Software Adds Test Capability for Latest Narrowband Digital Radio Systems

LAS VEGAS—International Wireless Communications Expo -- Aeroflex Incorporated announced today two new digital radio test options for the 3500A Hand-held Radio Test Set. Software version 3.8.0 includes new features that extend the test capabilities of the 3500A to the latest land mobile digital radio standards. The 3500A can now test Digital Mobile Radio (DMR) and NXDN™ digital narrowband mobile stations and repeaters. This testing includes the ability to measure the key RF parameters of the DMR and NXDN digital modulation including FSK error, symbol deviation, frequency error, and power.

NXDN is a very narrowband radio system based on the radio standard developed by the NXDN Forum. With the 3500A, users will be able to verify that the transmitter and receiver of the NXDN radio are operating correctly by measuring key RF parameters. Included in these measurements are the modulation fidelity parameters: FSK error, symbol deviation, and frequency error. The 3500A can also generate several modulation patterns that verify the operation of a NXDN receiver. These modulation patterns can be used for receiver bit error rate testing as well as tone generation. With a user-defined Radio Access Number (RAN), technicians can test a NXDN radio without putting it into test mode.

DMR is a two slot TDMA standard based on ETSI TS 102 361-1. The 3500A performs the RF testing required to ensure that the DMR modulation is performing according to this specification. This testing includes measuring key modulation fidelity parameters such as FSK error, symbol deviation, and frequency error.

The 3500A also measures the power in the slots and the amount of magnitude error over a burst. With the capability of encoding and decoding the color code and radio ID, the 3500A can even verify the operation of a DMR radio without having to put the radio into a special test mode. The 3500A includes the capability to simulate a base repeater.

Source URL (retrieved on *05/22/2013 - 6:27am*):
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