Agilent N9310A – An Effective, Professional Field Installation and Maintenance Tool

N9310A Application Note

Minimize Your Operating Cost
In the field installation and maintenance market, the advantage goes to the equipment with a basic test suite at the lowest price. The Agilent N9310A provides such a solution for regular base-station, RX-level calibraton.

Built to Perform
General purpose base-station RX-level calibration does not require an elaborate and extensive suite of tests. All that's needed from a signal generator are stable and accurate CW signals. The N9310A is the perfect solution, providing, at a competitive price, the essential tests:

- Frequency: 9 kHz ~ 3 GHz
- Stability: < ±1ppm / year aging rate
- Amplitude: -127 dBm ~ +13 dBm,
- Accuracy: < ±1 dB
- Switching speed: <10 ms

Easy to Use
- 6.5'' high-resolution color LCD provides easy-to read display
- Easily-understood hard and soft keys for essential functions make measurements easy and fast
- Multi-language user interface for worldwide usability
- Customizable frequency step and editable list sweep function improves efficiency

Additional Features:
- Programmable
- SCPI compatible
- USB connectivity for remote control
- Compact and lightweight

RX Level Calibration Example
1. Connect the calibration system as shown in Figure 1.
2. Run calibration software, toggling base station to RX level calibration status. See Figure 2.
3. Configure the N9310A and output the first signal to the first calibration channel.

Figure 1 System Connection

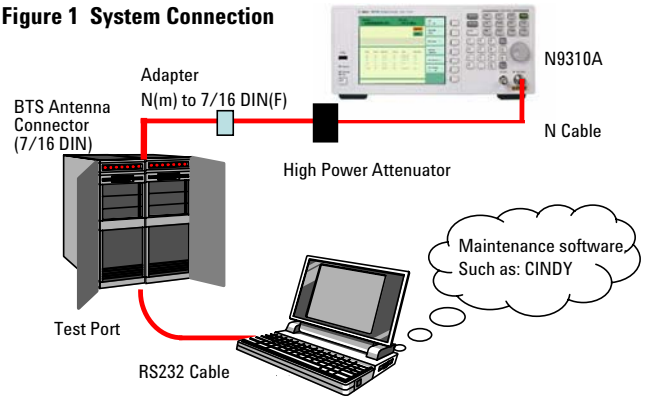
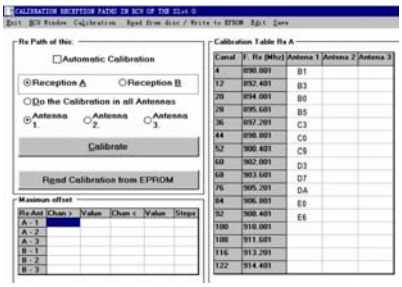


Figure 2 Base Station RX Level Calibration Software



4. To calibrate the second channel, set frequency increment to 1.6 MHz. Rotate the knob to output the second CW signal, offset 1.6 MHz from the first one. Keep rotating the knob to outputs CW signals with a 1.6 MHz offset.
5. Save the calibrated data and exit RX-level calibration mode.

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Recommended Equipment

- N9310A 9 kHz~3 GHz RF Signal Generator
- Option N9310A-1HB Handle and Bumper
- Option N9310A-1TC Hard Transit Case
- Attenuator 50 W/30 dB

Tip： Please consider the RF cable loss and the effect of the attenuator when using the N9310A.

Reference

Base station RX level calibration requirements (based on Motorola's Mcell and Horizon series base station)

- Frequency

Frequency	Point
881.001 MHz ~ 914.601 MHz	22
880.8052 MHz ~ 914.4052 MHz	22
1710.8052 MHz ~ 1784.4052 MHz	47
1711.001 MHz ~ 1784.401 MHz	47

- CW level: -65.2 dBm

For more information, please visit www.agilent.com/find/n9310a

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