

ARTISAN®
TECHNOLOGY GROUP

Your **definitive** source for quality pre-owned equipment.

Artisan Technology Group
(217) 352-9330 | sales@artisantg.com | artisantg.com

Full-service, independent repair center
with experienced engineers and technicians on staff.

We buy your excess, underutilized, and idle equipment
along with credit for buybacks and trade-ins.

Custom engineering
so your equipment works exactly as you specify.

- Critical and expedited services
- In stock / Ready-to-ship
- Leasing / Rentals / Demos
- ITAR-certified secure asset solutions

Expert team | Trust guarantee | 100% satisfaction

All trademarks, brand names, and brands appearing herein are the property of their respective owners.

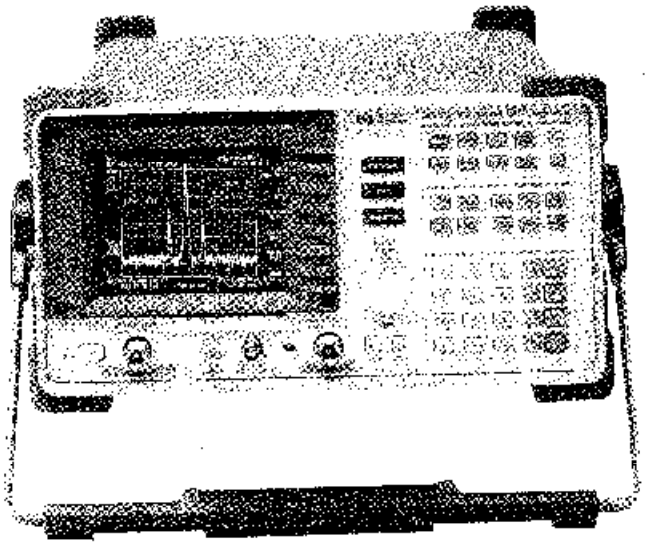
Find the *Keysight / Agilent 8590B* at our website: ***Click HERE***

SIGNAL ANALYZERS

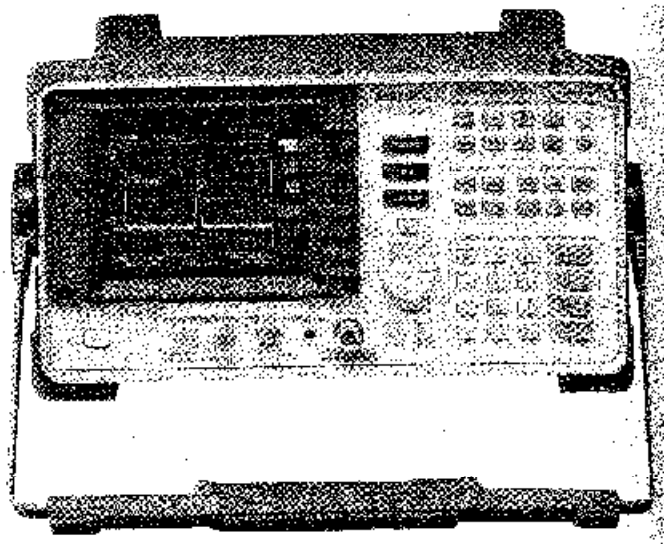
Spectrum Analyzers, Low-cost Portable

HP 8590B, 8592B

- Low price
- Easy to use
- Sturdy and lightweight
- Measurement personalities



HP 8590B



HP 8592B

HP 8590B and 8592B Spectrum Analyzers

These models offer basic RF and microwave measurement performance at a low cost. The HP 8590B has a frequency range of 9 kHz to 1.8 GHz, a 50- or optional 75-ohm input, and a weight of only 13.6 kg (30 pounds). Amplitude range is a wide −115 to +30 dBm. The HP 8592B has a frequency range of 9 kHz to 22 GHz (or 25 GHz with option 1H25), an internal preselector, and a weight of (35 pounds) 15.9 kg. Amplitude range extends from −114 to +30 dBm. (For special applications or general export, the HP 8592B option 1BH does not tune above 18 GHz nor span greater than 2.3 GHz.) If ac power is not available, both spectrum analyzers can be operated using the HP 85901A portable ac power source.

One Spectrum Analyzer for Many Applications

You can change the test capabilities of these spectrum analyzers to fit specific measurement needs. An optional memory card reader enables you to load specific measurement personalities for cable television, electromagnetic compatibility, or digital radio applications. Complex measurement routines and test limits are available at a keystroke. An optional built-in tracking generator provides the HP 8590B RF analyzer with a synchronously swept signal source for stimulus-response measurements. Operating these analyzers requires only minimal training.

Easy-to-Use Features

Numerous features make it easier to control your measurements and to analyze the results. Both portable spectrum analyzers have built-in, automatic calibration to ensure measurement consistency. Frequency panning lets you quickly reposition signals without repeated sweeps. The internal memory allows 50 traces to be stored, and 24 more can be stored on a RAM card with addition of the optional memory-card reader. Time-and-date stamping come standard. Direct output to printer or plotter are available with either the HP-IB or RS-232 interface option.

HP 8590B Specifications

General

Temperature range
- **Operating:** 0° to +55° C
- **Storage:** −40° to +75° C

EMI compatibility: CISPR Pub. 11 and FRZ 526/527/79

Audible noise: <37.5 dBA pressure and <5.0 Bels power (ISODP7779)

Power requirements: 86 to 127 or 195 to 250 Vrms, 47 to 66 Hz, 103 to 126 Vrms, 400 Hz ±10%

Frequency

Range: 9 kHz to 1.8 GHz; 1 MHz to 1.8 GHz option 001

Readout accuracy: ±(5 MHz + 1% of frequency span)

Span
- **Range:** 0 Hz (zero span), 50 kHz to 1.8 GHz
- **Accuracy:** ±3% of indicated span

Sweep time
- **Range:** 20 ms to 100 s
- **Accuracy:** ±3% of indicated sweep time
- **Sweep trigger:** free run, single, line, video, external

Stability
- **Drift:** <75 kHz/5 minutes after 2-hour warmup and 5 minutes after setting center frequency
- **Noise sidebands:** <−95 dBc/Hz at >30 kHz offset from CW signal
- **System related sidebands:** <−65 dBc at >30 kHz offset from CW signal

Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

HP 8590B Specifications (continued)

Amplitude

Amplitude range: −115 to +30 dBm (50 ohm); −63 to −75 dBmV (75 ohm, option 001)

Maximum safe input level:	**50 ohm**	**75 ohm (option 001)**
Average cont. power	+30 dBm (1 watt)	75 dBmV (0.4 watts)
Peak pulse power	+30 dBm (1 watt)	75 dBmV (0.4 watts)
DC	25 Vdc	100 Vdc

Gain compression > 10 MHz: ≤0.5 dB (total power at input mixer = −10 dBm

Displayed average noise level: <−115 dBm to <−113 dBm

Spurious responses

Second harmonic distortion > 6 MHz: <−70 dBc for −45 dBm tone at input mixer

Third-order intermodulation

Distortion >5 MHz: <−70 dBc for two −30 dBm tones at input mixer and >50 kHz separation

Other input-related: <−65 dBc for ≥30 kHz offset from CW signal

Residual responses (input terminated and 0 dB attenuation)

	50 ohm	**75 ohm (option 001)**
150 kHz to 1 MHz	<−90 dBm	N/A
1 MHz to 1.8 GHz	<−90 dBm	<−35 dBmV

Display range

Log scale: 0 to −70 dB from reference level is calibrated; 1 to 20 dB/division in 1 dB steps; 8 divisions displayed

Linear scale: 8 divisions

Scale units: dBm, dBmV, dBmicroV, volts, watts

Marker readout resolution: 0.05 dB for log scale; 0.05% of reference level for linear

Reference level

Range: −115 to +30 dBm (50 ohm); −63 to +75 dBmV (75 ohm)

Resolution: 0.01 dB for log scale; 0.12% of ref level for linear

Accuracy (referred to −20 dBm reference level)

0 to −59.9 dBm: ±(0.5 dB + input attenuator accuracy at 50 MHz)

−60 to −115 dBm: ±(1.25 dB + input attenuator accuracy at 50 MHz)

Frequency response, 10 dB input attenuation

Absolute: ±1.5 dB, referred to 300 MHz CAL OUT

Relative flatness: ±1.0 dB, referred to midpoint between highest and lowest frequency response deviations

Calibrator output

Frequency: 300 MHz ±30 kHz

Amplitude: −20 dBm ±0.4 dB (50 ohm), −28.75 dBmV ±0.4 dB (75 ohm, option 001)

Input attenuator

Range: 0 to 60 dB, 10 dB steps

Accuracy: ±0.5 dB at 50 MHz, ref 10 dB attenuation, 0 to 50 dB; ±0.75 dB at 50 MHz, ref 10 dB attenuation, 60 dB

Resolution bandwidth: 1 kHz to 3 MHz, −3 dB nominal

Switching uncertainty, referred to 3 kHz RBW: ±0.4 dB for 3 kHz to 3 MHz RBW; ±0.5 dB for 1 kHz

Video bandwidth range: 30 Hz to 1 MHz

Log to linear switching: ±0.25 at reference level

Display scale fidelity

Log incremental accuracy: ±0.2 dB/2 dB, 0 to −70 dB from ref lev

Log maximum cumulative: ±0.75 dB, 0 to −60 from ref level; ±1.0 dB, 0 to −70 dB from ref level

Linear accuracy: ±3% of reference level

HP 8592B Specifications

Frequency

Range: 9 kHz to 22 GHz; 9 kHz to 25 GHz (option H25)

Readout accuracy: ±[(5 x N) MHz + 0.01% of center frequency + 2% of frequency span]

Span

Range: 0 Hz (zero span), (50 x N) kHz to 19.25 GHz

Accuracy: ±2% of span, span >10 MHz; ±5% of span, span <10 MHz

Sweep time

Range: 20 ms to 100 s

Accuracy: ±3% of indicated sweep time

Sweep trigger: free run, single, line, video, external

Stability

Noise sidebands: <(−95 − 20 log N) dBc/Hz, >30 kHz offset from CW

System-related sidebands: <−65 dBc + 20 log N at >30 kHz offset from CW signal

Comb generator frequency accuracy: 100 MHz fundamental freq ±0.007%

Amplitude

Range: −114 to 130 dBm

Maximum safe input: +30 dBm (1 watt, 7.1 Vrms), 0 Vdc

Gain compression: ≤0.5 dB (total power at input mixer = −10 dBm

Displayed average noise level: ≤−114 to ≤−92 dBm

Spurious responses

Second harmonic distortion

10 MHz to 2.9 GHz: <−70 dBc for −40 dBm tone at input mixer

>2.75 GHz: <−100 dBc for −10 dBm tone at input mixer (or below displayed average noise level)

Third-order intermodulation

Distortion > 10 MHz: <−65 dBc for two −30 dBm at input mixer and >50 kHz separation

Other input related: <−70 dBc for applied freq ≤18 GHz; <−60 dBc for applied freq ≤22 GHz

Display range

Log scale: 0 to −70 dB from reference level is calibrated: 1 to 20 dB/division in 1 dB steps; 8 divisions displayed

Linear scale: 8 divisions

Scale units: dBm, dBmV, dBμV, volts, watts

Reference level

Range: −114 to +30 dBm

Resolution: 0.01 dB for log scale; 0.12% of ref lev for linear

Accuracy referred to −20 dBm reference level

0 to −59.9 dBm: ±(0.5 dB + input atten acc @ 50 MHz)

−60 to −114 dBm: ±(1.25 dB + input atten acc @ 50 MHz)

Frequency response, referred to 300 MHz CAL OUT, preselector peaked

Absolute: ±2.0 to +3.0 dB

Relative flatness: ±1.5 to +2.0 dB

Calibrator output

Frequency: 300 MHz ±30 kHz

Amplitude: −20 dBm ±0.4 dB

Input attenuator

Range: 0 to 70 dB in 10 dB steps

Accuracy

0 to 60 dB: 0.5 dB at 50 MHz, ref to 10 dB atten

70 dB: 1.2 dB at 50 MHz, ref to 10 dB atten

Resolution bandwidth (−3 dB nominal): 1 kHz to 3 MHz

Switching uncertainty: ±0.4 dB, 3 kHz to 3 MHz RBW; ±0.5 dB, 1 kHz

Video bandwidth range: 30 Hz to 1 MHz

Log to linear switching: ±0.25 dB at reference level

Display scale fidelity: ±0.2 dB/2 dB, 0 to −70 dB from ref lev, incremental; ±0.75 dB, 0 to −60 dB from ref lev ±1.0 dB; 0 to −70 dB from ref lev, maximum cumulative

Linear accuracy: ±3% of reference level

Ordering information

HP 8590B spectrum analyzer (9 kHz to 1.8 GHz)

HP 8592B spectrum analyzer (9 kHz to 22 GHz)

Opt 001 75 Ω input impedance (HP 8590B only)

Opt 003 card reader

Opt 010 tracking generator 50Ω (HP 8590B only)

Opt 011 tracking generator 75Ω (HP 8590B only)

Opt 021 HP-IB interface

Opt 023 RS-232 interface

Opt H25 frequency extension to 25 GHz (HP 8592B only)

Opt 1BH general export version

Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

Artisan Technology Group is an independent supplier of quality pre-owned equipment

Gold-standard solutions

Extend the life of your critical industrial, commercial, and military systems with our superior service and support.

We buy equipment

Planning to upgrade your current equipment? Have surplus equipment taking up shelf space? We'll give it a new home.

Learn more!

Visit us at **artisantg.com** for more info on price quotes, drivers, technical specifications, manuals, and documentation.

Artisan Scientific Corporation dba Artisan Technology Group is not an affiliate, representative, or authorized distributor for any manufacturer listed herein.

We're here to make your life easier. How can we help you today?

(217) 352-9330 | sales@artisantg.com | artisantg.com

ARTISAN® TECHNOLOGY GROUP