



For further information on the ROMDAS road measurement system please visit [www.romdas.com](http://www.romdas.com)

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**ROMDAS**  
Manufactured by  
Data Collection Ltd.  
New Zealand

*providers of innovative technology for  
measuring and managing roads*

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## MiniROMDAS Roughness Measurement System

### Overview

MiniROMDAS® is a streamline version of the full ROMDAS system. It is designed as an easy to install, portable and cost effective option for customers who need to collect road roughness and/or GPS data.

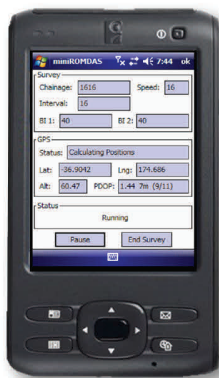
The miniROMDAS® software was created to run on the Windows Mobile operating system and once installed will automatically collect and integrate distance, speed and road roughness data (GPS optional).

The system records roughness data from either one or two Bump Integrators (BI). The most common configuration uses a single Bump Integrator connected to the centre of the axle. In the case of vehicles with independent rear suspension two Bump Integrators are used to collect data from each wheel path.

Similar to the full ROMDAS® the miniROMDAS® system also connects to the ROMDAS Hardware Interface. However, the full ROMDAS system runs on a PC computer, while miniROMDAS® uses a hand held Windows Mobile devices.

All roughness measurements are recorded automatically and based on the user-defined roughness sampling interval, as per the full ROMDAS system.

The miniROMDAS stands out from other response-type roughness measuring systems thanks to its competitive price and use of proven technology.



Data Logger



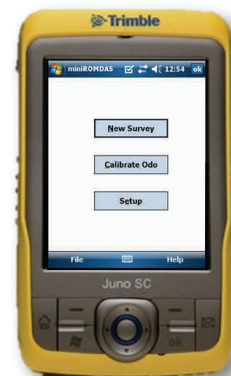
### Features & Benefits

miniROMDAS offers a more cost effective and simpler solution for users wanting only roughness or GPS data.

#### Features of miniROMDAS® include:

- ⇒ One screen display for easy and reliable use;
- ⇒ Simple to operate so minimal training is required;
- ⇒ Easy to download data to computer with USB or Bluetooth;
- ⇒ A step by step calibration wizard for odometer calibration;
- ⇒ Roughness recording that is fully automated over user-defined sampling intervals;
- ⇒ Data is processed in the ROMDAS PC software and output in Microsoft Access files.
- ⇒ Optional GPS integration;

The data is uploaded from the hand held data logger to a PC with ROMDAS® software and data is automatically processed using roughness calibration coefficients into a Microsoft Access .mdb file with the roughness output in IRI (or any other roughness index that the system is calibrated to).



Data Logger and GPS Receiver



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## MiniROMDAS Roughness Measurement System

### Installation

There are only two components to install in the vehicle; the odometer sensor and the Bump Integrator (BI). In addition, cabling must be run to the iPAQ data logger. All the hardware and cabling needed for installation are supplied with the product.

miniROMDAS® installation depends on the layout of the vehicle and the dashboard. It can be hand held or affixed to the top of the dashboard.

### Bump Integrator

The BI is installed at the rear of the vehicle, above the rear suspension. The instrument is mounted to the floor of the vehicle and a wire is connected to the suspension.

### Cabling

The following cables are supplied:

- ◆ **Power:** a 12 V vehicle charger is provided to power the data logger;
- ◆ **Odometer:** the odometer is connected to the ROMDAS hardware interface through a 5-pin DIN connector;
- ◆ **BI:** the BI unit(s) are connected to the ROMDAS hardware interface through a 5-pin DIN connector.

All cabling is supplied with the unit. Since the cables are industry standard, replacement cables are readily available at low cost.

### Odometer Sensor

miniROMDAS comes with one of four types of odometer sensors:

- ◆ **Proximity sensor:** General purpose fits all vehicles;
- ◆ **Electronic:** These sensors are used with electronic speedometers. A wire is connected to the 'pulse' line of the transmission;
- ◆ **Speedometer cable - spliced in:** These are used with older vehicles that use speedometer cables. The cable is removed from the outer housing and a sensor is spliced in;
- ◆ **Speedometer cable—transmission connection:** This sensor works on newer Japanese vehicles. It connects the existing speedometer cable and the transmission.



### Technical Specifications

<b>Roughness Output</b>	Typically IRI but can be calibrated to any roughness index
<b>Data Storage</b>	More than 100,000 km
<b>Output File Format</b>	Microsoft Access files
<b>Integrated GPS</b>	12 Channel with full SBAS
<b>GPS Rate</b>	1 Hz
<b>GPS Output</b>	Can output into any datum and co-ordinate system with ROMDAS Co-Ordinate Converter