ULTRASHOCK-EB

TEMPERATURE, PRESSURE, HUMIDITY & TRI-AXIAL SHOCK DATA LOGGER WITH EXTENDED BATTERY

MADGETECH
WE BUILD DATA LOGGERS

Features

- All inclusive design
- Built-in accelerometers
- 60 day battery life
- High speed download
- Low cost
- Reusable
- User-friendly
- CE compliant

Applications

- Complete environmental shipment monitoring
- Shipping live cargo
- Aircraft turbulence measurement
- Endurance testing
- Assembly line monitoring
- Brake & crash testing
- Laboratory drop testing
- Machinery monitoring
- Railcar coupling impacts

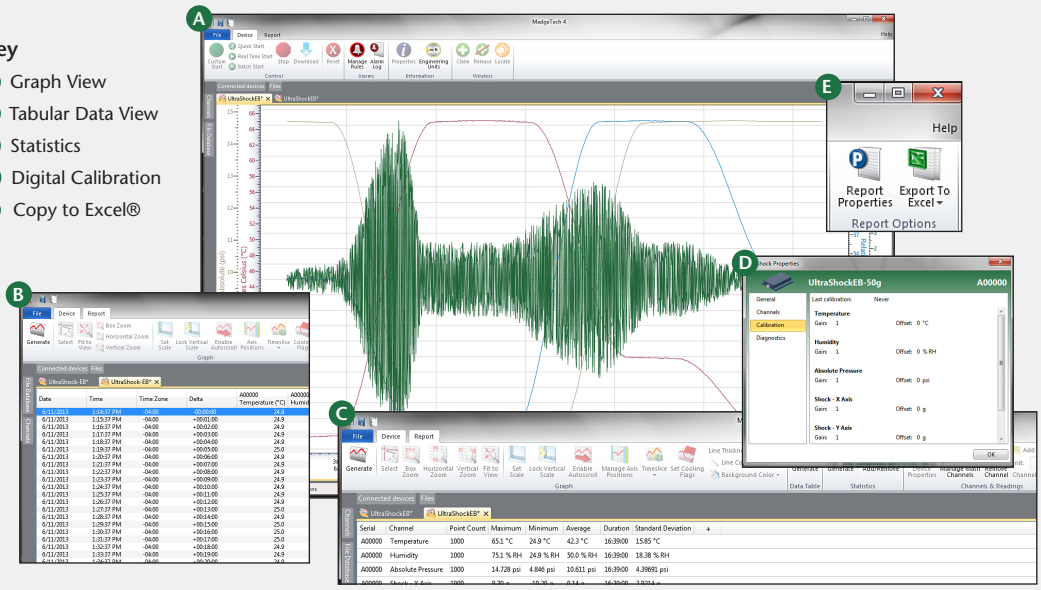
The UltraShock-EB is a battery powered, stand alone temperature, pressure, humidity and 3-axis shock recorder which offers a battery life of up to 60 days typical. The unit measures and records temperature, pressure and humidity at the selected reading rates, while shock is recorded as the peak acceleration levels over the same interval.

The UltraShock-EB is specifically designed for documenting dynamic environments such as moving vehicles, trucks, containers, ships, etc. The device is also valuable in characterizing environments such as production and assembly lines of delicate electronics, IC fabrication, communications and computer components. This is an all-in-one compact, portable, easy to use device that will measure and record up to 174,762 measurements per channel. The storage medium is non-volatile solid state memory, providing maximum data security even if the battery becomes discharged. The device can be started and stopped directly from your computer. The UltraShock-EB makes data retrieval quick and easy. Simply plug it into an empty USB port and our user-friendly software does the rest.

MADGETECH DATA LOGGER SOFTWARE

Key

- A Graph View
- B Tabular Data View
- C Statistics
- D Digital Calibration
- E Copy to Excel®



Software Features:

- Multiple graph overlay
- Statistics
- Digital calibration
- Zoom in/ zoom out
- Lethality equations (F0, PU)
- Mean Kinetic Temperature
- Full time zone support
- Data annotation
- Min./Max./Average lines
- Data table view
- Automatic report generation
- Summary view
- Multilingual

ULTRASHOCK-EB SPECIFICATIONS*

*SPECIFICATIONS ARE SUBJECT TO CHANGE WITHOUT NOTICE. SPECIFIC WARRANTY REMEDY LIMITATIONS APPLY.

TEMPERATURE

Sensor:	Semiconductor
Range:	-20 °C to +54 °C
Resolution:	0.1 °C
Accuracy:	±0.5 °C (0 °C to +50 °C)

HUMIDITY

Sensor:	Capacitive Polymer
Range:	0 %RH to 95 %RH
Resolution:	0.1 %RH
Calibrated Accuracy:	±3 %RH (±2 %RH typical at 25 °C)
Specified Accuracy Range:	+10 °C to +40 °C; 10 %RH to 80 %RH

PRESSURE

Sensor:	Semiconductor Strain Gage
Range:	0 PSIA to 30 PSIA
Resolution:	0.002 PSIA
Calibrated Accuracy:	±1.0 %FSR at 25 °C; ±0.2 % typical
Specified Accuracy Range:	0 PSIA to 30 PSIA, 25 °C

SHOCK

Accelerometer Type:	MEMS Semiconductor			
Acceleration Range (g):	±5 g	±50 g	±100 g	±250 g
Acceleration Resolution (g):	0.01 g	0.05 g	0.1 g	0.2 g
Calibrated Accuracy (g):	±0.2 g	±1.0 g	±2.0 g	±4.0 g
Absolute Max. Acceleration:	250 g (all versions)			
Sampling Rate:	1.953 ms/512 Hz			
Accelerometer Freq. Resp.:	0 Hz to approx. 400 Hz			

Memory:	174,762 readings per channel
Reading Rate:	64 Hz to 5 minutes for shock, selectable in software. Temperature, pressure and humidity, approximately every 2 seconds at intervals faster than 2 seconds, otherwise sampled at the reading rate.
Start Modes:	Software programmable immediate start or delay start up to 180 days from PC launch.
Password Protection:	An optional password may be programmed into the device to restrict access to configuration options. Data may be read out without the password.
Calibration:	Digital calibration through software
Calibration Date:	Automatically recorded within device
Battery Type:	6 D-cell alkaline batteries, **user replaceable**
Battery Life:	60 days typical at 25 °C, 1 minute reading rate
Data Format:	Date and time stamped gravities (g and mg), temperature (°C, °F, K, °R), humidity (%RH, mg/ml water vapor concentration), pressure (PSIA, inHg, mmHg, bar, atm, Torr, Pa, kPa, MPa)
Time Accuracy:	±1 minute/month at 20 °C to 30 °C
Computer Interface:	USB (interface cable required); 115,200 baud
Software:	XP SP3/VIsta/Windows 7/Windows 8
Operating Environment:	-20 °C to +54 °C, 0 %RH to 95 %RH (non-condensing)
Dimensions:	5.5 in x 5.4 in x 3.2 in (140 mm x 137 mm x 80 mm)
Weight:	80 oz (2.3 kg)
Enclosure:	Anodized aluminum
Approvals:	CE

BATTERY WARNING: DO NOT CONNECT IMPROPERLY, CHARGE OR DISPOSE OF IN FIRE, BATTERY MAY EXPLODE OR LEAK.

ORDERING INFORMATION

MODEL	DESCRIPTION	
ULTRASHOCK-5-EB	Temperature, Humidity, Pressure and ±5g Tri-Axial Shock Recorder	
ULTRASHOCK-50-EB	Temperature, Humidity, Pressure and ±50g Tri-Axial Shock Recorder	
ULTRASHOCK-100-EB	Temperature, Humidity, Pressure and ±100g Tri-Axial Shock Recorder	
ULTRASHOCK-250-EB	Temperature, Humidity, Pressure and ±250g Tri-Axial Shock Recorder	
IFC200	Software, manual and USB interface cable	
NIST	NIST Calibration Certificate	
MN1300	Replacement battery for UltraShock-EB (6 required)	

ASK ABOUT OUR OTHER DATA LOGGERS

Temperature
Humidity
Pressure
pH
Level
Shock
LCD Display
Pulse/Event/State
Current
Voltage
Wireless
Intrinsically Safe
Spectral Vibration
Motion