

# SIGNAL ANALYZERS

## HP 70000 Modular Measurement System (cont'd)

### Components

(See page 119 for standard HP 70000 modular spectrum analyzer systems.)

#### HP 70001A System Mainframe

Provides all necessary power, cooling, digital interface, and EMI shielding for any width module. Fits any standard EIA rack and holds a maximum of eight 1/8-width modules. Modules are automatically connected to power, digital interface, and forced-air cooling.

#### HP 70206A System Graphics Display

A full-width, stand-alone, menu-driven interface for the HP 70000 system. Presents measurement results and configuration information with high-resolution-graphic, trace, text, and marker capability. Includes a 9-inch CRT, data and control keys, and an analog control knob. Can be stacked or racked with the HP 70001A mainframe or located up to 30m or more away from the analyzer.

#### HP 70205A Graphics Display

All the capability of the HP 70206A system graphics display in a 3/8-width module.

#### HP 70900A Local Oscillator

This 3/8-width module provides a swept LO signal of 3.0 to 6.6 GHz, processes video signals, and acts as master controller for the spectrum analyzer. Contains the system firmware to control and coordinate measurements and to output data. Has a minimum 32K bytes of memory for DLPs.

#### HP 70902A IF Section (Res BW 10 Hz - 300 kHz)

#### HP 70903A IF Section (Res BW 100 kHz - 3 MHz)

These 1/8-width modules process a 21.4 MHz IF signal received from an RF or external mixer interface module. Contain resolution bandwidth filters, log amplifiers, detection circuitry, and video filters. Used together, provide res BWs of 10 Hz to 3 MHz.

#### HP 70904A RF Section (100 Hz - 2.9 GHz)

#### HP 70905A RF Section (50 kHz - 22 GHz)

#### HP 70905B RF Section (50 kHz - 22 GHz, no attenuator)

#### HP 70906A RF Section (50 kHz - 26.5 GHz)

#### HP 70906B RF Section (50 kHz - 26.5 GHz, no attenuator)

These are 1/8-width front-end modules for RF and microwave spectrum analyzer systems. Convert incoming RF signal to a 21.4 MHz IF. The HP 70905B and 70906B do not have input attenuators and are intended for use with HP 70600A/70601A preselectors.

#### HP 70907A External Mixer Interface

This 1/8-width module provides the interface between external mixers and spectrum analyzer systems. Contains an LO amplifier, mixer bias supply, and down-conversion circuitry to convert the 321.4 MHz input IF to a 21.4 MHz IF signal. Frequency range is 18 GHz to 110 GHz using HP 11970 mixers, and 2.7 GHz to 325 GHz using mixers from other manufacturers.

#### HP 70908A RF Section (100 Hz - 22 GHz)

This 3/8-width front-end module provides state-of-the-art tracking preselection from 2.7 to 22 GHz. Uses fundamental mixing from 100 Hz to 22 GHz for sensitivity <-133 dBm from 2-22 GHz.

#### HP 70600A Preselector (2.7 GHz - 22 GHz)

#### HP 70601A Preselector (2.7 GHz - 26.5 GHz)

These 1/8-width modules can be used with the HP 70905A/B and 70906A/B RF sections. Provide tracking preselection from 2.7 GHz to either 22 or 26.5 GHz. Low pass filtering is used below 2.9 GHz, and preselectors can be bypassed if desired.

#### HP 70620A Preamplifier

This 1/8-width module covers 2 to 22 GHz. Minimum small-signal gain is >22 dB; typically >29 dB. Noise figure is <11 dB; typically <9 dB. Flatness is ±1.8 dB. Sends calibration data to a microwave spectrum analyzer to compensate for preamp gain and flatness.

### Price

\$5,500

\$7,000

\$5,000

\$14,700

\$4,100

\$2,950

\$7,890

\$10,700

\$9,750

\$12,500

\$11,500

\$8,680

\$35,900

\$10,350

\$12,600

\$10,500

#### HP 70300A Tracking Generator

A 3/8-width module whose output signal tracks the tuned frequency of the spectrum analyzer. Makes stimulus-response measurements with a dynamic range of 125 dB in conjunction with an HP 70000 spectrum analyzer. Frequency range is 20 Hz to 2.9 GHz.

#### HP 70301A Microwave Tracking Generator

A 3/8-width module whose output signal tracks the tuned frequency of the spectrum analyzer over a 2.7 to 18 GHz frequency range. When used with the HP 71210A spectrum analyzer, stimulus-response measurements can be made over a 120 dB dynamic range. Use with the HP 70300A RF tracking generator to provide a tracking signal from the output over a 10 MHz to 18 GHz range.

#### HP 70310A Precision Frequency Reference

##### Option 001 Add Distribution Amplifier

##### Option 002 Delete Ovenized Oscillator and External Power Pak

This 1/8-width module supplies precise reference signals at 10 and 100 MHz. Signals are phase-locked to an internal ovenized oscillator, improving system frequency reference accuracy after one year from 3 to 0.1 ppm. External reference input allows the use of house standards or other external references at 1, 2, 5, or 10 MHz.

Option 001 adds two distribution amplifiers, each with three outputs and one input. Option 002 deletes the ovenized oscillator and external power pak but retains the external reference input capability.

#### HP 70700A Digitizer

This 1/8-width module adds precision digitizing capability to HP 70000 instruments. Improves analyzer ability to characterize signals in the time domain. Has a sampling rate of 20M-sample/sec, 10 bits/sample, and 256K words of memory.

Digitizing rate improved by a factor of 1000 allows faster start-to-stop frequency sweeps and better resolution of signals such as pulsed RF. Sweep times as fast as 80 usec can be made in zero span (time domain).

Can also be used as a stand-alone, programmable waveform recorder, transient analyzer, or digitizing oscilloscope. For multi-channel applications, up to eight digitizer modules will operate synchronously in a single HP 70001A mainframe.

#### HP 70100A Power Meter

##### Option 003 Move Ref. Oscillator to Rear Panel

A full-feature, single-channel power meter in a 1/8-width module. Fully compatible with HP 8480 series power sensors. See page 210.

#### HP 70591A 1/8-width Module Part Kit

#### HP 70592A 3/8-width Module Part Kit

#### HP 70593A 3/8-width Module Part Kit

#### HP 70594A 1/8-width Module Part Kit

#### HP 70595A Module Development Design Guides

#### HP 70596A Module Communication Design Guides

Module Part Kits and Module Design Guides provide information and hardware to aid you in the design and fabrication of modules to meet your specific needs.

#### HP 70900-60121 Scalar/Spectrum Analyzer Personality

Adds scalar measurement personality to an HP 71100A system that also includes an HP 70300A tracking generator. Useful measurement routines include pass-fail and open/short/ thru calibration testing; dual displays, shape factor, and 150 dB display. On 3 1/2" or 5 1/2" discs for HP series 200/300 controllers with BASIC 3.0, 4.0, or 5.0 (included in HP 71100XL system).

#### HP 11970 Harmonic Mixers (See page 143.)

\$10,350

TBA

\$4,930

+\$1,530

-\$2,450

\$7,650

\$2,500

\$0

\$750

\$800

\$1400

\$2,500

\$600

\$600

\$250