



OPERATING GUIDE

SPECIAL SUPPLEMENT

SPECIFICATION MODEL 8970B OPTION H18 NOISE FIGURE METER

For use with instruments that have a serial prefix of 2937U or above

Model Number: 8970B
Part Number: 08970-90042
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QUEENSFERRY MICROWAVE OPERATION



The HP Model 8970B Option H18 is a standard HP 8970B Noise Figure Meter that has been modified to operate up to 1800MHz input frequency. The following specification changes apply to the H18 option.

| | |
|-----------------------------------|------------------------------|
| INPUT FREQUENCY RANGE | 10 to 1800MHz |
| NOISE FIGURE 10 to 1600MHz | < 7dB +0.003dB/MHz |
| 1600 to 1800MHz | < 14dB |

INPUT SWR

Any DUT Gain 10 to 1600MHz < 1.7

> 30dB DUT Gain 1600 to 1800MHz < 1.7

Any DUT Gain 1600 to 1800MHz < 2.3 (typical)

Operation of this instrument is the same as the standard HP 8970B except that the input frequency range has been extended to 1800MHz. The Option H18 response to CLEAR or PRESET is as indicated in the 8970B Operating and Service Manual. The START, STOP and STEP frequencies are 10MHz, 1600MHz and 20MHz respectively. Should the operator desire to operate above 1600MHz, the frequency data will need to be entered either manually or programmed after PRESET or TURN-ON.

The 8970B will adjust its gain by inserting or removing attenuators in the input circuits. If the DUT has a gain of 30dB (or more), the 8970B will insert at least one attenuator in the input circuit. Under this condition, the Input SWR will be less than 1.7.

PERFORMANCE TESTS

Performance tests which are affected by this modification are Input SWR (Section 4.6) and Instrument Noise Figure (Section 4.9). These tests should be performed to 1800MHz and the results within the limits indicated above.

SERVICE

This change was accomplished by changing the Input Filter (FL1) to pass frequencies up to 1800MHz. The first converter's low pass filter was changed to pass frequencies up to 1800MHz. The Program ROM was changed to allow the instrument to operate up to 1800MHz.

REPLACEMENT PARTS

Make the following changes to the Replaceable Parts List - Table 6-3.

Change A14 Cont. Assy to 08970-60036
* Change A10 First Converter Assy to 08970-60051
Change A14U5 Program ROM to 08970-82014
Change A14U7 Program ROM to 08970-82015
Change FL1 Filter Low Pass to 0960-0159
Change W1 Cable Assy J2FL1 to 08970-22002
Add Label 10-1800MHz 08970-82001

In all other respects, the information contained in the Operating and Service Manual for the 8970B applies to this instrument.

*** NOTE:**

This change is only necessary for instruments having serial prefixes below 2745A or serial numbers below 2815U00219.