HP 8901B RF Level (True RMS)
Frequency Range with HP 11722A: 100 kHz to 2.6 GHz
Power Range: −20 to +30 dBm
RF Range-to-Range Change Error: ±0.02 dB/RF range change from reference range
Input SWR: <1.15, using HP 11722A sensor module
Zero Set (digital settability of zero): ±0.5% ±1 digit of full scale on lowest range (decrease by a factor of 10 for each high range)
RF Power Resolution:
0.1% of full scale in watts or volts mode
0.001 in dBm or dB relative mode

HP 8901B Selective Power Measurements (Options 030 Through 037)
Frequency Range: 10 MHz to 1.3 GHz
Carrier Power Range: +30 to −20 dBm, 12.5, 25 and 30 kHz filters; +30 to −10 dBm, carrier noise filter
Dynamic Range: 115 dB
Carrier Rejection (temp. ≤35° C): >90 dB for offsets ≥1 channel spacing or 5 kHz, whichever is larger
Relative Accuracy: ±0.5 dB, levels ≥ −95 dBc or levels ≥ −129 dBc/Hz

Power Reference
Power Output: 1.00 mW, factory set to ±0.7%, traceable to the U.S. National Institute of Standards and Technology
Accuracy: ±1.2% worst case (±0.9% rss) for one year (0° to 55° C)

Audio Filters
High-Pass (3 dB cutoff frequency): 50 Hz and 300 Hz
Low-Pass (3 dB cutoff frequency except >20 kHz filter): 3 kHz, 15 kHz, >20 kHz
De-emphasis Filters: 25 μs, 50 μs, 75 μs, and 750 μs

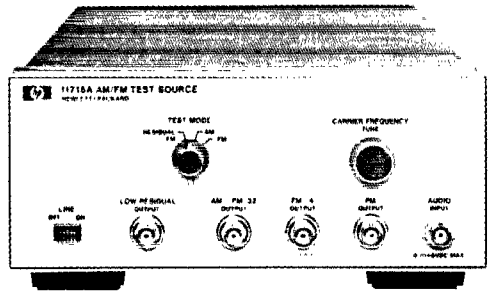
Calibrators (Standard HP 8901B, Option 010 HP 8901A)
AM Calibrator Depth and Accuracy: 33.33% depth, nominal; internally calibrated to an accuracy of ±0.1%
FM Calibrator Deviation and Accuracy: 34 kHz peak deviation, nominal; internally calibrated to an accuracy of ±0.1%

General Characteristics
Operating Temperature Range: 0° to 55° C
Power Requirements: 100, 120, 220, or 240 V (+5%, −10%); 48 to 66 Hz; 200 VA max
Weight: HP 8901A: Net, 20 kg (44 lb); shipping, 25 kg (55 lb); HP 8901B: Net, 23 kg (52 lb); shipping, 31 kg (69 lb)
Size: HP 8901A: 190 mm H × 425 mm W × 468 mm D (7.5 in × 16.8 in × 18.4 in); HP 8901B: 190 mm H × 425 mm W × 551 mm D (7.5 in × 16.8 in × 21.7 in)

Ordering Information
HP 8901A/HP 8901B
HP 8901A Modulation Analyzer[1]
Opt 001 RF Connectors on Rear Panel Only
Opt 002 1×10^{-9}/Day Internal Reference
Opt 003 Connections for External Local Oscillator
Opt 004 Operation from 48 to 440 Hz Power (temp. <40° C)
Opt 010 AM and FM Calibrators
Opt 907 Front Handle Kit (5061-9690)
Opt 908 Rack Flange Kit (5061-9678)
Opt 909 Front Handle & Rack Flange Kit (5061-9684)
Opt 910 2 sets of Operating (08901-90135) and Service Manuals (08901-90136)
Opt 915 Service Manual (08901-90136)
Opt W30 Extended Repair Service (see page 663)
Opt W32 Calibration Service (see page 663)
HP 8901B Modulation Analyzer[1]
Opt 021 Add HP 11722A Sensor Module
Opt 030 High Selectivity (select only 2 filter options) (Options 032 through 037 require Option 030; Option 030 includes Option 003 connections for external local oscillators.)
Opt 032 12.5 kHz Filter
Opt 033 20.0/25.0 kHz Filter
Opt 035 Cellular Radio Filter
Opt 037 Carrier Noise Filter

[1]HP-IB cables not included. For description and prices, see page 99.

Opt 910 2 Sets of Operation/Calibration (08901-90113) and Service Manuals (08901-90114)
Opt 915 Service Manual (08901-90114)
Opt W30 Extended Repair Service (see page 663)
Opt W32 Calibration Service (see page 663)



HP 11715A

HP 11715A AM/FM Test Source
The HP 11715A AM/FM test source provides very flat, wide-bandwidth, and low-distortion amplitude- or frequency-modulated RF signals. Designed primarily for performance tests and adjustments of the HP 8901A/B modulation analyzer and HP 8902A measuring receiver, it will also serve as a high-quality modulated test oscillator where its frequency ranges apply.

The major components of the HP 11715A are a low-noise voltage-controlled oscillator (VCO), 2 digital dividers, and a double-balanced mixer. The VCO is the primary signal source, with a typical frequency range of 330 to 470 MHz at the FM output. FM is produced by directly coupling the external modulation source to the VCO's tune input, providing very wide bandwidth modulation with low phase shift. This design also ensures very little incidental AM.

The HP 11715A can also be used in conjunction with an HP 8901A/B and an HP 8902A as a calibrated signal source for special applications. In particular, the U.S. commercial FM broadcast band of 88 to 108 MHz is covered by the FM ÷ 4 output of the HP 11715A.

HP 11715A Specifications

FM Outputs
Frequency Range:
11 to 13.5 MHz, AM FM ÷ 32 output
88 to 108 MHz, FM ÷ 4 output
352 to 432 MHz, FM output
Peak Deviation:
>12.5 kHz, 11 to 13.15 MHz carrier
>100 kHz, 88 to 108 MHz carrier
>400 kHz, 352 to 432 MHz carrier
Distortion: <0.025% THD (< −72 dB) for

Carrier frequency	Peak deviation	Modulation rate
12.5 MHz	12.5 kHz	<10 kHz
100 MHz	100 kHz	<100 kHz
400 MHz	400 kHz	<100 kHz

Flatness:
±0.1%, dc to 100 kHz rates ±0.25%, dc to 200 kHz rates
Stereo Separation (88 to 108 MHz carrier, 75 kHz peak deviation, 1 kHz rate): >60 dB typical

AM Output
Frequency Range (AM/FM ÷ 32 output): 11 to 13.5 MHz
Depth: To 99%
Distortion:
<0.05% THD (< −66 dB), 50% AM, 20 Hz to 100 kHz rates
<0.1% THD (< −60 dB), 95% AM, 20 Hz to 100 kHz rates
Flatness: ±0.1%, 50 Hz to 50 kHz rates;
±0.25%, 20 Hz to 100 kHz rates
Linearity: ±0.1%, <95% AM; ±0.2%, <99%

Ordering Information
HP 11715A AM/FM Test Source
Opt 910 A Total of 2 Sets of Operating and Service Manuals (11715-90004)

For the most current prices and product information, contact your local Hewlett-Packard sales office—see page 691.