TSR101

TRI-AXIAL TRANSIENT SHOCK RECORDER

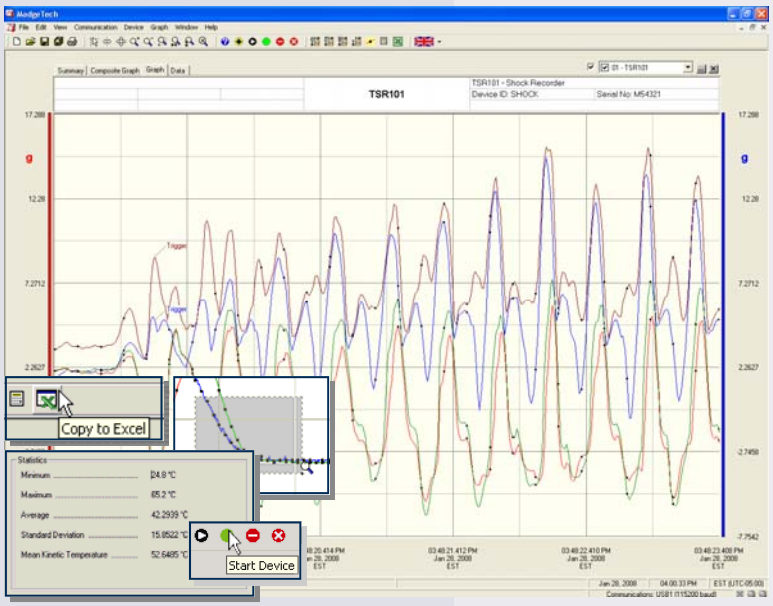
Features

- Records 3-axis shock
- Built-in accelerometers
- Measures dynamic and static acceleration
- Low cost
- Programmable start time
- Reusable
- Compact
- Optional password protection
- High speed download (115,200 baud)

Applications

- Fragility testing
- Laboratory drop testing
- Brake testing
- Assembly line monitoring
- Aircraft turbulence measurement
- Machinery monitoring
- Railcar coupling impacts
- Shipment monitoring

The TSR101 is a battery powered, stand alone 3-axis shock recorder. The TSR101 measures and records instantaneous shock levels when the user-selectable shock levels have been exceeded. There are 15 rates to chose from ranging from 1024Hz to 1 Hz. The TSR101 is valuable in characterizing environments such as packaging & fragility assessment (drop testing), break & crash testing, and shipping validation. This is an all-in-one compact, portable, easy to use device that will measure and record approximately 349,000 measurements per axis. 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 and its small size allows it to fit almost anywhere. The TSR101 makes data retrieval quick and easy. Simply plug it into an empty COM or USB port and our user-friendly software does the rest.



MadgeTech Data Recorder Software
displays shock data in an easy to use graph.

The Windows®-based software package allows the user to effortlessly collect, display and analyze data. A variety of powerful tools allow you to examine, export, and print professional looking data with just a click of the mouse.

Click MadgeTech Software for more information or to download the software.

879 Maple Street · Contoocook, NH 03229
PO Box 50 · Warner, NH 03278 · Phone: (603) 456-2011 · Fax: (603) 456-2012

TSR101 SPECIFICATIONS*

Channels: Shock (3 axes)

Accelerometer Type: MEMS Semiconductor

Acceleration Range (g):	±5	±50	±100	±250
Calibrated Accuracy (g):	±0.2	±1	±2	±4
Acceleration Resolution (g):	0.01	0.05	0.1g	0.2

Reading Rate Range: 15 options from 0.976ms/1,024Hz to 1 second, selectable in software

Trigger Specifics: User settable trigger levels on X, Y, and/or Z axes, and specifies # of samples after triggers

Pre-Trigger Specifics: Records a pre-trigger of up to 50 readings prior to the trigger point

Frequency Response: 0Hz to approx. 400Hz (50, 100g) (0-512Hz (5g))

Real Time Recording: May be used with PC to monitor and record instantaneous acceleration in real time (Only at 1 second rate, not possible during logging)

Start Modes: Software programmable immediate start or delay start up to 180 days in advance

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 is available to the user through software

Calibration Date: Automatically recorded within device

Battery Type: 9V lithium or alkaline battery included; **user replaceable**

Battery Life: 7 days typical with lithium battery, immediate start, 1024Hz

Data Format: Date and time stamped gravities (g and mg)

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

Operating Environment: -20 to +60°C, 0 to 95%RH non-condensing

Dimensions: 3.5" x 4.4" x 1.0" (89mm x 112mm x 26mm)

Weight: 12 oz (340 g)

Materials: Anodized aluminum

Approvals: CE

BATTERY WARNING: DISCARD USED BATTERY PROMPTLY. KEEP OUT OF REACH OF CHILDREN. DO NOT DISPOSE OF IN FIRE, RECHARGE, PUT IN BACKWARDS, DISASSEMBLE, OR MIX WITH OTHER BATTERY TYPES. MAY EXPLODE, FLAME, OR LEAK AND CAUSE PERSONAL INJURY.

SOFTWARE FEATURES

Multiple Graphs: Simultaneously analyze data from several units or deployments; easily switch to a single data series

Graphical Cursor: One click displays readings by time, value, parameter or sample number

Data Table: Instantly access tabular view for detailed dates, times, values, and annotations

Scaling Options: Autoscale function fits data to the screen, or allows user to manually enter their own values

Formatting Options: Change colors, line styles, plotting options, show or hide channels quickly

Statistics: Calculate averages, min, max, standard deviation

Export Data: Export data in a variety of common formats, or switch to Excel® with a single click

Calibration: Automatically calculate and store calibration parameters

Communications: Automatically sets up communications port, or lets user select configuration

Printing: Automatically print graphical or tabular data

*SPECIFICATIONS ARE SUBJECT TO CHANGE WITHOUT NOTICE.
SPECIFIC WARRANTY AND REMEDY LIMITATIONS APPLY.
CALL 1-603-456-2011 OR GO TO WWW.MADGETECH.COM FOR DETAILS.

ORDERING INFORMATION

Model	Description	
TSR101-5	±5g Tri-Axial Shock Recorder	
TSR101-50	±50g Tri-Axial Shock Recorder	
TSR101-100	±100g Tri-Axial Shock Recorder	
TSR101-250	±250g Tri-Axial Shock Recorder	
IFC200	Software, manual and USB interface cable	
U9VL-J	Replacement battery for TSR101	

ASK ABOUT OUR OTHER DATA RECORDERS

Temperature	Pulse/Event/State
Humidity	Low Level Current
Pressure	Low Level Voltage
pH	RF Transmitters
Level	Intrinsically Safe
Shock	Spectral Vibration
LCD Display	

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