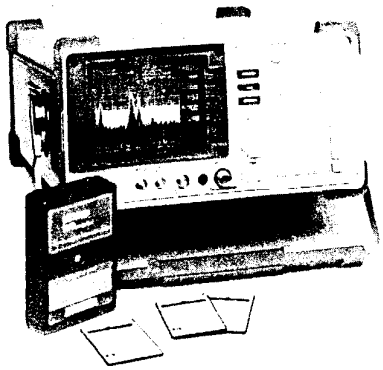
Mass Memory Module

A companion Mass Memory Module, the HP 85620A, plugs onto the rear panel. Use 128K bytes of built-in, battery-backed RAM of the HP 85620A to store at least 10 downloadable programs (DLPs) or more than 100 traces. This module has the capability to generate "smart" limit lines to track the analyzers' settings and automatically adjust to the changes. With the built-in clock, auto-save, and auto-execute capabilities of the Mass Memory Module, the HP 8561A and 8562A/B can automatically make measurements at specified times or when specific frequency/amplitude criteria are met.



The HP 85620A Mass Memory Module provides the analyzers with built-in computer capability.

Test and Adjustment Module

The HP 85629B Test and Adjustment Module or "TAM" is a new approach to servicing spectrum analyzers. It plugs onto the rear panel of the HP 8561A and 8562A/B and performs high level diagnostics, self tests, and much more. The TAM is a must for anyone doing his own repair. And one module can service multiple spectrum analyzers.

Detect Fault

Automatic Fault Isolation makes functionality checks of the CPU, ADC, IF, LO, and RF sections. Just connect the CAL OUTPUT, press a few keys, and many failures can be isolated to a single board within minutes. No external test equipment is required.

Find Fault

Manual probe troubleshooting using the TAM's 8-input voltmeter and the twenty-six 16-pin test connectors spread throughout the analyzer lets you make more than 1000 measurements, isolating the faulty board or component quickly, without racks of equipment.

Readjustment

Once you've repaired the analyzer, readjustment is fast and accurate because the TAM controls both internal analyzer settings and external test equipment. For example, the TAM performs the frequency-response adjustment in 10 minutes. The same adjustment performed manually takes an hour. After readjustment, use the TAM's functional tests for immediate confidence that the repair was completed successfully.

Specifications

Frequency

Frequency Range: 1 kHz to 6.5 GHz (HP 8561A)
1 kHz to 22 GHz (HP 8562A/B)
1 kHz to 26.5 GHz (Opt. 026)
(325 GHz with external mixers)

Harmonic mode (n)	Center frequency
1	1 kHz - 2.9 GHz
1	2.75 GHz - 6.46 GHz
2	5.86 GHz - 13.0 GHz
3	12.4 GHz - 19.7 GHz
4	19.1 GHz - 22.0 GHz
4	19 GHz - 26.5 GHz (Opt. 026)

Frequency Readout Accuracy: Start, Center, Stop, or Marker: ±(freq readout × freq reference accuracy + 5% of span + 15% of res BW + 250 Hz)
Counter Resolution: 10 Hz - 1 MHz (selectable)
Counter Accuracy: ±(marker freq × freq reference accuracy + 50 Hz × n + 2 LSD) for S/N≥25 dB
Delta Counter Accuracy: ±(delta freq × freq reference accuracy + 100 Hz × n + 2 LSD) for S/N≥25 dB
Frequency Reference Accuracy: $<4 \times 10^{-6}$/year (includes aging, temperature drift, settability)
Frequency Stability
Residual FM: <50 Hz × n p-p in 0.1 sec (zero span)
Spectral Purity
Noise Sidebands: < (−100 + 20 Log n) dBc/Hz at 30 kHz offset
Frequency Span
Range: 0 Hz, 2.5 kHz x n to 19.25 GHz
2.5 kHz x n to 23.75 GHz (Opt. 026)
Accuracy: < 5%
Resolution Bandwidth (−3 dB)
Range: 100 Hz - 1 MHz in a 1,3,10 sequence and 2 MHz
Accuracy: ±30% 100 Hz, ±10% 300 Hz to 300 kHz, ±25% 1 MHz and 2 MHz
Selectivity: <15:1 (−60 dB/−3 dB)
Shape: Synchronously-tuned, 4-pole filter
Video Bandwidth
Range: 1 Hz - 3 MHz in a 1,3,10 sequence

Amplitude Range

Amplitude Range: +30 dBm to displayed average noise level
Maximum Safe Input
Average Continuous Power: +30 dBm (1 Watt) with input atten ≥10 dB
Peak Pulse Power: +50 dBm (100 Watt) with input atten ≥30 dB for <10 usec pulse width and <1% duty cycle
DC: 0 Volts
Display Range
Display: 10 × 10 Division Graticule
Calibration: Log 10,5,2 and 1 dB per division, Linear 10% of Reference Level/division
Reference Level Range: Log, −120 to +30 dBm in 0.1 dB steps; linear 2.2 uVolts to 7.07 Volts in 1% steps
Input Attenuation Range: 0 to 70 dB in 10 dB steps

Dynamic Range

Maximum Dynamic Range
Compression to Noise: 118 dB
Signal to Distortion:
Harmonic: ≥2.9 GHz: 100 dB (77.5 dB unpreselected), <2.9 GHz: 77.5 dB
Intermodulation: 86 dB
Displayed Average Noise Level: With 100 Hz res BW, 0 dB Input Attenuator, 1 Hz video filter: −90 dBm, 10 kHz; −100 dBm, 100 kHz; −120 dBm, 1 MHz to 2.9 GHz; −121 dBm, 2.75 GHz to 6.46 GHz; −110 dBm, 5.86 GHz to 13.0 GHz; −105 dBm, 12.4 GHz to 19.7 GHz; −100 dBm, 19.1 GHz to 22.0 GHz; −100 dBm, 19.1 GHz to 26.5 GHz (Option 026)
1 dB Gain Compression: −3 dBm at input mixer above 10 MHz
Spurious Responses: Signals generated by the analyzer due to input signals. For mixer level <−40dBm: all harmonic and intermodulation distortion >60 dB[1] below input signal.
Second Harmonic Distortion: for mixer level =−40 dBm: <−72 dBc, 10 MHz to 2.9 GHz; <−60 dBc (8562B only) above 2.75 GHz. For mixer level =−10 dBm: <−100 dBc (8562B unspecified) above 2.75 GHz.

[1]to 6.46 GHz 8561A/8562A, to 2.9 GHz 8562B