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TM2 – Texture Meter

The TM2 surface texture meter, with the latest electronics, is the result of an extensive in-house research and development programme by W.D.M. Limited to provide all the functionality of a routine texture measurement instrument, coupled with extensive analysis tools.

The TM2 is recognized as delivering the definitive pavement surface texture measurement standard. The updated TM2 measures a broad swathe of the road profile transversely over a width of 100mm at very frequent intervals to build a detailed record of the surface, with its average texture depth, and deliver repeatable and consistent results.



It is widely recognised that pavement texture is an extremely important factor in the control of surface friction and subsequent road safety. It is also an important parameter for the determination of factors such as noise emission from vehicle tyres.

The TM2 is powered by a rechargeable lithium battery and projects a very thin continuous line of light onto the road surface, transversely to the direction of travel. This procedure creates a broad swathe of road profile measurement across the road surface over a width of 100mm, which can be repeated every 2mm to every 5mm (depending on the user requirements) at an ideal walking speed of 3.5kph. 100mm has been chosen to provide the MPD statistical 100mm length (as determined in ISO 13473) and to maintain the low profile of the device.

The device is easy to operate and delivers repeatable and consistent results. Dropout levels, often a major problem on new asphalt, are generally low, typically around 5%. The TM2 has been further updated to introduce GPS tracking technology, for greater survey detail.

Data Storage

Survey data is stored internally, on the tablet PC, and on to external USB pen drives. 1km of standard texture and GPS data, providing 10 and 50m results will require only 65kb of data storage. If 'raw' data is selected, 1km of test data will require up to 400Mb of data storage, depending on the regularity of measurements.

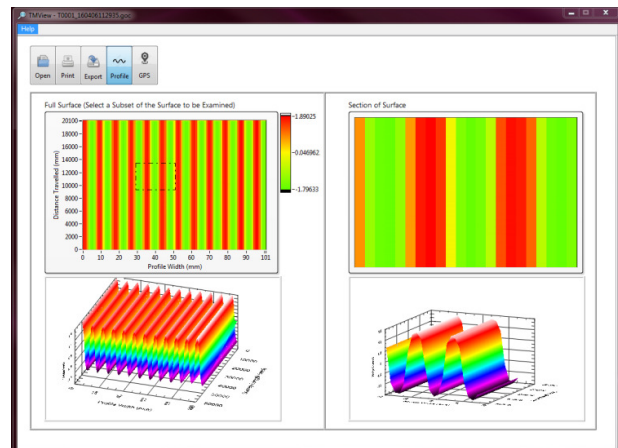
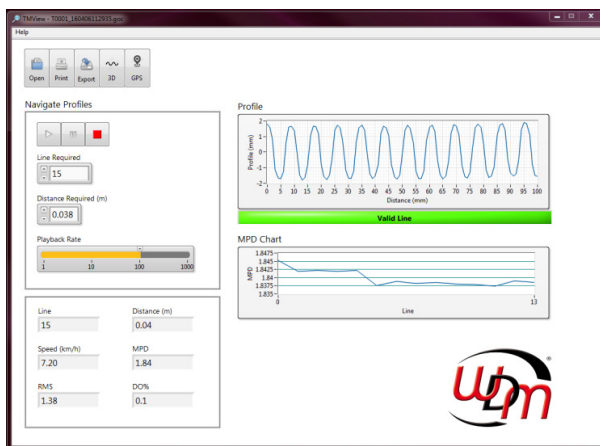
Survey Detail

The operator can optionally choose to store standard texture data files or all the raw data, which can then be analysed by using the standalone TMView software, an optional post-processing software-set, that allows you to review and analyse your surveys, line-by-line. It also includes a GPS feature for mapping the route taken on the survey.



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Thanks to movement triggered surveying, the TMView program can also be used to provide a 3D representation of the surveyed area:



Computer

The TM2 utilises a 7" fanless, widescreen XGA Touch Panel PC, incorporating an Intel ATOM N2600 1.66GHz Processor. The system runs the familiar Windows 7 operating system, and has a 5-wire resistive touch screen, which may be operated by either finger or stylus. The tablet includes a generous 32GB hard-drive.

The panel PC itself is attached by a one-click operation and is fully manoeuvrable. Data can be transferred from the TM2 to a removable USB pen drive with ease.



TM2 Specifications

Laser line sampling frequency
Laser line sampling length
Profile depth measurement range
Profile depth measurement resolution
Walking speed range
Survey distance with external USB flash disk
Batteries – lithium ion rechargeable
Battery operating time
(Battery also replaceable with simple docking system)
CE approval
ISO Compatibility
Weight

User Selectable (2mm-5mm regularity)
100mm
50mm
<0.05mm
3-5kph
>10km
36v
Up to 10 hours
YES
ISO 13473 in three parts
22 kg

- **Product patent nos.: Australia – 2009202347 / UK – GB2460892, / USA – 8,159,679 / Hong Kong – 1139200.**
- **Austroads has validated TM2 as a calibrated reference device for measuring pavement surface texture (AG:AM/T014 – Reference Device Method)**