

The *IMdigital* -T203 Installers Meter

Makes measuring VHF/UHF Analogue and digital signals painless

Before digital terrestrial transmissions had begun Swires Research saw the difficulties that would be encountered:

- Firstly, analogue meters would be unsuitable for measuring digital signals.
- Secondly, poor or misleading information could lead to confusion.

Swires therefore designed a meter specifically aimed at Digital signals that would also measure Analogue signals - the *IMdigital-T*, (Analogue/Digital Terrestrial) This latest version *IMdigital-T203* now includes VHF coverage.

Being the only British manufacturer of television test equipment, Swires has been in the unique position of being able to provide a digital instrument proved during field experience gained in the UK.

This exercise was implemented for the digital terrestrial (DTT) market at the end of 1998. Since then several of Britains largest television retailers have bought their digital test meters from Swires.

Installer's Meter *type IMdigital -T203*

- The hand held *IMdigital-T203* designed to make the testing of analogue and digital signals as straightforward as possible.
- The *IMdigital-T203* has an in-built channel plan, Stepping through the preset channels giving the average signal reading for digital channels (peak detection for analogue) in 'dBuV' within the measured 8 MHz channel. The instrument **Automatically detects** whether the selected channel is Analogue or Digital. For digital only, pushing the "**test**" button, the meter scans the noise floor and gives the Signal-to-Noise Ratio (SNR), for the selected channel. Swires Research undertook extensive testing to ensure that



this reading is conclusive in assessing the quality of a digital signal.

The results of the SNR and level tests are presented as the level and SNR values, and then as a simple read-out of "Pass" (>26dB), "Marginal"(23-25dB) or "Fail" (< 23dB). These figures apply to the 64QAM transmissions only. For the 16QAM signals relax these figures by 3-4dB.

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- A Master unit usually held by the Service manager can reprogram the units to measure the majority of Standard VHF / UHF channels .

One *IMdigital-T203* can ‘clone’ to many other *IMdigital-T203*’s, this saves time in larger service organisations as the download takes less than 30 seconds.

The number of ‘active’ preset channels downloaded to the instrument can also be selected from 1 to 99.

- With microprocessor control, the *IMdigital-T203* offers a typical accuracy of ± 1 dB UHF band 470 to 860MHz, but guaranteed better than ± 2 dB, over the whole 50 - 860 MHz frequency bands.

• Specifications

- Frequency range: 50 to 860 MHz.
- Number of presets: 99 channel frequencies preloaded.
Cloning of units via a **designated** unit. Also possible when downloading is the number of ‘active’ presets.
- Level accuracy: Typically ± 1 dB UHF . Guaranteed $< \pm 2$ dB.(50-860MHz)
- Input range: 15 to 80 dB \square V.
- Input connector: ‘F’ type, 75ohm female (supplied with Belling-Lee to ‘F’ adapter)
- Weight: 0.5 kg.
- Dimensions: 275 mm \square 115 mm \square 63 mm.
- Power source: NiCad batteries.
- Power sources: Charging from either the mains or 12 V dc car battery.
Full charge gives 5 hours continuous use.
- Included with: Ever-ready case, Mains charger, instruction sheet.
- ‘Optional’ extras: Fuse protected car charging lead.

- An LCD display indicates both the channel being scanned and the signal level simultaneously, making recording of both parameters quick and easy. The dynamic range is 15 to 80 dBuV, with readings outside this range being indicated by “**Hi**” or “**Lo**”, respectively. A larger RF input signal can be measured if an external in-line attenuator is used.(don’t forget to add value of the attenuator to reading on the *IMdigital-T203*!)

- Environmental ruggedness and operating reliability are ensured through the use of a glass fibre, reinforced polycarbonate case and advanced surface mount technology in circuit construction. Gold plated interconnection reduces the risk of oxidisation.

- The *IMdigital-T203* was designed and is exclusively manufactured at the Swires factory in Wickford, Essex.

For further information or a demonstration, please, call:

Swires Research.
2, Orwell Court
Hurricane Way
Wickford
Essex SS11 8YJ

Tel: (01268) 574574
Fax: (01268) 574576
Email: sales@swires.com
Internet: www.swires.com