# **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

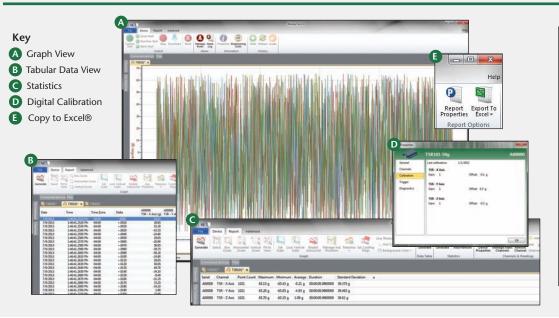
The TSR101 is a battery powered, stand alone 3-axis shock recorder. The TSR101 measures and records instantaneous shock levels when the user-selectable shock levels have been exceeded. There are 15 rates to chose from ranging from 1024Hz to 1 Hz. The TSR101 is valuable in characterizing environments such as packaging & fragility assessment (drop testing), break & crash testing, and shipping validation.



MADGETECH

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 USB port and our user-friendly software does the rest.

### MADGETECH DATA LOGGER SOFTWARE



### 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

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## **TSR101 SPECIFICATIONS\***

Channels:	Shock (3	axes)			Calibration:	Digital calibration is available to the user through software
Accelerometer Type:	MEMS Semiconductor				Calibration Date:	Automatically recorded within device
Acceleration Range (g):	±5	±50	±100	±250	Battery Type:	9V lithium or alkaline battery included; user replaceable
Calibrated Accuracy (g):	±0.2	±1	±2	±4	Battery Life:	7 days typical with lithium battery, immediate start, 1024Hz
Acceleration Resolution (g):	0.01	0.05	0.1	0.2	Data Format:	Date and time stamped gravities (g and mg)
Reading Rate Range:	ns from 0.976ms/1,024Hz to 1 electable in software			Time Accuracy:	±1 minute/month (at 20 °C to 30 °C)	
Trigger Specifics:		ble trigger and specif Jers			Computer Interface:	USB (interface cable required), 115,200 baud
Pre-Trigger Specifics:		Records a pre-trigger of up to 50 readings prior to the trigger point			Software:	XP SP3/Vista/Windows 7/Windows 8
Frequency Response:	0Hz to ap (0-512Hz	prox. 400ł	Hz (50, 100	) g)	Operating Environment:	-20 °C to +60 °C, 0 to 95%RH non-condensing
	May be u	sed with P			Dimensions:	3.5" x 4.4" x 1.0" (89 mm x 112 mm x 26 mm)
Real Time Recording: real t	real time	stantaneou (Only at 1 luring logg	second rate		Weight:	12 oz (340 g)
Start Modes:		programm			Materials:	Anodized aluminum
	,	tart up to '	,	n advance	Approvals:	CE
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			s. Data	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.	

## **ORDERING INFORMATION**

MODEL	DESCRIPTION	
TSR101-5	±5g Tri-Axial Shock Recorder	ASK A
TSR101-50	±50g Tri-Axial Shock Recorder	DAT LOGO
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	



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