P25 Phase II TDMA Test Functions to the 3920 Digital Radio Test Set

Aeroflex announced a major feature upgrade to its market-leading 3920 Radio Test Set. The 3920 now supports P25 Phase II TDMA test functions and adds many new features for the development, manufacturing, and field test of both analog and digital PMR radios and base stations used around the world.

The 3920 Radio Test Set is the de facto world leader for testing PMR communications systems. Its modularity offers users the ability to test virtually all PMR analog and digital radio standards within one single test system. Using Aeroflex Auto-Test II scripts, the 3920 also supports automated testing and alignment of TETRA, P25, DMR, dPMR, NXDN™, as well as many analog legacy radio systems.

“This is our most extensive software upgrade yet for the 3920. It was driven by two factors—fulfilling customer requests for specific new features and adding support of the new P25 Phase II TDMA technology based on the TIA/EIA-102 standard,” said Rob Barden, director of product marketing, Aeroflex. “In addition, we have released a wide range of enhancements to our 8920 emulation mode, helping customers more easily replace obsolete Agilent test sets and smoothing the transition to a modern PMR test system that supports both legacy analog systems and the new digital systems being developed around the world. The 3920 is virtually future-proof. It’s really the only radio test set a customer will need for almost all PMR testing requirements,” he said.

New 3920 Radio Test Set Upgrades Extend its Versatility
The 3920 Radio Test Set software version 2.0.0 adds many new features. (Please refer to the Aeroflex web site for a complete list.) Highlights of major new capabilities include:
• P25 Phase II TDMA operation support added, including:
o H-CPM (inbound modulation) modulation and demodulation

o H-CPM eye diagram, distribution plot, and constellation
o H-DQPSK (outbound modulation) modulation and demodulation
o H-DQPSK eye diagram, distribution plot, and constellation
o Generation of all H-CPM standard patterns
o Generation of all H-DQPSK standard patterns
o Unit-under-test (UUT) measurements for Phase II including modulation fidelity, symbol deviation, symbol clock error, frequency error, power, and TX bit error
o Power profile diagrams of both full slots and ramp-up/ramp-down for H-CPM modulation
o New features for P25 radios have been added, including extended FM analog test functions.

• Analog Duplex: New IF and audio filters have been added to further emulate the Agilent 8920 test set, allowing users of this older test platform to easily upgrade to the Aeroflex 3920.
• Support for DMR systems such as MOTOTRBO® has been enhanced with new analog test features. DMR radios utilize both digital and FM operational modes, and with this new release, the 3920 now eliminates the need to switch between the 3920's analog and DMR digital test modes. This feature saves time when testing and aligning DMR radios.
• dPMR and NXDN standards have also been enhanced with new analog FM tests, allowing faster testing of these radio systems.
• Enhanced Auto-Test II support for Motorola APX™ Series, XTS-5000®, and other Auto-Test scripts have been added to provide enhanced, automated test and alignment features for a wide range of installed radio systems and standards.

About the 3920 Radio Test Set
The 3920 Radio Test Set is a portable tester for advanced professional analog and digital radio communications testing of portable, hand-held and mobile radios, and base stations. Building upon a long-standing reputation for excellence in professional radio communication test, the 3920 from Aeroflex is the benchmark for quality, ease of use, performance and value.

The 3920 platform is capable of testing the following systems:
• Analog – FM, AM, AM USB, AM LSB
• P25 conventional and trunking (and now P25 Phase II)
• TETRA – BS, BS T1, DM, MS, MS T1
• SmartNet/SmartZone trunking (analog or digital handoff)
• dPMR – digital Private Mobile Radio
• NXDN - 4800/9600 baud
• DMR – Digital Mobile Radio
• HPD - High Performance Data
• ARIB STD-T98

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