

HP 8411A

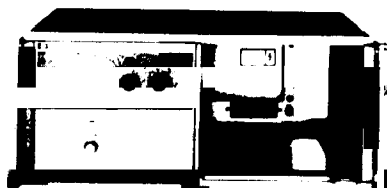
HP 8410C



HP 8412B



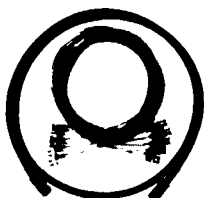
HP 8414B



HP 8418B



HP 11650A



HP 11609A

Specifications

HP 8410C/8411A Network Analyzer

Function: HP 8411A converts RF signals to IF signals for processing in HP 8410C mainframe. HP 8410C is the mainframe for display plug-in units. Mainframe includes tuning circuits (octave bands or multioctave bands when used with HP 8620C or 8350B sweep oscillator), IF amplifiers and precision IF attenuator. HP 8410C allows injection of an external local oscillator used in automatic applications to lock the HP 8410C receiver to an external source such as the HP 3335A.

HP 8410C frequency range: 0.11 to 18 GHz.

HP 8411A frequency range: 0.11 to 12.4 GHz.

Opt 018: 0.11 to 18 GHz.

HP 8411A input impedance: 50 ohms nominal. SWR <1.5, 0.11 to 2.0 GHz; <2.0, 2.0 to 16.0 GHz; 3, 6.0 to 18.0 GHz.

Channel isolation: >65 dB, 0.1 to 6 GHz; >60 dB, 6 to 12.4 GHz; >50 dB, 12.4 to 18 GHz.

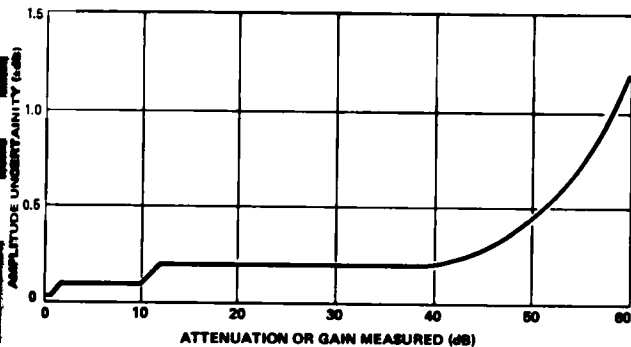
Magnitude Range

Reference channel: -18 to -35 dBm, 0.11 to 12.4 GHz; -18 to -25 dBm from 12.4 to 18.0 GHz.

Test channel: -10 to -75 dBm from 0.11 to 12.4 GHz; -10 to -68 dBm from 12.4 to 18 GHz.

Maximum RF input to either channel: 50 mW.

IF gain control: 69 dB range in 10 dB and 1 dB steps with a maximum cumulative error of ± 0.2 dB.



Phase

Phase range: 0 to 360°

Control: vernier control $\leq 90^\circ$

Connectors (HP 8411A): APC-7.

Power: 115 or 230 V $\pm 10\%$, 50-60 Hz, 70 watts (includes HP 8411A).

Weight

HP 8410C: net, 14.9 kg (33 lb); shipping, 18.5 kg (41 lb).

HP 8411A: net, 3.2 kg (7 lb); shipping, 4.5 kg (10 lb).

Size

HP 8410C: 191 H x 425 W x 467 mm D (7.5" x 16.75" x 18.38").

HP 8411A: 67 x 228 W x 143 mm D (2.63" x 9" x 5.63") exclusive of connectors and cable.

HP 8412B Phase-Magnitude Display

Function: plug-in CRT display unit for HP 8410C. Displays relative amplitude in dB and/or relative phase in degrees between reference and test channel inputs versus frequency. Programmable 180° phase offset by ground closure.

Amplitude

Range: 80 dB display range with selectable resolutions of 10, 2.5, 1 and 0.25 dB/division.

Accuracy: 0.08 dB/dB from midscreen.

Phase

Range: $\pm 180^\circ$ display range with selectable resolutions of 90, 45, 10, and 1°/division.

Accuracy: 0.065°/degree from midscreen.

Phase offset: 0.3°/20° step cumulative <3°.

Power: 23 watts supplied by mainframe.

Weight: net, 7.8 kg (17 lb); shipping, 10 kg (22 lb).

Size: 152 H x 186 W x 395 mm D (6" x 7.28" x 15.56") excluding front panel knobs.

HP 8414B Polar Display

Function: plug-in CRT display unit for HP 8410C. Displays amplitude and phase data in polar coordinates on 5-in. cathode ray tube.

Range: normalized polar coordinate display; magnitude calibration 20% of full scale per division. Scale factor is a function of IF setting on HP 8410C. The beam center function is controllable by an external contact closure.

Accuracy: error circle on CRT ± 3 mm.

Power: 35 watts supplied by mainframe.

Weight: net, 5.8 kg (13 lb); shipping, 8.1 kg (18 lb).

Size: 152 H x 186 W x 395 mm D (6" x 7.28" x 15.56") excluding front panel knobs.

HP 8418B Auxiliary Display Holder

Function: the HP 8418B auxiliary display holder provides power for operating of the HP 8412B or the 8414B display units. Used in conjunction with the HP 8410C network analyzer, it provides the capability of viewing amplitude and phase readout in both rectangular and polar coordinates simultaneously. Includes a remotely programmable 0-70 dB IF attenuator required for autoranging in automatic applications.

Weight: net, 11.2 kg (25 lb); shipping, 19.7 kg (44 lb).

Size: 177 H x 483 W x 450 mm D (6.97" x 19" x 17.13").

HP 11650A Accessory Kit

Function: accessories normally used for transmission and reflection tests with the HP 8745A and 8743B.

Weight: net, 1.34 kg (3 lb); shipping, 2.23 kg (5 lb).

HP 11609A Cable Kit

Function: interconnecting cables normally required for network measurements using the HP 8410C network analyzer.

Weight: net, 0.9 kg (2 lb); shipping 1.36 kg (3 lb).

Ordering Information

HP 8410C mainframe
 Opt 908: Rack Flange Kit
 HP 8411A Frequency Converter
 Opt 018: 0.11 to 18 GHz
 HP 8412B Phase-Magnitude Display
 HP 8414B Polar Display
 HP 8418B Auxiliary Display Holder
 Opt 908: Rack Flange Kit
 HP 11650A Accessory Kit
 HP 11609A Cable Kit

Price

\$7,775
 add \$25
 \$5,520
 add \$550
 \$4,110
 \$3,865
 \$3,710
 add \$25
 \$1,605
 \$150