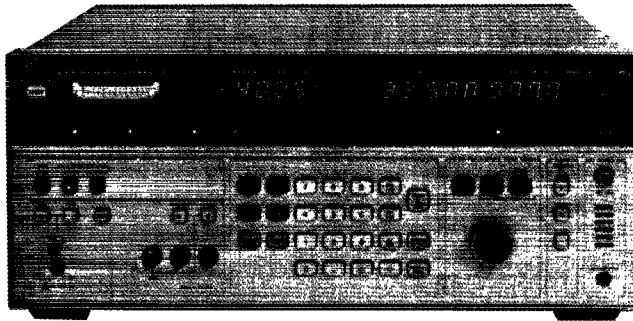


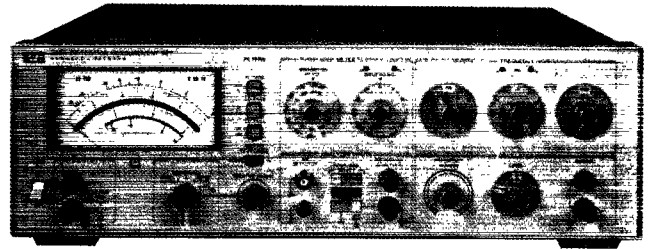
SIGNAL ANALYZERS

Selective Level Meter and Distortion Measurement Set

HP 3586C, 339A



HP 3586C



HP 339A

HP 3586C Selective Level Meter

The HP 3586C Selective Level Meter is designed for general-purpose wave analysis applications in the design, manufacture, and maintenance of electronic systems. The HP 3586C is fully HP-IB programmable and covers the frequency range of 50 Hz to 32.5 MHz, allowing measurement of audio, sonar, and other low-frequency systems, as well as high-frequency communications subsystems. Input impedances of 50, 75, and 600 Ω are provided with 10 k Ω bridging for maximum measurement flexibility in a wide variety of applications. Signal levels are measured with up to ± 0.2 dB accuracy down to -80 dB, with 0.01 dB resolution and bandwidth choices of 20, 400, or 3100 Hz. The built-in counter and narrow-resolution bandwidths allow harmonic and intermodulation measurements to be made with ease. Frequency can be set or measured with 0.1 Hz resolution and ± 10 ppm stability (± 0.2 ppm optional).

For frequency response measurement of high-Q filters and other selective networks, the companion HP 3336C synthesizer/level generator functions as a full-featured, HP-IB programmable tracking generator. Frequency range for the HP 3336C is 10 Hz to 21 MHz, with precise output levels from -70 to $+8$ dBm.

HP 3586C Specifications (abbreviated)

Frequency

Range: 50/70 Ω unbalanced input, 50 Hz to 32.5 MHz; 600 Ω balanced input, 50 Hz to 108 kHz

Resolution: 0.1 Hz

Center frequency accuracy: $\pm 1 \times 10^{-5}$ /year ($\pm 2 \times 10^{-7}$ /year with option 004).

Selectivity

3dB bandwidth: $\pm 10\%$: 20 Hz, 400 Hz, 3100 Hz

Pass band flatness: ± 0.3 dB

Level accuracy (+20 to -80 dB):

± 0.20 dBm, 20 kHz to 18 MHz

± 0.25 dBm, 18 MHz to 32.5 MHz

Ordering Information

HP 3586C Selective Level Meter

Opt 004 High-Stability Frequency Reference + \$775

Opt 907 Front Panel Handles + \$68

Opt 908 Rack Flange Kit + \$37

Opt 909 Rack Flange & Handle Combination Kit \$95

Opt W30 Extended repair service. See page 671. \$280

Price

\$12,700

HP 339A Distortion Measurement Set

The HP 339A Distortion Measurement Set is an ultralow distortion measuring system complete with total harmonic distortion (THD) analyzer, true rms voltmeter, and sinewave oscillator. This lightweight bench instrument allows you to make THD measurements over the 10 Hz to 110 kHz frequency band, including harmonics to 330 kHz.

With the built-in tracking oscillator in the HP 339A, you only need to tune one instrument instead of two. Input filters are included to speed test time. The 30 kHz low-pass filter provides the band limiting required by FCC proof-of-performance broadcast testing. An 80 kHz low-pass filter and 400 Hz high pass filter reduce high frequency noise and line frequency hum.

Distortion Measurements

The fundamental frequency range is 10 Hz to 110 kHz with continuous frequency coverage with 2-digit resolution. The distortion analyzer and oscillator are tuned simultaneously. Distortion measurement range is 100% to 0.01%, (0 dB to -80 dB).

Specifications

Distortion measurement accuracy

20 Hz to 20 kHz: ± 1 dB

10 Hz to 50 kHz: $+1, -2$ dB

50 kHz to 110 kHz: $+1.5, -4$ dB

Distortion introduced by instrument (Input > 1 V rms)

10 Hz to 20 kHz < -95 dB (0.0018%) THD

20 kHz to 30 kHz < -90 dB (0.0056%) THD

30 kHz to 50 kHz < -85 dB (0.01%) THD

50 kHz to 110 kHz < -70 dB (0.032%) THD

Oscillator

Frequency range is 10 Hz to 100 kHz with 2-digit resolution. Output level is variable from 1 V rms to > 3 V rms.

Oscillator distortion (> 600 ohm load, < 3 Vrms)

10 Hz to 20 kHz < -93 dB (0.0022%) THD

20 kHz to 30 kHz < -85 dB (0.0056%) THD

30 kHz to 50 kHz < -80 dB (0.01%) THD

50 kHz to 80 kHz < -70 dB (0.032%) THD

80 kHz to 110 kHz < -65 dB (0.056%) THD

Voltmeter

Range is 1 mV rms full scale to 300 V rms full scale (-60 dB to $+50$ dB with the meter calibrated in dBV to 600 ohms). Option 001 provides increased sensitivity to 0.1 mV rms (-80 dBV).

Voltmeter accuracy

1 mV to 300 V Ranges .1 mV and .3 mV ranges

20 Hz to 20 kHz: $\pm 2\%$ 20 Hz to 20 kHz: $\pm 2\%$

10 Hz to 110 kHz: $\pm 4\%$ 10 Hz to 30 kHz: $\pm 4\%$

30 kHz to 80 kHz: $+10\%$ to -30%

General

Power: 100/120/220/240 V $+5\%$, -10% , 48 Hz to 66 Hz line operation, 200 mA maximum.

Size: 146 mm H \times 426 mm W \times 375 mm D (5.75 in \times 16.75 in \times 14.75 in)

Weight: Net, 8.2 kg (18 lb); shipping, 11.3 kg (25 lb)

Ordering Information

HP 339A Distortion Measurement Set

Opt 001 Increased Sensitivity \$290

Opt W30 Extended Repair Service. See page 671. \$105

Price

\$4,875