

## MULTI-FUNCTION ANALYZER AND TESTER

# MA-850

**U**ltrak's microprocessor-based MA-850, multi-function, 8-zone analyzer is the ultimate in shock sensor analyzers.

The MA-850 offers 8 zones for large shock sensor installations. Ultrak is the first to introduce an analyzer with a built-in tester for each zone.

The installer simply mounts the shock sensors, connects them to the MA-850 puts the MA-850 into the automatic mode and strikes the window or door frame containing the mounted shock sensors. The sensitivity is then automatically set for that zone.

*... It's simply automatic — fast and easy.*

All these features, and at a cost that's less than two of our 3-zone UA-350 analyzers.



## FEATURES

- 8 individual input/output zones
- Automatic test and set-up for each zone
- Optional relay output with MA-850R analyzer
- 3 modes of analyzing sensors available:
  - Ultrak time/pulse integrated mode
  - Glass break mode
  - Pulse count mode
- Will analyze up to 15 sensors per zone, for a total of 120 sensors
- Works with the Ultrak US-1, US-2, US-4, SD-2, SD-4 and other inertia shock sensors
- Reduces installer's set-up time dramatically with the automatic set-up feature



# MA-850

## TECHNICAL SPECIFICATIONS

### ELECTRICAL

Displays/Controls	7-segment numerical display
Reset Button	Clears the display, also used for programming
Power Requirements	Voltage 12V DC Current 20mA, no relays, display off. Display of "8" will add about 35 mA
Inputs	8 zone inputs. Each zone has E.O.L. resistor monitoring
External Reset	Voltage from panel clears the display when the system arms
High Input Voltage	Greater than +3.5 volts
Low Input Voltage	Less than +1.0 volts
Outputs	8 zones. Direct interfacing to control panel
Standard model (MA-850)	8 open collectors
Optional model (MA-850R)	Sockets for 8 relays plus 24 position terminal strip for 3 terminals per 850R relay: C, NC and NO (1 relay installed)
Tamper Switch	Cabinet tamper switch included. Two terminals provided so tamper switch can be wired into any loop.

### MODELS

**MA-850** 8-zone analyzer with three modes of analyzing the shock sensors. 8 input/output zones are open collectors which will trip E. O. L. supervised zones on the control panel. Time/pulse integration circuitry, glass break or pulse count, built-in auto tester and automatic sensitivity learn mode. 15 sensors per zone for a total of 120 (US-1, US-2, or US-4). White. 6 15/16" x 5" x 1" H.

**MA-850R** Same as MA-850, but will accept up to 8 850R relays.

**850R** Relays for MA-850R

**US-1** Flush mount, 2-wire, 1/2" body diameter, 12" leads, gold contacts. Analyzer required. Brown or white. 1/2" W x 1/2" H x 11/16" D.

**US-2** Surface mount shock sensor, 2-terminal, gold contacts. Can be mounted in any plane: vertical, horizontal or any angle in between by simply rotating the sensor in the housing. Analyzer required. Brown or white. 1 13/16" x 15/16" x 5/8" H.

**US-4** Surface mount shock sensor with contact. 4-terminal with tamper, built-in reed switch, gold contacts and magnet assembly. Can be mounted in any plane: vertical, horizontal or any angle in between by simply rotating the sensor in the housing. Analyzer required. Brown or white. 2 3/8" x 1 1/4" x 3/4" D. Magnet 2" x 7/16" x 1/2" D.

**UA-2000** Universal single-zone analyzer. LED alarm test indicator, time/pulse integration circuitry with auto reset. Use up to 15 standard sensors (US-1, US-2 or US-4). Sensitivity adjustable. Auto reset for relay and LED. Wire leads. Works with UA-350 Tester. 1 1/2" x 1 1/4" x 3/4" H.

**UA-350** 3-zone shock analyzer with tamper and 3 output relays. 3 momentary individual relay outputs. Time/pulse integration circuitry, LED zone display with auto reset for alarm test indication. Use up to 15 standard sensors per zone for a total of 45 (US-1, US-2 or US-4). Sensitivity adjustable by zone. White. 6 15/16" X x 5" H x 1" D.

Design and specifications subject to change without notice.

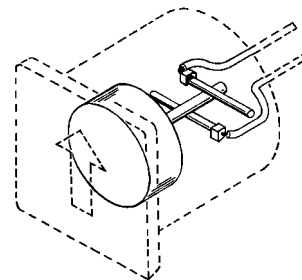
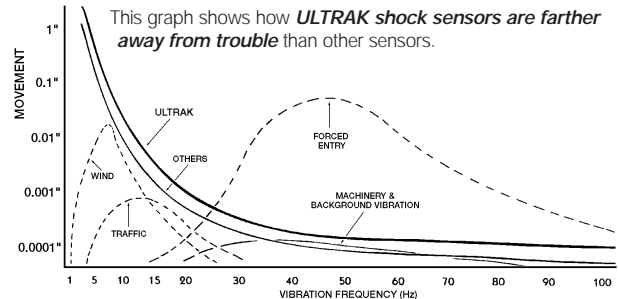
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### Why Ultrak Shock Sensors Work Better

The unique leverage action in the design of the **ULTRAK** system means that the moving mass weight is lighter than that of other sensors. This means that the sensors are less sensitive to wind and traffic-generated vibrations, when compared to other manufacturers.

**The true wiping action of the gold CROSSPOINT contacts,** achieved by providing resilience to the contact bars, means that the sensors are less sensitive to low-level vibrations.

This graph shows how **ULTRAK shock sensors are farther away from trouble** than other sensors.



This figure shows how leverage is used in our design concept to provide a crowbar action on the cross-point contacts.

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