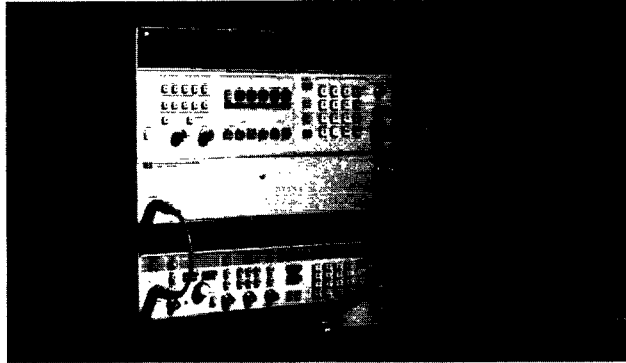


SIGNAL ANALYZERS

150 kHz to 26.5 GHz

Models 8902S, 11792A, 11793A, 11794A

- RF power: digital power meter accuracy
- Tuned RF level: 0 dBm to -100 dBm dynamic range
- AM and FM: 1% accuracy, Φ M: 3% accuracy
- Carrier Noise (AM and phase noise measurements): ± 0.5 dB accuracy
- RF frequency: 10 Hz resolution
- Audio: frequency, level and distortion



HP 8902S

HP 8902S Measurement System

The HP 8902S Measurement System extends the superb measurement performance of the HP 8902A Measuring Receiver to microwave frequencies. The HP 8902S system delivers the accuracy and resolution of a high performance power meter at frequencies from 50 MHz to 26.5 GHz and levels from +30 dBm to -100 dBm. It accurately measures AM, FM and Φ M (including residuals and incidentals) with a single keystroke. Adding options 030-037 to the HP 8902A extends the system's capability to include carrier noise measurements (AM and phase noise) with ± 0.5 dB accuracy to 26.5 GHz and down to the noise floor of the system's local oscillator. The HP 8902S counts signals to 26.5 GHz with 10 Hz resolution and excellent long-term frequency stability.

The HP 8902S Measurement System consists of the HP 8902A Measuring Receiver, HP 11793A Microwave Converter, HP 11792A Sensor Module, an instrument controller, HP 11794A Software Pac and a choice of microwave local oscillators. You can choose from the HP 8671B, 8672A and 8673B/D/E Synthesized Signal Generators and the HP 8340A/B and 8341A/B Sweep Oscillators.

Improves Quality

The HP 8902S minimizes measurement errors. The system's high performance instruments deliver superb accuracy: AM and FM, $\pm 1\%$; level and power, ± 0.02 dB ± 0.02 dB/10 dB; and carrier frequency, 10 Hz resolution.

Special care is taken to minimize the HP 8902S's input SWR, RFI susceptibility and insertion loss. 26.5 GHz hardware and a specially-designed flexible RF input cable with extremely stable insertion loss and input SWR help make your measurements repeatable.

Increases Confidence and Saves Time

The HP 8902S performs fast, accurate and repeatable microwave measurements traceable to the U.S. National Bureau of Standards.

Even difficult tasks such as measuring levels down to -100 dBm, residual FM down to <17 Hz and incidental Φ M of <0.03 radians in the presence of 50% AM, are performed in just a few seconds.

The HP 8902S can be assembled and running in minutes. For critical down-time applications, move the HP 8902S to the device-under-test and test it in place. Since the HP 8902S consists of general purpose HP-IB programmable equipment, it can also be used for other applications.

System Software

Under the control of the HP 11794A Software Pac, the HP 8902S Measurement System functions as a single instrument. You select the frequency and measurement from the front panel of the HP 8902A.

The software then calculates and sets the local oscillator frequency, then releases the HP 8902A to make the measurement and display the results. Entering power sensor calibration factors is also fast and easy using the Cal Factor Manager function.

For automatic attenuator calibration, add the HP 11806A Attenuator Test Software and an RF or microwave source to drive the attenuator. The HP 11806A adds the efficiency and repeatability of automation to the outstanding accuracy of the HP 8902A Measuring Receiver. By entering a table of frequencies, levels and specification limits, you can test any RF or microwave attenuator - fixed, manual or programmable - quickly and accurately. Adding an SWR bridge and 50 ohm termination will allow the system to test the SWR of the DUT. Flexible system configuration, various output formats and multiple test frequencies make the HP 11806A the ideal software pac for all your attenuator calibration needs.

Add the HP 8903B Audio Analyzer and HP 11795A software pac and the system expands to become an HP 8952S RF or Microwave Signal Generator Test System. (See next page for more information on the HP 8952S.)

HP 11793A Microwave Converter

The HP 11793A Microwave Converter down converts microwave signals to the frequency range of the HP 8902A Measuring Receiver. When you want to make a tuned RF level, modulation or frequency measurement above 1.3 GHz, the HP 11793A Microwave Converter routes the signal through its internal mixer. Below 1.3 GHz, signals are routed directly to the input of the HP 8902A.

The HP 11793A requires +8 dBm leveled output from the local oscillator. For LOs with insufficient power above 18 GHz, the HP 11793A offers an optional 18 to 26.5 GHz amplifier.

HP 11792A Sensor Module (50 MHz to 26.5 GHz)

When used with the HP 11793A Microwave Converter, the HP 11792A Sensor Module gives you all the performance of the HP 8902S system, plus superb power measurement accuracy, at a single connector. You can characterize a signal without manually switching back and forth between the power sensor and the receiver input.

Each HP 11792A Sensor Module is individually calibrated, traceable to the U.S. National Bureau of Standards. The calibration factors are printed on the sensor module for easy reference. Enter these factors into the HP 8902A's non-volatile memory and the instrument automatically compensates for the power sensor's efficiency and mismatch loss at each frequency. The HP 11792A is available with either a 3.5 mm precision or Type-N connector.