

ARTISAN®
TECHNOLOGY GROUP

Your **definitive** source for quality pre-owned equipment.

Artisan Technology Group
(217) 352-9330 | sales@artisantg.com | artisantg.com

Full-service, independent repair center
with experienced engineers and technicians on staff.

We buy your excess, underutilized, and idle equipment
along with credit for buybacks and trade-ins.

Custom engineering
so your equipment works exactly as you specify.

- Critical and expedited services
- In stock / Ready-to-ship
- Leasing / Rentals / Demos
- ITAR-certified secure asset solutions

Expert team | Trust guarantee | 100% satisfaction

All trademarks, brand names, and brands appearing herein are the property of their respective owners.

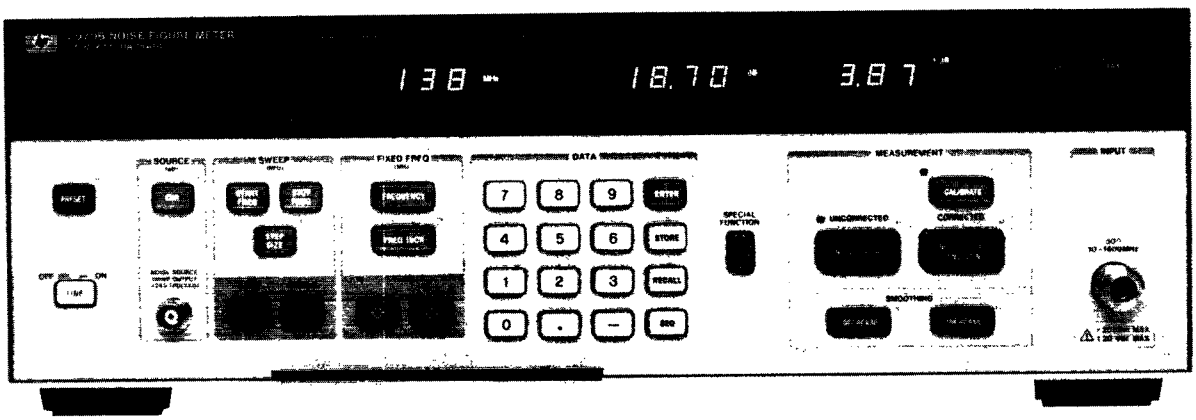
Visit our website - *Click HERE*

NOISE FIGURE METER

Automatic Noise Figure Meter

Model 8970B

- 10 MHz to 1600 MHz.
- Accurate and simple, swept or CW measurements.
- Second stage correction.
- Displays both noise figure and gain.
- Calibrated display on oscilloscope, recorder, or plotter.
- Powerful special function enhancements.



HP 8970B

HP-IB SYSTEMS

HP 8970B Noise Figure Meter

With the HP 8970B Noise Figure Meter, noise figure measurements are easy, accurate, and repeatable. Automatic second stage correction makes accurate noise figure readings possible even for low gain devices. The HP 8970B's dynamic range allows gain measurements of at least 40 dB (higher in some cases) or loss measurements to −20 dB, with no external attenuation or amplification. The HP 8970B can store up to 4 ENR (Excess Noise Ratio) noise source calibration tables. It also properly interpolates ENR values at each measurement frequency.

Microprocessor and Controller Functions

The HP 8970B takes the mystery out of noise figure measurements. It uses a microprocessor to make the calculations and corrections necessary for truly accurate, convenient, and flexible noise figure measurements. The meter also controls external local oscillators (such as the HP 8670 series synthesizers, HP 8340 series synthesized sweepers, or the HP 8350 sweep oscillator) and the HP 8971B Noise Figure Test Set. This makes accurate, broad-band microwave measurements of amplifiers, mixers, and transistors as simple as RF measurements.

Virtually all of the HP 8970B's front panel keys and functions are accessible over HP-IB, Hewlett Packard's enhanced version of IEEE-488. The meter has an independent System Interface Bus (SIB) to control the HP 8971B and local oscillator. This additional bus frees you from having to write computer code to control an instrument on the SIB (like the local oscillator) when used in an automated set-up. Pass-through capability allows other instrument controllers to send messages through the meter to any other instrument on the SIB.

Simple Calibration and Second Stage Correction

Noise figure measurement accuracy is enhanced because the meter measures its own noise figure (and that of the rest of the measurement system) at up to 181 points. It stores this information, interpolates where necessary, and corrects for it when displaying the device-under-test noise figure. The HP 8970B also measures the test device gain.

Display

The HP 8970B's front panel LEDs display frequency, gain, and noise figure. Rear panel BNC connectors allow swept display of noise figure and gain versus frequency on an oscilloscope or x-y recorder. You can also get the noise figure and gain vs. frequency display sent to a digital plotter over the HP 8970B's System Interface Bus. All display modes are easily and accurately scaled to the desired resolution from the meter's front panel. The swept oscilloscope display allows you to optimize your test device in real time for both noise figure and gain. You can easily change the noise figure display from noise figure to effective noise temperature (Te) or Y factor.

Front Panel and Special Functions

The HP 8970B front panel keys control the number entry, calibration, and measurement functions. STORE, RECALL, and SEQ keys allow up to 9 front panel settings to be stored and sequenced automatically or manually to save set-up time. Smoothing INCREASE and DECREASE keys are used to average up to 512 readings before display. This increases accuracy and eliminates display flicker.

For those who need greater measurement power than that provided by the HP 8970B's simple front panel, there are more than 200 special functions selected by pressing a numerical code and the special function key. Two examples are hot-cold measurements and automatic compensation for losses at the input of the test device. One of the special functions is a catalog that quickly shows you the current special functions being used. Three pull-out cards serve as a mini-reference manual for the instrument. They include most of the special functions, the HP-IB formats and codes, error messages, and typical measurement set-ups.

HP 8970B Partial Specifications

(See technical data sheet for complete specifications)

Noise figure (gain) measurement range: 0 to 30 dB (−20 to at least 40 dB).
Noise figure (gain) instrumentation uncertainty: ±0.1 dB for 0 to 55° C (±.15 dB).
Noise figure resolution: .01 dB (.001 dB over HP-IB).
Gain resolution: .01 dB (.001 dB over HP-IB).
Frequency range: tunable from 10 to 1600 MHz.
Tuning accuracy (from 10 to 40°C): ± (1MHz + 1% of frequency), 6MHz maximum.
Frequency resolution: 1 MHz.
Noise figure (for input power levels below −60 dBm): <7 dB + .003 dB/MHz.
Maximum operating input power: −10 dBm.
Maximum net external gain: 65 dB between noise source and HP 8970B RF input.
Noise source drive: 28.0 ± .1 volt.
Operating temperature: 0°C to 55°C.
Storage temperature: −55° to 75°C.
Power: 100, 120, 220, or 240 V (+5%, −10%); 48–66 Hz; 150 VA maximum.
Dimensions: 143 H x 427 W x 476 mm D (5.68″ x 16.75″ x 18.38″).
Weight: Net, 15.5 kg (34 lb). Shipping, 18.5 kg (40 lb).

Artisan Scientific - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisan-scientific.com

Artisan Technology Group is an independent supplier of quality pre-owned equipment

Gold-standard solutions

Extend the life of your critical industrial, commercial, and military systems with our superior service and support.

We buy equipment

Planning to upgrade your current equipment? Have surplus equipment taking up shelf space? We'll give it a new home.

Learn more!

Visit us at **artisantg.com** for more info on price quotes, drivers, technical specifications, manuals, and documentation.

Artisan Scientific Corporation dba Artisan Technology Group is not an affiliate, representative, or authorized distributor for any manufacturer listed herein.

We're here to make your life easier. How can we help you today?

(217) 352-9330 | sales@artisantg.com | artisantg.com

ARTISAN® TECHNOLOGY GROUP