

Agilent E6389A

E6389A Nortel Cellular AMPS/TDMA and PCS TDMA Base Station Test Software for the E6381A AMPS/TDMA* Base Station Test Set

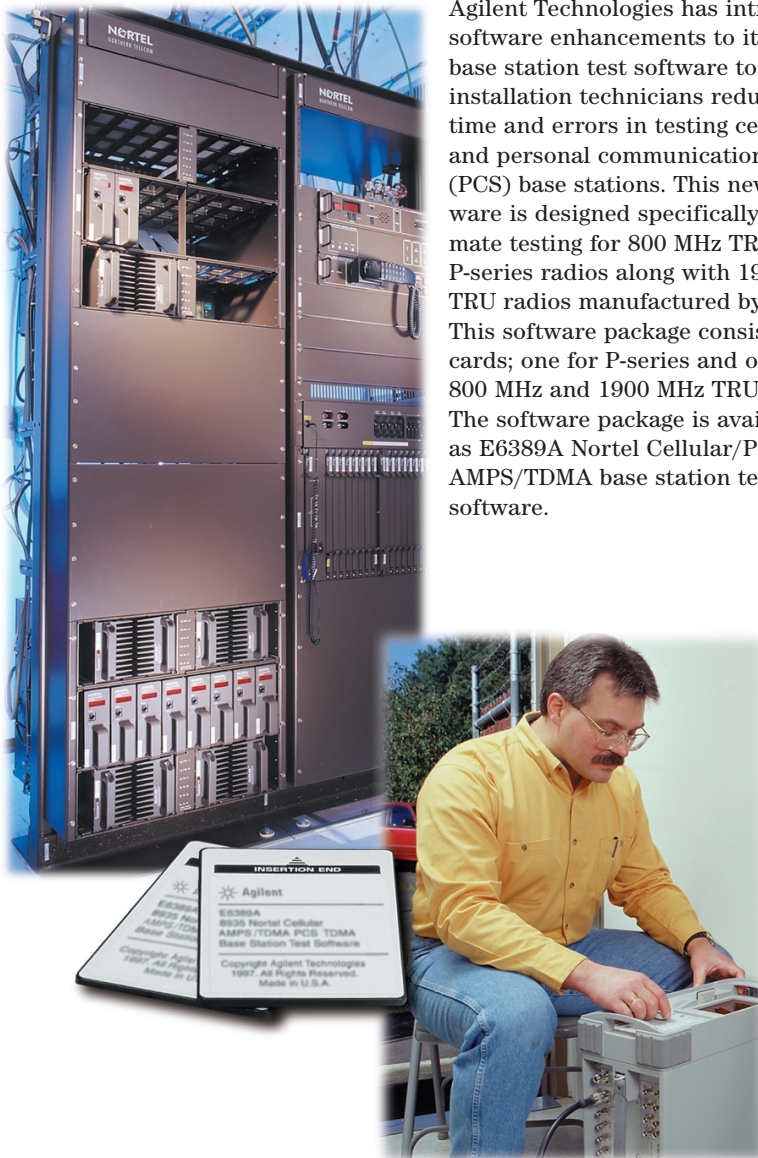
Overview

Agilent Technologies' test set and software reduce test time for Nortel Cellular AMPS/TDMA and PCS TDMA base stations

Agilent Technologies has introduced software enhancements to its E6389A base station test software to help installation technicians reduce the time and errors in testing cellular and personal communication service (PCS) base stations. This new software is designed specifically to automate testing for 800 MHz TRU and P-series radios along with 1900 MHz TRU radios manufactured by Nortel. This software package consists of two cards; one for P-series and one for 800 MHz and 1900 MHz TRUs. The software package is available as E6389A Nortel Cellular/PCS AMPS/TDMA base station test software.

The E6389A software package was designed to automate the installation procedure used by Nortel base station installers. Automation of this procedure reduces the occurrence of measurement errors and increases a technician's efficiency. In addition, a simple menu-driven user interface requires less technical expertise to achieve consistent, repeatable measurements.

The E6389A software package also includes a laptop utility that allows you to link your base station test set running base station test software to a laptop computer. In addition to capturing data by printing or saving data to a memory card, this program aids in recording test results and capturing test set screen images to a PC. Data capture allows service providers to identify key trends over a period of time and improves record keeping because the same, pertinent data is always captured.



* AMPS base station testing may also be performed on the E6380A AMPS/CDMA base station test set.



Agilent Technologies

Innovating the HP Way

E6389A Test Suite

Models tested: TRU and P-series

RS-232 interface to base station

Tests performed:

Transmitter Tests

P-Series and TRU Analog Tests

- Frequency error
- Maximum power and power level
- SAT frequency and deviation
- Wideband data deviation
- Residual FM

P-Series Analog Tests

- Voice modulation/limiting/adjustment

TRU Tests

- TDMA power
- TDMA adjacent channel power
- Residual AM
- Modulation accuracy
 - Error vector magnitude (EVM)
 - Magnitude and phase error
 - Origin offset
 - Frequency error
 - Peak error vector magnitude

Receiver Tests

P-Series and TRU Tests

- Receiver A/B SINAD sensitivity
- Receiver A/B SAT detection
- Receiver A/B ST detection
- Receiver A/B audio level
- Receiver A/B RSSI linearity
- Receiver A/B RSSI offset

TRU Tests

- Bit error rate (BER)

General Tests

- Laptop emulator
- Manual switch control
- PA LED alarm and TRU display

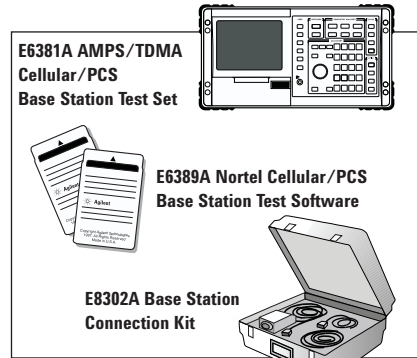
RF Measurement Tools

- Swept frequency insertion loss
- Swept frequency return loss
- Cable fault test—return loss versus distance (P-series)
- PC data transfer

Nortel Base Station Types Tested

- P-Series AMPS radio
- TRU 1/MPA
- TRU 2/MPA, SCLPA, DPA, NONE, MCPA, FMPA+
- TRU 3/SCLPA, DPA, NONE, MCPA
- TRU 1900/SCLPA, NONE
- Macro cell
- Urban cell

Test conditions	Measured value	Lower limit	Upper limit	P/F
TX Tone FM Pk-Dev	7.57 kHz	998.0	1002.0	8.80
TX Tone Audio Frequency	1000.0 Hz			8.80
TX Residual FM RMS Dev	24.49 Hz	7.20	220.00	220.00
TX Data Pk-Dev	8.63 kHz	-220.00		-20.00
TX Tone FM Pk-Dev	-10.60 Hz			10.00
TX Data Pk-Dev	-38.95 dB			10.00
TXD Frequency Error	2.76 %			14.00
TXD Origin Offset	2.62 deg			30.00
TXD Magnitude Error	5.32 %			12.50
TXD Phase Error	13.85 %			-26.00
TXD Error Vector Magnitude	4.83 %			-26.00
TXD Peak EVM	-34.59 dB			-45.00
TXD EVM 10 Averages	-33.18 dB			-45.00
TXD Lower Adj Ch Pwr	-48.74 dB			-60.00
TXD Upper Adj Ch Pwr	-48.23 dB			-60.00
TXD Lower 1st Alt Ch Pwr	-62.14 dB			
TXD Upper 1st Alt Ch Pwr	-63.14 dB			
TXD Lower 2nd Alt Ch Pwr	-46.79 dBm			
TXD Upper 2nd Alt Ch Pwr	46.79 dBm			
TXD Power @ Lev 0 in dBm	47.80 watts			



Sample Order:

For Cellular or PCS TDMA base station testing.

E6381A	AMPS/TDMA Cellular/PCS base station test setqty 1
E6389A	Nortel Cellular/PCS base station test softwareqty 1
E8302A	Base station connection kitqty 1

Agilent Support, Services, and Assistance

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"Our Promise" means your Agilent test and measurement equipment will meet its advertised performance and functionality. We can verify that it works properly, help with product operation, and provide basic measurement assistance for specified capabilities, at no extra cost. Many self-help tools are available.

"Your Advantage" means that Agilent offers additional expert test and measurement services at extra cost. Solve problems efficiently by contracting with us for calibrations, extra-cost upgrades, out-of-warranty repairs, on-site training, professional emerging services, and more.

By internet, get assistance with all your test and measurement needs at www.agilent.com/find/assist

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5968-6661E



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