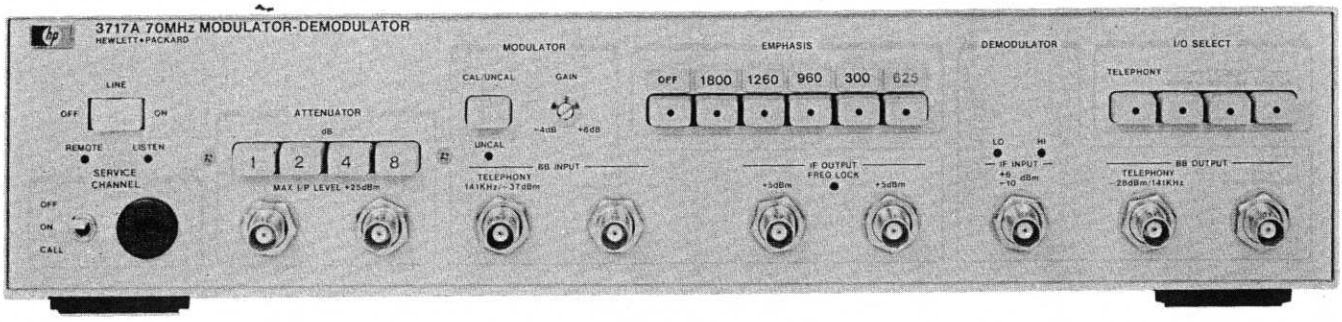
TELECOMMUNICATIONS TEST EQUIPMENT

70 MHz Modulator/Demodulator

Model 3717A

- Up to 5 pre-/de-emphasis networks
- Video and telephony inputs and outputs
- Service channel provided
- Built-in 15 dB open-ended attenuator
- Optional HP-IB control
- Optional balanced BB input and output



DESIGNED FOR HP-IB SYSTEMS

The 3717A 70 MHz Modulator/Demodulator can be used in microwave radio link systems to enable BB qualitative measurements to be made at non-demodulating repeater stations.

Standard measurement practice for the alignment and maintenance of microwave radio links involves two specific categories of tests, i.e. swept response measurements and BB qualitative measurements. Normal practice is to align a microwave radio initially by using swept response techniques such as those provided by an MLA. After these measurements have been completed successfully, qualitative measurements such as white noise loading, TV waveform testing, and BB frequency response are performed at the BB terminals of the microwave radio to verify operational performance.

However, the optimum swept response does not always produce the best possible qualitative figure. When this happens it may be necessary to isolate the faulty section by performing qualitative measurements from BB terminal stations to IF repeater stations, or vice versa. To do this, a high quality wideband test modulator or demodulator is required. The 3717A provides this capability.

Specifications Summary

Back-to-Back Performance (Telephony)

BB Frequency Response (with or without Emphasis)
50 Hz to 10 MHz: ±0.2 dB.
50 Hz to 20 MHz: ±3 dB.

Noise Loading Performance
At manual loading for all slots, 70 to 7600 kHz (1800 channels with emphasis): ≤25 pWOp (57 dB NPR).
Thermal: mod/demod is thermally dominated and will typically tolerate a 6 dB overload with no degradation.

Spurious Response
300 kHz to 10 MHz: ≤ −72 dBm0.

Back-to-Back Performance (Video)

BB Frequency Response
5 Hz to 10 MHz: ±0.2 dB.
Square wave tilt (50 Hz): <1.0%.
Diff. Gain (4.43 MHz)*: ≤0.7%.
Diff. Phase (4.43 MHz)*: ≤0.7°.
*Measured on an HP Microwave Link Analyzer with a test tone of 4.43 MHz.

Options	Price
Connector options–select any one.	
Std: BNC	NC
003: Siemens small.	NC
004: commercial equivalent of WECO 477B balanced input.	+$885
Emphasis networks–up to five may be installed and should be specified with every order.	
CCIR	
011: 24 channel emphasis.	+$195
012: 60 channel emphasis.	+$195
013: 120 channel emphasis.	+$195
014: 300 channel emphasis.	+$195
015: 600 channel emphasis.	+$195
016: 960 channel emphasis.	+$195
017: 1260 channel emphasis.	+$195
018: 1800 channel emphasis.	+$195
021: 525 line emphasis.	+$195
022: 625 line emphasis.	+$195
023: 819 line emphasis.	+$195
Bell	
031: Bell 600 channel emphasis.	+$195
032: Bell 900 channel emphasis.	+$195
033: Bell 1200 channel emphasis.	+$195
034: Bell 1500 channel emphasis.	+$195
035: Bell 1800 channel emphasis.	+$195
036: Bell 2100 channel emphasis.	
037: Bell 2400 channel emphasis.	
Miscellaneous	
006: deletes Modulator section.	−$2115
007: deletes Demodulator section.	−$2335
100: HP-IB.	+$285
136: Combination of options 003 and 006.	−$2115
137: Combination of options 003 and 007.	−$2335
146: Combination of options 004 and 006.	−$1230
147: Combination of options 004 and 007.	−$1450
3717A 70 MHz Modulator/Demodulator	**$9455**