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Agilent 8920A
RF Communications Test Set
Data Sheet



The Agilent Technologies 8920A RF communication test set is a full-featured, one-box test set designed to meet the service and repair needs of today's RF wireless communications market.

Single keystroke transmitter and receiver testing simplifies radio test. Signaling for multiple formats is supported, including tone sequential, digital paging (CCITT, POCSAG, ZVEI, etc.), DTMF, trunking, and cellular signaling.

For cellular phone test, the call processing interface emulates a base station, allowing you to automatically establish and maintain a cellular link between the test set and an analog cellular phone.

The built-in controller allows you to automate measurements and test routines, and control external instruments. Combined with the Agilent 11807A software, it provides a self-contained, automated radio test solution.

Key Features:

- Intuitive call processing interface for cellular phone test
- Functions of more than 20 complete instruments
- Frequency ranges:
  Signal generator: 30 MHz to 1 GHz
  RF analyzer: 10 MHz to 1 GHz
- Portable and lightweight
- Optional full-span spectrum analyzer, tracking generator and adjacent channel power meter
- Built-in IBASIC computer

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Agilent 8920A RF Communications Test Set Specifications

Specifications describe the instrument's warranted performance and are valid over the entire operating/environmental range unless otherwise noted.

Supplemental Characteristics are intended to provide additional information useful in applying the instrument by giving typical, but non-warranted performance parameters. These characteristics are shown in italics or labeled as "typical," "usable to," or "nominal."

Signal Generator Specifications

RF Frequency

Frequency Range:
Standard: 30 MHz to 1 GHz
Option 055: 250 kHz to 1 GHz

Accuracy and Stability: Same as reference oscillator ±0.015 Hz

Reference Oscillator Specifications

TCXO (Agilent 8920A standard)

Temperature: 1 ppm (0 to +55 °C)

Aging: <2 ppm/year

Warm-Up time: <30 sec. to be ±2 ppm of final freq.

Supplemental Characteristics

Switching Speed: *<150 ms to within 100 Hz of the carrier frequency*

Minimum Resolution: *1 Hz*

Output

RF IN/OUT Connector

Level Accuracy: ±1.8 db (level ≥–127 dBm),
Typically ±1.0 dB for all levels

Level Range

Standard:
Level Range: –137 to –20.5 dBm into 50 Ω
Reverse Power: 60 watts continuous,
100 watts for 10 seconds/minute

With Option 007:
Level Range: –137 to –6.5 dBm into 50 Ω
Reverse Power: 2.4 watts continuous,
4 watts for 10 seconds/minute

With Option 008:
Level Range: –137 to –10.5 dBm into 50 Ω
Reverse Power: 6 watts continuous,
10 watts for 10 seconds/minute

With Option 016:
Level Range: –137 to –22.5 dBm into 50 Ω
Reverse Power: 100 watts continuous,
125 watts for 10 seconds/minute

Option 055:
Level Range: –137 to –19 dBm into 50 Ω
Reverse Power: 60 watts continuous,
100 watts for 10 seconds/minute

With Option 007:
Level Range: –137 to –5 dBm into 50 Ω
Reverse Power: 2.4 watts continuous,
4 watts for 10 seconds/minute

With Option 008:
Level Range: –137 to –9 dBm into 50 Ω
Reverse Power: 6 watts continuous,
10 watts for 10 seconds/minute

With Option 016:
Level Range: –137 to –21 dBm into 50 Ω
Reverse Power: 100 watts continuous,
125 watts for 10 seconds/minute

DUPLEX OUT Connector

Standard:
Level Accuracy: ±1.5 dB, *typically ±1.0 dB for all levels*
Level Range: –127 to +5 dBm into 50 Ω
Reverse Power: 200 mW max

Option 055:
Level Range: –127 to +7 dBm into 50 Ω

SWR:
RF In/Out: <1.5:1
Duplex Out: <2.0:1 (level <–4 dBm)

Supplemental Characteristics

Minimum Resolution: *0.1 dB*

Spectral Purity

Spurious Signals: For specified output levels at DUPLEX OUT port or specified output level at RF IN/OUT port.

Option	DUPLEX OUT	RF IN/OUT
Standard	≤–2.5 dBm	≤–26.5 dBm
007	≤–2.5 dBm	≤–12.5 dBm
007 with Opt. 055	≤–1.0 dBm	≤–11.0 dBm
008	≤–2.5 dBm	≤–16.5 dBm
008 with Opt. 055	≤–1.0 dBm	≤–15.0 dBm
016	≤–2.5 dBm	≤–28.5 dBm
016 with Opt. 055	≤–1.0 dBm	≤–27.0 dBm
055	≤–1.0 dBm	≤–25.0 dBm

Harmonics: <–30 dBc

Non-Harmonic Spurious: <–60 dBc (at >5 kHz from carrier)

Residual FM (rms, CCITT):

Frequency Range	8920A Standard	8920A Opt. 050
250 kHz ≤f_c <249 MHz	<20 Hz	<7 Hz
249 MHz ≤f_c <501 MHz	<10 Hz	<4 Hz
501 MHz ≤f_c ≤1000 MHz	<20 Hz	<7 Hz

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Supplemental Characteristics

SSB Phase Noise: *(For >20 kHz offsets at 1 GHz)*
8920A *<–110 dBc/Hz*
8920A Opt. 050 *<–116 dBc/Hz*

FM

FM Deviation Maximum (For rates >25 Hz)

Standard and Options 007, 008, 016:
100 kHz for f_c from 30 MHz to <249 MHz
50 kHz for f_c from 249 MHz to <501 MHz
100 kHz for f_c from 501 MHz to 1000 MHz

Option 055:
100 kHz for f_c from 0.25 MHz to <249 MHz
50 kHz for f_c from 249 MHz to <501 MHz
100 kHz for f_c from 501 MHz to 1000 MHz

FM Rate (1 kHz reference)
Internal: DC to 25 kHz (1 dB BW)

External:
AC Coupled: 20 Hz to 75 kHz (typically 3 dB BW)
DC Coupled: DC to 75 kHz (typically 3 dB BW)

FM Accuracy: (1 kHz rate)
≤10 kHz dev: ±7.5% (3.5%*) of setting ±50 Hz
>10 kHz dev: ±7.5% (3.5%*) of setting ±500 Hz

FM Distortion: (THD + Noise, in a 0.3 to 3 kHz BW)
<1% (0.5 %*) at > 4 kHz deviation and 1 kHz rate

Center Frequency Accuracy in DC FM Mode:
(External source impedance <1 kΩ) ± 500 Hz
(after DC FM zero), *typically ±50 Hz*

Supplemental Characteristics

External Modulation Input Impedance: *600 Ω nominal*

Resolution: *50 Hz for <10 kHz deviation, 500 Hz for >10 kHz deviation*

AM

Standard:
Frequency Range: 30 MHz to 1 GHz
AM Depth: 0 to 90% (usable to 99%) for DUPLEX OUT level ≤–2.5 dBm or RF IN/OUT level ≤–26.5 dBm; 0 to 70% (usable to 90%*)

Option 055:
Frequency Range: 1.5 MHz to 1 GHz (usable to 250 kHz)
AM Depth: 0 to 90% (usable to 99%) for DUPLEX OUT level ≤+1 dBm or RF IN/OUT level ≤–27 dBm; 0 to 70% (usable to 90%*)

AM Rate: 20 Hz to 25 kHz (3 dB BW)

AM Accuracy: (1 kHz rate)
≤10% AM: ±5% of setting ±1.0% AM
>10% AM: ±5% of setting ±1.5% AM

AM Distortion: (THD+Noise 0.3 to 3 kHz BW)
<2% at 1 kHz rate, <30% AM
<3% at 1 kHz rate, ≤90% AM

Supplemental Characteristics

External Mod. Input Impedance: *600 Ω nominal*

Residual AM: *<0.1% in a 50 Hz to 15 kHz BW*

Resolution: *0.05% AM from 0 to 10% AM, 0.5% AM from 10 to 100% AM*

Audio Source Specifications

(Applicable to both internal sources)

Frequency

Range: dc to 25 kHz

Accuracy: 0.025% of setting

Supplemental Characteristics

Minimum Resolution: *0.1 Hz*

Output Level

Range: 0.1 mV to 4 Vrms

Maximum Output Current: 20 mA peak

Output Impedance: <1 Ω (1 kHz)

Accuracy: ±2% of setting plus resolution

Residual Distortion: 0.125%
(THD plus noise, for amplitudes >200 mVrms), for tones 20 Hz to 25 kHz measured in an 80 kHz BW

Supplemental Characteristics

Resolution: *Level <0.01V: ±50 µV*
Level <0.1V: ±0.5 mV
Level <1V: ±5 mV
Level <10V: ±50 mV

Offset in DC Coupled Mode: *<50 mV*

RF Analyzer Measurements

RF Frequency Measurements

Measurement Range:
Standard: 30 MHz to 1 GHz
Option 055: 400 kHz to 1 GHz

Level Range:

RF In/Out:

Standard: 1 mW to 60 W continuous 100 W for 10 seconds/minute

Option 007: 40 mW to 6 W continuous 4 W for 10 seconds/minute

Option 008: 0.1 mW to 6 W continuous 10 W for 10 seconds/minute

Option 016: 1.6 mW to 100 W continuous 150 W for 10 seconds/minute

ANT IN: –36 dBm to +20 dBm

Accuracy: ±1 Hz plus timebase accuracy

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Supplemental Characteristics

Minimum Frequency Resolution: *1 Hz*

RF Power Measurements

Frequency Range:
Standard: 30 MHz to 1 GHz
Option 055: 400 kHz to 1 GHz

SWR: <1.5:1 for standard and all options

RF IN/OUT Measurement Range:

Standard: 1 mW to 60 W continuous or to 100 W for 10 sec/minute

Accuracy: ±10% of reading ±1 mW

Option 007: 40 µW to 2.4 W continuous 4 W for 10 seconds/minute

Accuracy: ±10% of reading ±40 µW

Option 008: 0.1 mW to 6 W continuous 10 W for 10 seconds/minute

Accuracy: ±10% of reading ±0.1 mW

Option 016: 1.6 mW to 100 W continuous 125 W for 10 seconds/minute

Accuracy: ±10% of reading ±1 mW

Supplemental Characteristics

Resolution: *P >10 W: 10 mW, P <10 W: 1 mW; P <100 mW: 0.1 mW, P <10 mW: 0.01 mW*

FM Measurement

Frequency Range:
Standard: 10 MHz to 1 GHz
Option 055: 5 MHz to 1 GHz *(Usable to 400 kHz)*

Deviation: 20 Hz to 75 kHz

Sensitivity: 2 µV (15 kHz IF BW, high sensitivity mode, 0.3 to 3 kHz BW, 12 SINAD, fc >10 MHz) ***Typically:*** *<1 µV*

Accuracy: ±4% of reading plus residual FM and noise contribution (20 Hz to 25 kHz rates, deviation ≤25 kHz)

Bandwidth (3 dB): 2 Hz to 70 kHz (DC FM measurements also available)

Input Level Range for Specified Accuracy:
Standard: –50 dBm to +14 dBm at ANT IN –18 to +50 dBm at RF IN/OUT (0.16 mW to 100 W*)

Option 007: –32 to +36 dBm at RF IN/OUT (0.63 µW to 4 W*)

Option 008: –28 to +40 dBm at RF IN/OUT (1.58 µW to 10 W*)

Option 016: –16 to +51 dBm at RF IN/OUT (0.25 µW to 125 W*)

*Note: The accuracy shown is for the complete range of power. The maximum power levels shown are only usable for 10 sec/min.

Residual FM and Noise: 20 Hz (0.3 to 3 kHz, rms), <7 Hz (with Agilent 8920A Opt 050)

Supplemental Characteristics

Resolution: *1 Hz, f <10 kHz; 10 Hz, f ≥10 kHz*

AM Measurement

Frequency Range: 10 MHz to 1 GHz (usable to 400 kHz)

Depth: 0 to 95%

Accuracy: ±5% of reading ±1.5% AM (50 Hz to 10 kHz rates, modulation ≤ 80%)

THD + Noise: <2% rms for modulation ≤80% AM (at 1 kHz rate in a 0.3 to 3 kHz BW)

Input Level Range for Specified Accuracy:
Standard: –50 dBm to +14 dBm at ANT IN –18 to +50 dBm at RF IN/OUT (0.16 mW to 100 W*)

Option 007: –32 to +36 dBm at RF IN/OUT (0.63 µW to 4 W*)

Option 008: –28 to +40 dBm at RF IN/OUT (1.58 µW to 10 W*)

Option 016: –16 to +51 dBm at RF IN/OUT (0.25 µW to 125 W*)

*Note: The accuracy shown is for the complete range of power. The maximum power levels shown are only usable for 10 sec/min.

Residual AM: <0.2% in a 0.3 to 3 kHz bw

Supplemental Characteristics

Resolution: *0.1%*

SSB Measurement

Frequency Range:
Standard: 10 MHz to 1 GHz
Option 055: 400 kHz to 1 GHz

Bandwidth (3 dB): 20 Hz to 70 Hz

Distortion and Noise: <3% (at 1 kHz rate in a 0.3 to 3 kHz BW)

AF Analyzer Specifications

Frequency Measurement

Measurement Range: 20 Hz to 400 kHz

Accuracy: ±0.02% plus resolution plus timebase accuracy

External Input: 20 mV to 30 Vrms

Supplemental Characteristics

Resolution: *0.01 Hz, f <10 kHz; 0.1 Hz, f <100 kHz; and 1 Hz for f ≥100 kHz*

AC Voltage Measurement

Measurement Range: 0 to 30 Vrms

Accuracy: ±3% of reading (20 Hz to 15 kHz, inputs >1 mV)

Residual Noise: 150 µV (15 kHz bandwidth)

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Supplemental Characteristics

3 dB Bandwidth: *Typically 2 Hz to 100 kHz*

Nominal Input Impedance: *Switchable between 1 MW in parallel with 95 pF or 600 Ω floating*

Minimum Resolution: *4 digits for inputs ≥100 mV; three digits for inputs <100 mV*

DC Voltage Measurement

Voltage Range: 100 mV to 42 V

Accuracy: ±1% of reading plus DC offset

DC Offset: ±45 mV

Supplemental Characteristics

Resolution: *1 mV*

Distortion Measurement

Fundamental Frequency: 1 kHz ±5 Hz

Option 019 Frequency Range: 0.3 to 10 kHz ±5%

Input Level Range: 30 mV to 30 Vrms

Display Range: 0.1% to 100%

Accuracy:
±1 dB (0.5 to 100% distortion) for tones from 300 to 1500 Hz measured with the 15 kHz LPF

±1.5 dB (1.5 to 100% distortion) for tones from 300 Hz to 10 kHz measured with the >99 kHz LPF)

Residual THD + Noise:
–60 dBc or 150 µV whichever is greater, for tones from 300 to 1500 Hz measured with the 15 kHz LPF

–57 dBc or 450 µV, whichever is greater, for tones from 300 Hz to 10 kHz measured with >99 kHz LPF)

Supplemental Characteristics

Resolution: *0.1% distortion*

SINAD Measurement

Fundamental Frequency: 1 kHz ±5 Hz

Option 019 Frequency Range: 0.3 to 10 kHz ±5%

Input Level Range: 30 mV to 30 Vrms

Display Range: 0 to 60 dB

Accuracy:
±1 dB (0 to 46 dB SINAD) for tones from 300 to 1500 Hz measured with the 15 kHz LPF

±1.5 dB (0 to 36 dB SINAD) for tones from 300 Hz to 10 kHz measured with the >99 kHz LPF

Residual THD + Noise:

–60 dBc or 150 mV, whichever is greater, for tones from 300 to 1500 Hz measured with the 15 kHz LPF

–57 dBc or 450 mV, whichever is greater, for tones from 300 Hz to 10 kHz measured with >99 kHz LPF

Supplemental Characteristics

Resolution: *0.01 dB*

Audio Filters

Standard: <20 Hz HPF, 50 Hz HPF, 300 Hz HPF 300 Hz LPF, 3 kHz LPF, 15 kHz LPF, >99 kHz LPF, and 750 µsec de-emphasis

Fixed Notch: 1 kHz, (Agilent 8920A standard)

Variable Notch: 300 Hz to 10 kHz (Option 019)

Optional: C-Message, CCITT, 400 Hz HPF, 4 kHz BPF, 6 kHz BPF (see options)

Audio Detectors: RMS, RMSxSQRT2, Pk+, Pk–, Pk+hold, Pk–hold, Pk±/2, Pk±/2 hold, Pk±max and Pk±max hold

Oscilloscope Specifications

Frequency Range: 2 Hz to 50 kHz (3 dB BW)

Scale/Division: 10 mV to 10 V

Amplitude Accuracy: ±1.5% of reading ±0.1 division (20 Hz to 10 kHz)

Time/Division: 1 µsec to 200 msec

Supplemental Characteristics

3 dB Bandwidth: *Typically >100 kHz*

Internal DC Offset: *≤0.1 div (≥50 µV/div sensitivity)*

Input and Output Specifications

Digital Interface Port

RS-232 port: 2 way

Connector: RJ-11 connector (6 pins; 2 addressable serial ports with single connector; Agilent 8920A rear panel)

Baud Rates: 300/600/1200/2400/4800/9600/19200

Reference In Port

Connector: BNC female (8920A rear panel)

Input frequency: 1/2/5/10 MHz

Input Level Range: >0.15 Vrms

Reference Out Port

Connector: BNC female (8920A rear panel)

Output Frequency: 10 MHz

Output Level: >0.5 Vrms

Standard User Memory, RAM

Approximately 1 Mbyte of RAM is available for nonvolatile save/recall of settings. This typically will allow you to save >1000 sets of instrument settings; depending on the type of information saved.

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Option Specifications

Option 001: High Stability Timebase

OCXO: (Oven controlled crystal oscillator)

Temperature: 0.05 ppm (0 to +55 °C)

Aging: <0.5 pm/year (<1 ppm in first year)

Warm-up Time: <15 minutes to be within ±0.1 ppm of final frequency

Supplemental Characteristics

Rear Panel BNC Connectors:

Input Frequency: *1, 2, 5, and 10 MHz*
Input Level: *>0.15 Vrms*
Output Frequency: *10 MHz*
Output Level: *>0.5 Vrms*

Option 004: Tone/Digital Signalling

Capability for generating and analyzing the formats listed here: CDCSS, DTMF, 1-TONE, 2-TONE, 5/6 TONE SEQUENTIAL, RPC1, POCSAG, EIA, CCITT, CCIR, ZVEI, DZVEI, GOLAY, EEA, NMT-450, NMT-900, LTR, AMPS/EAMPS/NAMPS, TACS/ETACS, JTACS/NTACS, EDACS, and MPT 1327.

A General Purpose function generator with the following wave forms included: Sine, square, triangle, ramp, Gaussian white noise, uniform white noise

Frequency Range/Level: Same as audio source

Option 007 and Low-Level RF Power Measurements

Option 007 removes a 14 dB attenuator at the RF IN/OUT port allowing lower-level, higher sensitivity measurements. This option reduces the maximum continuous input power of the Agilent 8920A from 60 watts to 2.4 watts. Specifications for Option 007 are included in the appropriate sections of: Signal Generator output, RF Analyzer, Frequency and Power Measurement Ranges, FM and AM Measurement Input Level Ranges.

Option 008 Cellular Mobile RF Power Measurement Range

Option 008 removes 10 dB attenuation at the RF IN/OUT port allowing lower-level, higher sensitivity measurements specifically for the range of cellular telephones testing. This option reduces the maximum continuous input power of the 8920A from 60 watts to 6 watts. Specifications for Option 008 are included in the appropriate sections of: Signal generator output, RF analyzer, frequency and power measurement ranges, FM and AM measurement input level ranges.

Option 010: 400 Hz High Pass Filter

Option 011: CCITT Weighting Filter

Option 012: 4 kHz Bandpass Filter

Option 013: C-Message Weighted Filter

Option 014: 6 kHz Bandpass Filter

Option 016 High-Level RF Power Measurements

Option 016 for the 8920A supports high-power transmitter measurement applications. Option 016 can only be ordered on a new instrument at the time of purchase. Option 016 can only be installed at the factory.

Option 019: Variable Notch Filter

Frequency Range: 300 Hz to 10 kHz

Notch Depth: >60 dB

Notch Width: *Typically ±5%*

Option 020: Radio Interface Card

The Option 020 for the 8920A is a built-in radio interface card for automating module and radio board test. It contains 16 parallel data lines, two interrupts, and brings the audio in/out lines and a relay closure out from the MIC/ACC connector on the front panel. These are controlled by the 8920A BASIC control language.

Line Levels: 5 volts or 12 volts

Option 050: Improved Residual FM Performance

Includes high stability timebase (Option 001), improved residual FM performance.

Option 102: Spectrum Analyzer with Tracking Generator and ACP

Frequency Range: 10 MHz to 1 GHz

Frequency Span/Resolution Bandwidth: (coupled)

Span	Bandwidth
<50 kHz	300 Hz
<200 kHz	1 kHz
<1.5 MHz	3 kHz
<18 MHz	30 kHz
>18 MHz	300 kHz, plus full span capability

Display: Log with 1, 2, and 10 dB/div

Display Range: 80 dB

Reference Level Range: +50 to –50 dBm

Residual Responses: <–70 dBm (no input signal, 0 dB attenuation)

Image Rejection: >50 dBm

Supplemental Characteristics

Non-Harmonic Spurious Responses: *>70 dB down (for input signals ≤–30 dBm)*

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Level Accuracy: *±2.5 dB*

Displayed Average Noise Level: *<–114 dBm for <50 kHz spans*

Log Scale Linearity: *±2 dB (for input levels ≤–30 dBm and/or 60 dB range*

Tracking Generator (In Option 102)

Frequency Range: 30 MHz to 1 GHz

Frequency Offset: Frequency span endpoints ± frequency offset cannot be <30 MHz or ≥1 GHz

Output Level Range: Same as signal generator

Sweep Modes: Normal and inverted

Adjacent Channel Power (In Option 102)

Relative Measurements:

Level Range:

Antenna IN: –40 dBm to +20 dBm

RF/Input: 0.16 mW (–8 dBm) to 60 W (47.8 dBm) continuous; or up to 100 mW (50 dBm) for 10 sec/min

Dynamic Range: *Typical values for channel offsets*

Channel Offset	*Res. BW*	*Dyn. Range*
12.5 kHz	*8.5 kHz*	*–65 dBc*
20 kHz	*14 kHz*	*–68 dBc*
25 kHz	*16 kHz*	*–68 dBc*
30 kHz	*16 kHz*	*–68 dBc*
60 kHz	*30 kHz*	*–65 dBc*

Relative Accuracy: ±2 dB

Absolute Level Measurements:

Level: (Results of absolute power in watts or dBm are met by adding the ACP ratio from the SA to the carrier power from the input section RF power detector).

Level Range:

Antenna: N/A

RF/Input: 1 mW (0 dBm) to 60 W (47.8 dBm) continuous; or up to 100 W (50 dBm) for 10 sec/min

Dynamic Range: *Typical values for channel offsets*

Channel Offset	*Res. BW*	*Dyn. Range*
12.5 kHz	*8.5 kHz*	*–65 dBc*
20 kHz	*14 kHz*	*–68 dBc*
25 kHz	*16 kHz*	*–68 dBc*
30 kHz	*16 kHz*	*–68 dBc*
60 kHz	*30 kHz*	*–65 dBc*

Absolute Accuracy: RF power measurement accuracy found in the RF Analyzer section and ACP relative accuracy of ±2 dB

Option 103: DC Current Sensing and I/O: GPIB/RS-232/Parallel (Centronics)

DC Current Meter

Measurement Range: 0 to 10 A (usable to 20 A)

Accuracy: The greater of ±10% of reading after zeroing or 30 mA (levels >100 mA)

Remote Programming

GPIB: Agilent's implementation of IEEE Standard 488.2

Functions Implemented: SH1, AH1, T6, L4, SR1, RL1, LE0, TE0, PP0, DC1, DT1, C4, C11, E2

RS-232: Two serial ports through RJ-11 connector used for serial data in and out

Baud Rates: 150, 300, 600, 1200, 2400, 4800, 9600 and 19200 Hz

Parallel (Centronics) Connector: A standard 25-pin, sub-min D female connector with right-angle adapter is included

Note: Retrofittable only for 8920A units with serial prefix numbers of 3501 or greater

General Specifications

8920A Dimensions: H × W × D in inches and (mm): 7.5 H × 13 W × 19 D (188 H × 330 W × 456 D)

8920A Weight: (fully optioned) 37 lbs. (16.8 kgs)

8920A Power:

AC: 100 V to 240 V, 48 to 440 Hz, *nominally 80 watts*
DC: 11 to 28 V, *nominally 120 watts*

8920D Power:

AC: 100 V to 240 V ±10%, 48 Hz to 440 Hz, *nominally 100 watts*

CRT Size: 7 × 10 cm

Operating Temperature: 0 to +55 °C

Storage Temperature: –55 to +75 °C

Calibration Interval: Two years

Supplemental Characteristics

Leakage: *At signal generator output frequency and level <–40 dBm, typical leakage is <0.5 µV induced in a resonant dipole antenna one inch from any surface except the rear panel. Spurious leakage levels are typically <1 µV in a resonant dipole antenna.*

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Configuration Information

X = Required Option O = Recommended Option

	8920A Options	001 High Stability Timebase	004 Signaling	007[1] Low-Power Measurement	008[1] Cellular MS RF Power Range	010 400 Hz High-Pass Filter	011 CCITT Weighting Filter	012 4 kHz Bandpass Filter	013 C-Message Weighting Filter	014 6 kHz Bandpass Filter	019 Variable Frequency Filter	055 Mechanical Attenuator	102 Specrum Analy./Tracking Gen	103 GPIB/RS-232 Parallel	11807A Radio Test Software (Options)
Measuring Capability	Automated FM Radio Test[3]	O	O			O	O				O			O	001
	Automated ϕm Radio Test[3]	O	O			O	O							O	002
	Automated AM Radio Test	O												O	003
	Testing Communications Bandwidths <30 MHz											X			
	Cordless Phone Test[3]	O	O	X			O								
	Frequency Scanning													O	
	Cable Fault Location[2]												X	O	
	Field Strength Measurement												X	O	100
	Intermodulation Prod. Cal.													O	
	Save/Recall Procedure													O	
Trunked Radio	LTR Trunked Radio Test[3] (Includes FM radio tests)	O	X			X	O				O			O	010
	EDACS Trunked Radio Test[3] (Includes FM radio tests)	O	X			O	O				O			O	011
	MPT 1327 Trunked Radio Test[3]	O	X				O				O		O	O	012
Cellular Phone Test	AMPS/EAMPS/NAMPS	O	X						O	O	O			O	004
	TACS/ETACS	O	X				O			O	O			O	005
	NMT 450/900	O	X				O	O			O			O	006
	JTACS/NTACS	O	X				O				O			O	007

1. Options 007 and 008 reduce the maximum input power of the 8920A from 60 watts to 2.4 and 6 watts respectively. Option 008 is recommended for applications where the 8920A is used for cellular phone test only.
2. Requires an external power divider and 50 ohm load to make measurement.
3. Testing frequencies below 30 MHz will require ordering Option 055 (400 kHz to 1 GHz).

For more information, visit our website at:
www.agilent.com/find/8920support/

By internet, phone, or fax, get assistance with all your test and measurement needs.

Online Assistance
www.agilent.com/find/assist

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