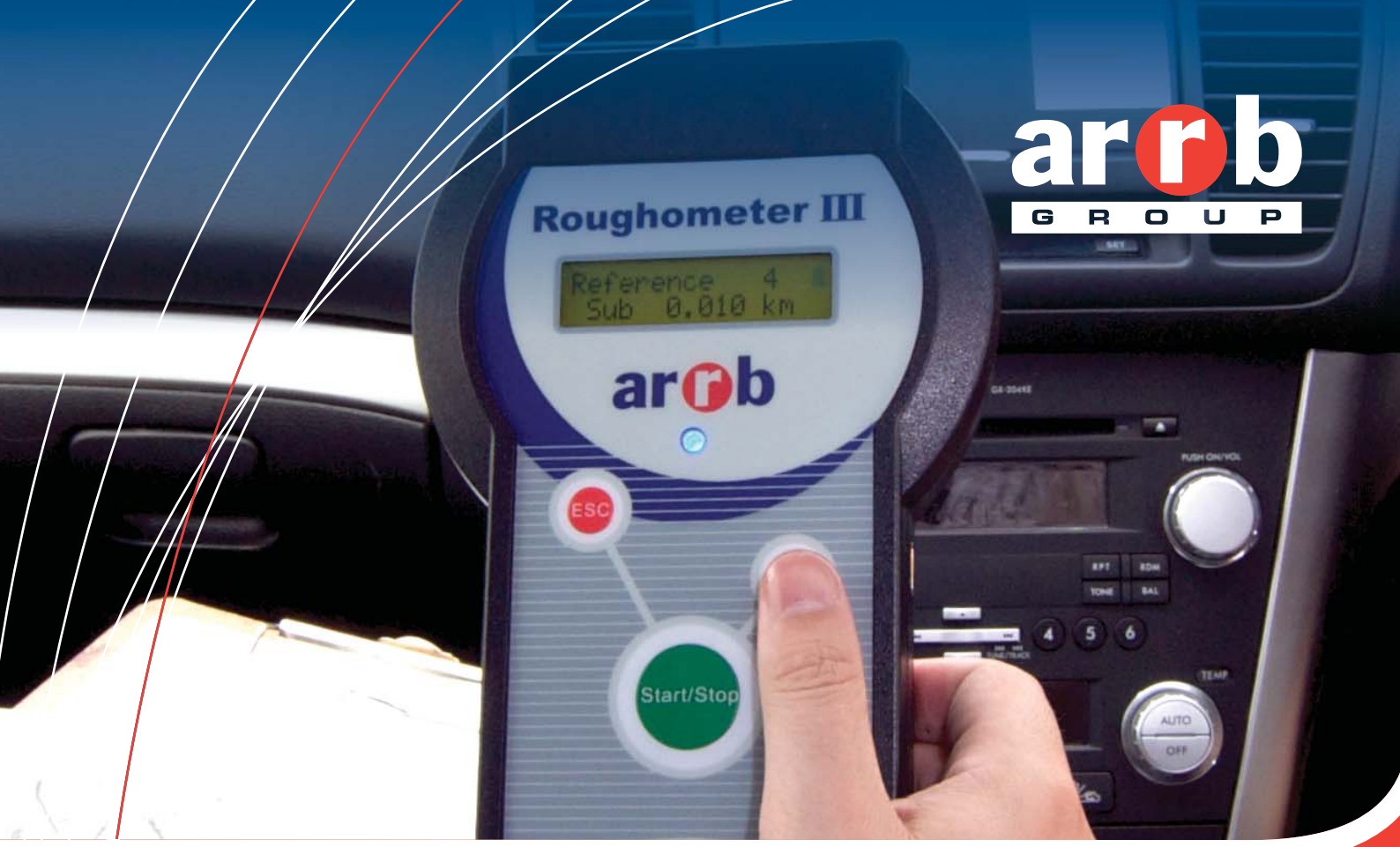

Roughometer III

The Roughometer III is a cost-effective, easy to install, portable device that provides objective and repeatable roughness results on both sealed and unsealed roads.

The Roughometer III is a response-type roughness device, complying to World Bank Class 3 requirements. Unlike other devices in this class, the Roughometer III eliminates the uncertainties associated with the vehicle (such as the vehicle's suspension or passenger weight) by directly measuring the axle movement with a precision accelerometer. This means the Roughometer III does not need to be calibrated experimentally to produce true International Roughness Index (IRI) results.

Practical and easy-to-use, the Roughometer III provides a simple technique for road quality assessment and has the advantage of an integrated GPS unit and the ability to collect up to 13,000 km of data.

Once a survey has been undertaken, the Roughometer III processing software enables the data to be formatted into custom graphs, tables and maps.

Applications

- Provide objective data for true evaluation of the roughess level of the road
- Objectively compare and analyse which roads are in need of repair
- Monitoring roughness deterioration trends

collect accurate roughness data with integrated GPS

Features

- Accurate and repeatable outputs regardless of vehicle type, suspension and passenger loads
- Axle-mounted inertial sensor used to determine road profile and roughness
- Integrated GPS for location data with on-screen display of satellite tracking status
- Outputs in International Roughness Index (IRI) or NASRAA counts
- Can be installed in most passenger and lighty commercial vehicles
- Fast and simple download of data, to laptop or computer, using USB connection
- Multi-format reports available:
  - Tables
  - graphs
  - GPS maps
  - CSV files

Components

- Roughometer hand-held controller
- Interface module
- Inertial module and mounting brackets
- Distance Measurement Instrument (DMI)
- GPS antenna with magnetic base mount
- Processing software

bsi. ISO 9001 Quality Management

About ARRB

ARRB Group Ltd (ARRB) provides research, consulting and information services to the road and transport industry. ARRB applies research outcomes to develop equipment that collects road and traffic information and software that assists with decision making across road networks. ARRB is the leading provider of road research and best practice workshops in Australia. ARRB Group Ltd | ABN 68 004 620 651

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Roughometer III Datasheet

Description	***Specification***
Data storage capacity	13,000 km (2GB storage)
Survey speed	Dependant on road condition, optimal speed 40 to 60 km/h (25 to 40 mph)
Roughness units	International Roughness Index (IRI) Australian bump integrator units (NAASRA)
Roughness accuracy	IRI: Correlates to better than +/- 0.5 IRI of true IRI (when operated within design parameters) NAASRA: +/- 12 NAASRA counts
Roughness resolution	IRI: 0.1 IRI NAASRA: 5 NAASRA counts
Data sampling interval	50 mm (2 inches)
Distance measurement	Wheel mounted Distance Measurement Instrument (DMI)
Distance Units	User selectable. Metric (metres, kilometres) or Imperial (miles)
Distance accuracy	Better than 0.1% with optional DMI
Power source	12V DC, with cables supplied for cigarette lighter connection or direct battery connection
Communication	USB cable adapter
Software operating system support	Windows 98/NT2000/XP/Vista Business/Windows 7 (PC not supplied)
GPS Position accuracy	+/- 3 to 15 metres (subject to availability of WAAS)
GPS Update rate	1 second
GPS Antenna mounting	Magnetic roof mount (supplied)