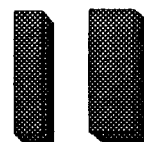
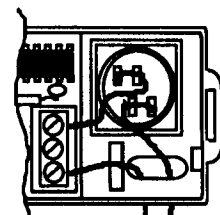
Shown using internal reed switches, terminals 2 & 3.



The average sensitivity setting would be with the arrow pointing at 12 O'clock. Clockwise direction of rotation increases chock sensitivity. When the Sensor is mounted in certain orientations it is hard to access the pot to set sensitivity. To do this you must unsnap the PCB from the chassis, make pot adjustment, re-snap PCB onto plastic chassis and re-test sensor. Continue this operation until the sensitivity is set correct. See testing on front page.



Terminal connections are shown NOT using internal reed switch. To use internal reed switches, connect the detector to terminals 2 & 3.



Solder & tape splice between switch and shock

External reed switch