

HP 8902A Specifications

RF Power (with HP 11722A Sensor Module)

Range: +30 dBm (1W) to -20 dBm (10 μ W).
Frequency range: 0.1 MHz to 2.6 GHz.
Linearity: ± 0.02 dB (within range) ± 0.02 dB per range change from reference range ± 1 count LSD.
Input SWR: <1.15.

Tuned RF Level

Range: 0 dBm to -127 dBm.
Frequency range: 2.5 MHz to 1300 MHz.
Relative accuracy: ± 0.02 dB ± 0.02 dB per IF range change ± 0.04 dB per RF range change ± 1 digit.

Selective power measurements (carrier noise, options 030-037)

Frequency range: 10 MHz to 1300 MHz
Carrier power range:
 +30 dBm to -20 dBm; 12.5 kHz, 25 kHz and 30 kHz filters.
 +30 dBm to -10 dBm; carrier noise filter.

Relative measurement accuracy:

± 0.5 dB; levels > -95 dBc; 12.5 kHz, 25 kHz and 30 kHz filters.
 ± 0.5 dB; levels > -129 dBc/Hz; carrier noise filter.
Filter bandwidths: 2.5 kHz, Carrier Noise filter; 8.0 kHz, 12.5 kHz filter; 16.0 kHz, 25 kHz filter; 30.0 kHz, Cellular Radio filter.

RF Frequency

Range: 150 kHz to 1300 MHz.
Maximum resolution: 1 Hz.

Amplitude Modulation

Rates: 20 Hz to 100 kHz.
Depths: to 99%.
Accuracy: $\pm 1\%$ of reading ± 1 digit, for rates 50 Hz to 50 kHz and depths $\geq 5\%$.

Frequency Modulation

Rates: 20 Hz to 200 kHz.
Deviations: to 400 kHz.
Accuracy: $\pm 1\%$ of reading ± 1 digit, for rates 50 Hz to 100 kHz.

Phase Modulation

Rates: 200 Hz to 20 kHz.
Deviations: to 400 radians.
Accuracy: $\pm 3\%$ of reading ± 1 digit.

Audio Level, Frequency and Distortion Capability

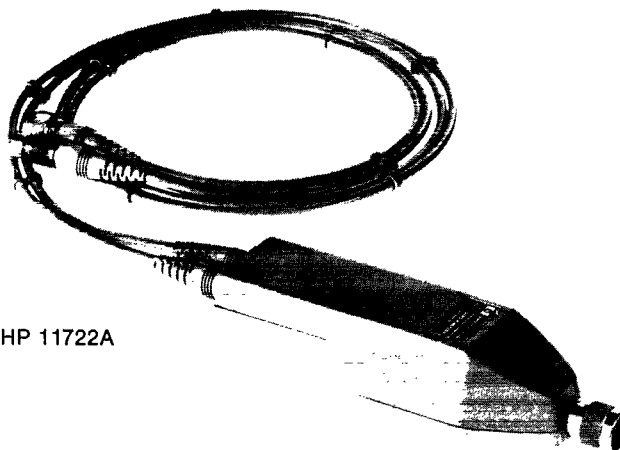
Audio Level
Accuracy: $\pm 4\%$ of reading, 100 mV to 3V.

Audio Frequency
Display resolution: 6 digits, to 250 kHz.

Audio Distortion
Accuracy: ± 1 dB, 400 Hz and 1 kHz.

Ordering Information

	Price
HP 8902A Measuring Receiver	\$22,950
Opt 001 Rear panel instead of front panel connections for input, modulation output, and calibrators	+ \$205
Opt 002 1×10^{-9} /day internal reference oscillator	+ \$765
Opt 003 RF connectors on rear panel only	+ \$400
Opt 004 Operation from 48 Hz to 400 Hz power line (temp. <40°C)	+ \$275
Opt 021 Add HP 11722A Sensor Module	+ \$2,040
Opt 030 High selectivity (select only two filter options) (Options 032-037 require Option 030. Option 030 includes Option 003 connections for external local oscillator.)	\$2450
Opt 032 12.5 kHz Filter	\$0
Opt 033 25.0 kHz Filter	\$0
Opt 035 Cellular Radio Filter	\$0
Opt 037 Carrier Noise Filter	\$0
Opt 907 Front panel handle kit	+ \$65
Opt 908 Rack Mounting Flange Kit	+ \$35
Opt 909 Front Panel Handle plus Rack Mounting Flange Kit	+ \$90
Opt 910 Additional operating and service manual	+ \$275



HP 11722A

HP 11722A Sensor Module

The HP 11722A Sensor Module was designed for use with the HP 8901B Modulation Analyzer and HP 8902A Measuring Receiver. The HP 11722A contains a silicon monolithic thermocouple as a power sensing element.

With the HP 11722A Sensor Module, you get all the performance of the HP 8901B or HP 8902A, plus superb power measurement accuracy, at a single connector. You can characterize a signal without switching back and forth between the power sensor and the analyzer's RF input.

Each HP 11722A 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 8901B or 8902A's non-volatile memory and the instrument automatically compensates for the power sensor's efficiency and mismatch loss at each frequency.

HP 11722A Specifications

Frequency range: 100 kHz to 2.6 GHz.
Power range: +30 dBm (1 watt) to -20 dBm (10 μ W).
Input SWR (Connected to an HP 8901B or 8902A): <1.15, for RF power measurements.
Power sensor linearity: +2%, -4%; +30 dBm to +20 dBm. Negligible deviation, levels <+20 dBm.
Calibration factors: Each HP 11722A Sensor Module is individually calibrated. The calibration factors are printed on the HP 11722A Sensor Module for easy reference.

Cal Factor Uncertainty

Frequency	RSS Uncertainty	Worst Case Uncertainty
0.1 MHz	0.7%	1.6%
0.3 MHz	0.7%	1.6%
1.0 MHz	0.8%	1.7%
3.0 MHz	0.8%	1.7%
10.0 MHz	0.9%	2.0%
30.0 MHz	0.9%	2.0%
50.0 MHz	0.0% (ref.)	0.0% (ref.)
100.0 MHz	1.1%	2.2%
300.0 MHz	1.1%	2.2%
1000.0 MHz	1.1%	2.2%
2600.0 MHz	1.2%	2.3%

Ordering Information

HP 11722A Sensor Module	\$2,040
Opt 910 Additional operating and service manual	+ \$15