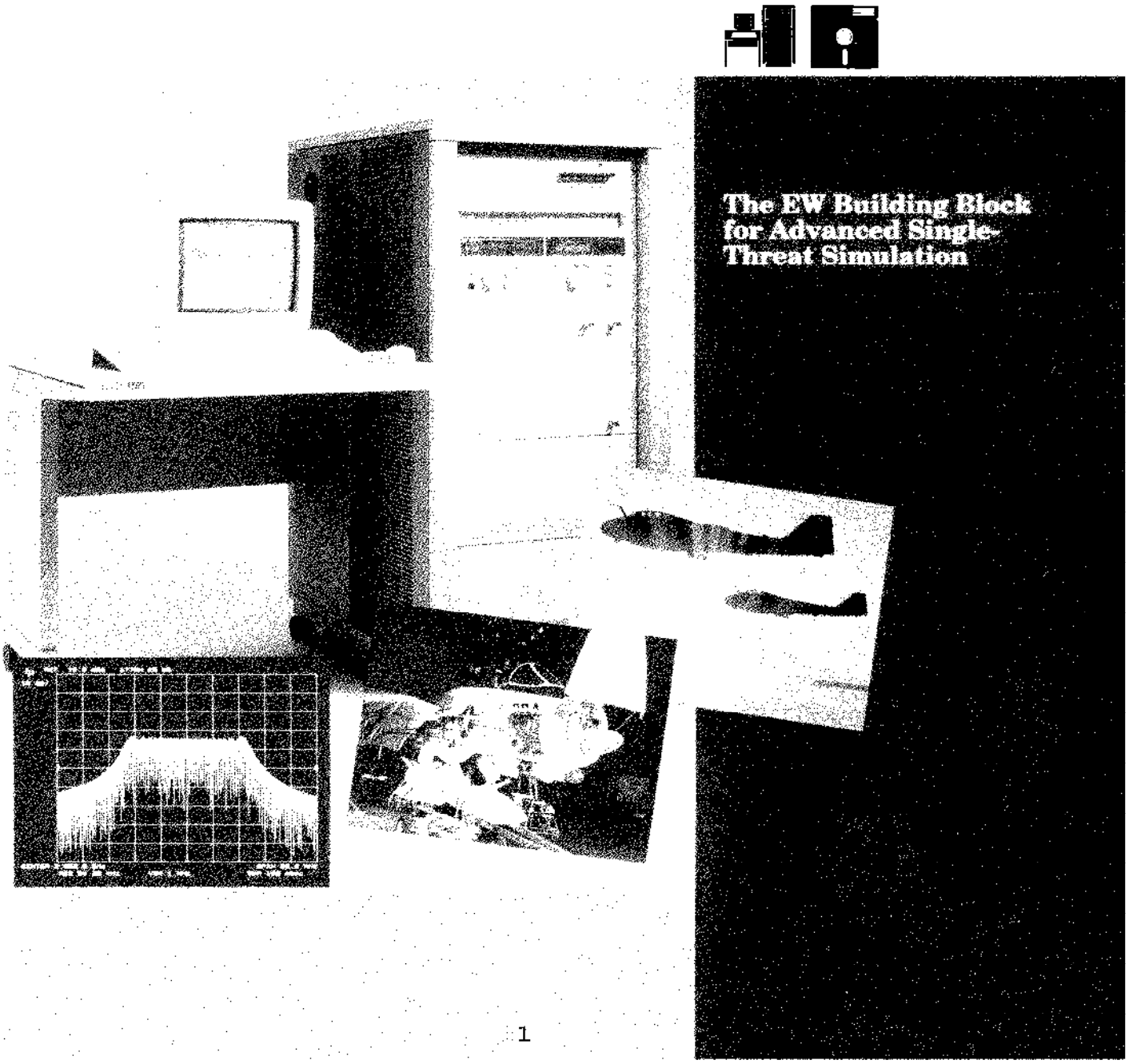
HEWLETT PACKARD

HP 8791 Model 2000 Advanced Agile Threat Simulator

10 MHz to 3 GHz
(Optional upconverters available)



The HP 8791 Model 2000 Advanced Agile Threat Simulator

The cost-effective alternative to custom hardware

DESIGNED FOR HP-IB SYSTEMS

Removable 20 Mb disk and 3.5" flexible disk store threat files and instrument setups for fast retrieval and maximum security

Instrument-on-a-Disk software speeds development of advanced single threats — no software expertise required

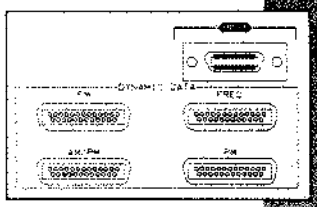
Keyboard and mouse allow rapid entry and editing of waveform parameters

Smart Interface unifies Model 2000, simplifying control and integration

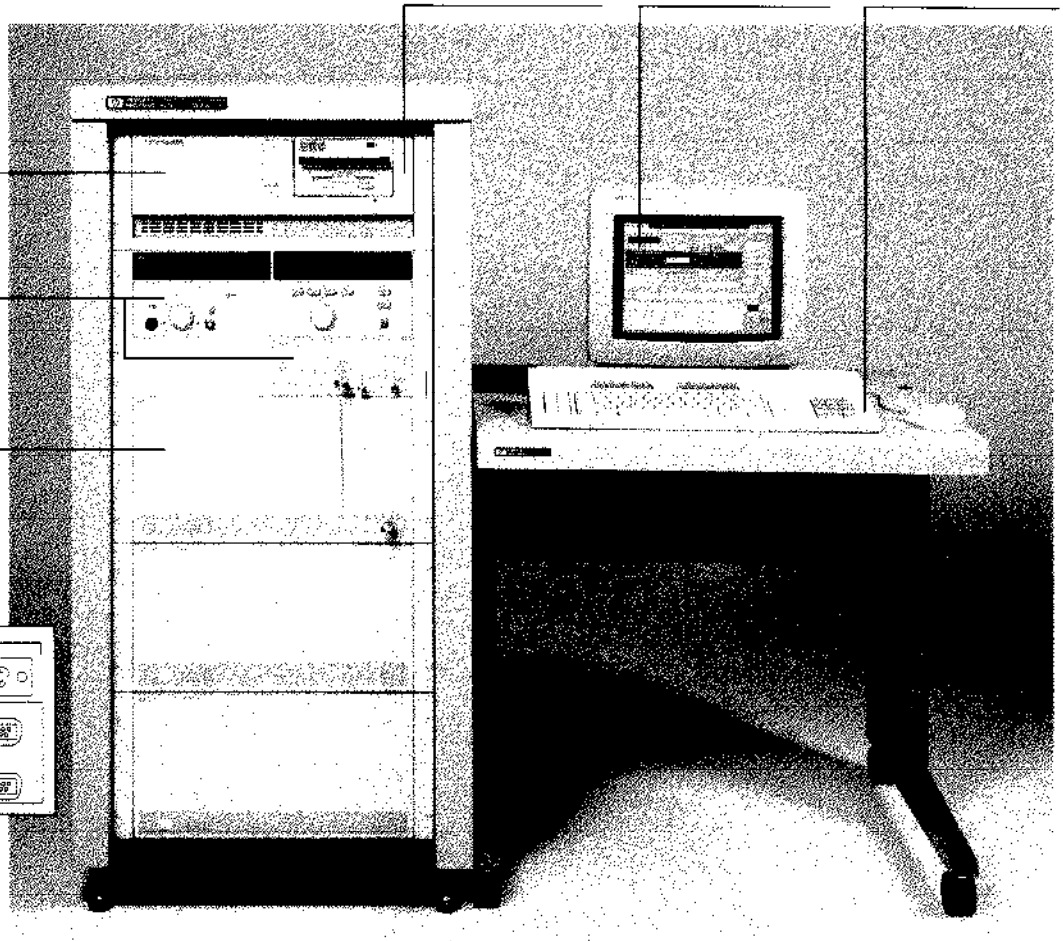
Optional microwave upconverters and LOs available

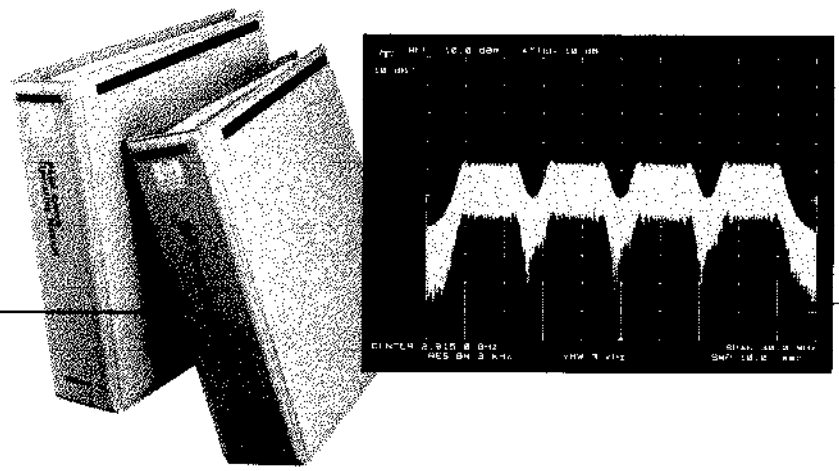
Modular design makes service and upgrades affordable

Complete control is always available over HP-IB, including smart diagnostics



Rear-panel dynamic data ports enable real-time waveform control, such as dynamic frequency hopping





Concise, easy-to-use documentation guides beginners and experts

Digital synthesis and agile upconversion assure laboratory-grade simulation of your agile, chirped and phase-coded signals

Front cover A-6 photo courtesy of C.J. Heatley III

Custom design an advanced threat simulator?

Keeping up with advances in electronic warfare is quite a challenge. Especially when receivers must process threats packed with exotic spread-spectrum modulations. This means EW receiver testing requires simulators with:

- High-performance modulation and agility
- Synthesizer stability
- Software reconfigurability
- Instrument-grade repeatability
- High-reliability, and
- Quality documentation.

Until now, simulating advanced threats required custom-designed simulators built with pulse generators, VCOs, and phase modulators. Today there is a better way with off-the-shelf simulators from HP. High precision and repeatability are guaranteed. You're assured of flexibility and ease-of-use. The end result is a lower cost simulator that:

- helps you meet tight deadlines
- allows you to concentrate on design
- grows with your needs, and
- offers instrument-grade performance.

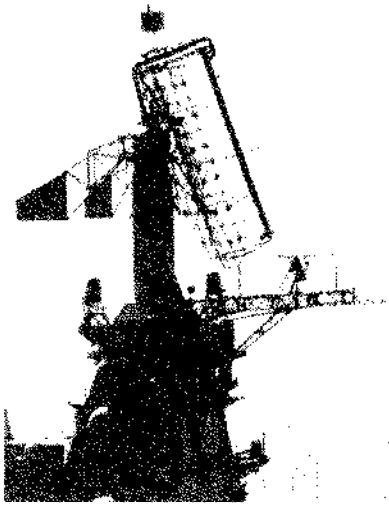
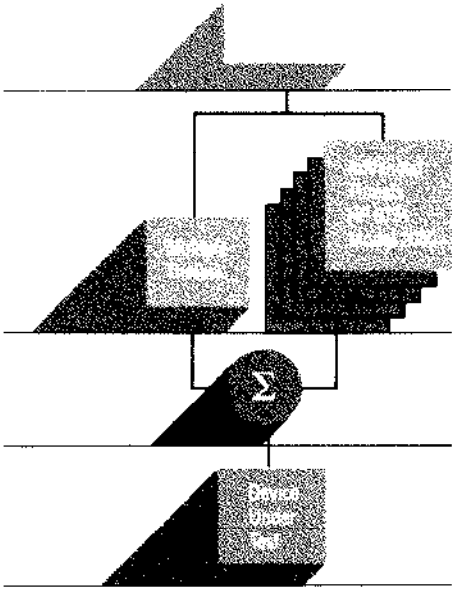


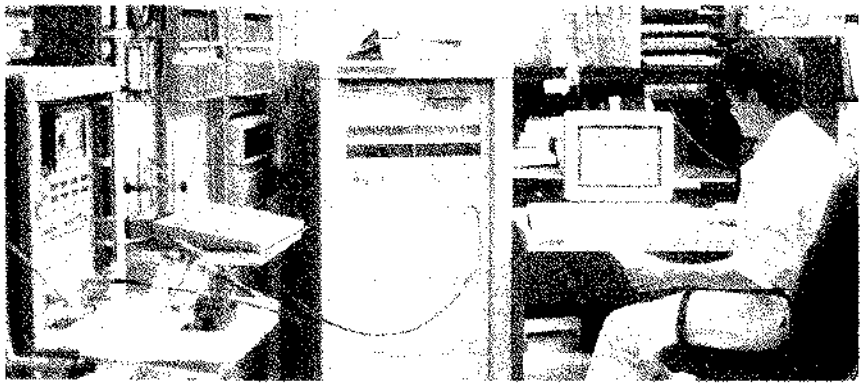
Photo Courtesy Guide to the Soviet Navy

The HP 8791 Model 2000 generates the threats of today and tomorrow.

Augment your multiple-threat simulator using the HP 8791 Model 2000 as the advanced threat building block.



Now from HP . . . the off-the-shelf advanced agile threat simulator



Don't tie up your large simulator. Instead, use the HP 8791 Model 2000 stand-alone for upgrades and design.

The simulator: standard equipment

Accurate and repeatable

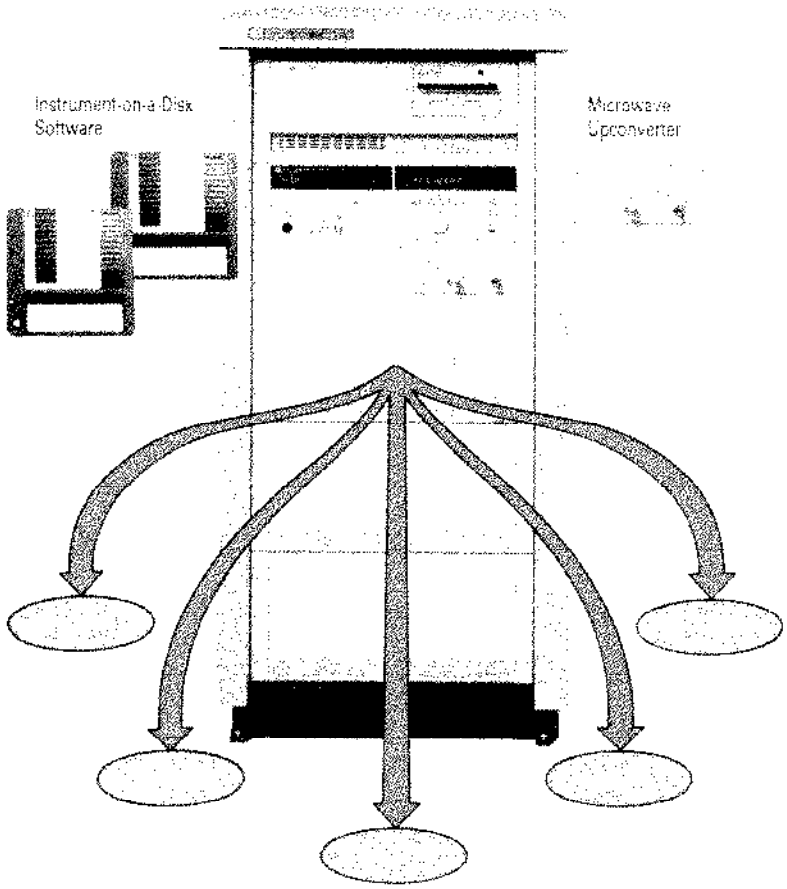
Standard equipment means accurate and repeatable signals. This gives you confidence that multiple installations provide identical signals. It also means reduced troubleshooting and redesigns.

Documented

Standard equipment means HP quality documentation. It gets you up to speed quickly and eases system integration. This translates into faster development of turnkey simulators and EW receivers.

Reliable and serviceable

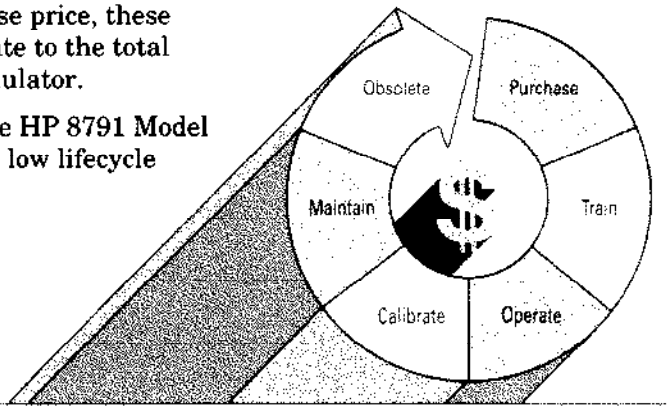
Finally, standard equipment means reliability. Low maintenance ensures your simulator is ready for use instead of waiting for repair.



The bottom line: long-term savings

When assessing the benefits of an off-the-shelf simulator, consider cost-of-ownership: training, operation, calibration, maintenance, and obsolescence. Besides purchase price, these factors contribute to the total cost of your simulator.

We designed the HP 8791 Model 2000 to excel in low lifecycle costs. By distributing nonrecurring expenses over our volume production, you pay just a fraction compared to the do-it-yourself simulator. What's more, HP backs the Model 2000 with documentation, training, service, and application support to ensure your success. Not to mention a hardware upgrade path that lets the Model 2000 grow with your needs.

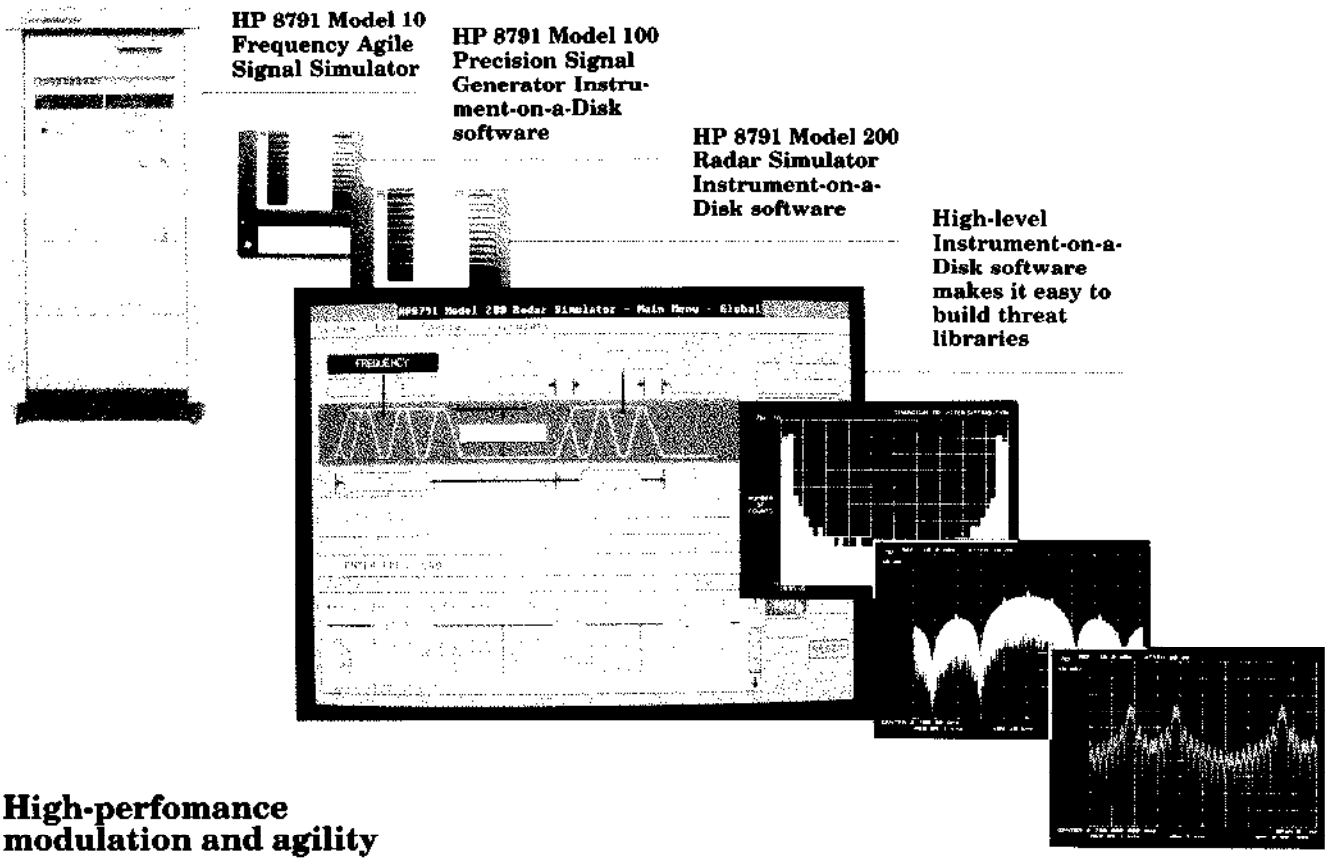


Reduce training and operating costs through high-level Instrument-on-a-Disk software.

An MTBF of 5000 hours and high-level diagnostics reduce maintenance costs.

HP's commitment to upgrades of hardware and software reduces obsolescence costs.

Reconfigure with Instrument-on-a-Disk software



High-perfomance modulation and agility

The synthesized precision of the HP 8791 Model 2000 provides the required stability and accuracy for pulse doppler, frequency agile, and intrapulse signal simulation.

Radar Simulator for single-threat simulation

Frequency Range: 0.01 to 3 GHz direct. (optional Upconverters to 18.5 GHz)
Resolution: 0.125 Hz
Switching speed: < 250 ns
Phase Noise: < –125 dBc/Hz @ 10 kHz offset from 2 GHz, typical
Spurious response: –55 dBc, typical

Pulse Repetition Interval
Range: 1.6 us (625 kHz) to 1 s (1 Hz)
Patterns available: constant, stagger, wobbulation, jitter with definable probability distribution functions.
Pulse Width: 29.8 ns to 100 ms

Intrapulse Modulation
Pulse shapes: Gaussian, exponential, trapezoidal, user-defined
Frequency: chirp, user-defined
Phase: Barker, compound Barker, user-defined

Antenna Modulation
Radiation Patterns: rectangular ($\frac{\sin x}{x}$), $\cos^n$ (n=1–5), Hamming, Hanning, Blackman, 3-term, programmable roll-off.
Scan Patterns: circular, conical, sector, raster, user-defined.

Precision Signal Generator for general purpose receiver testing

Carrier: Amplitude, frequency
Modulation Waveforms: Sine, rectangle, sawtooth, noise, user-defined
Two-Tone: frequency spacing: 0.2 Hz to 40 MHz over 0.01 to 3 GHz
AM: Modulation index: 0 to infinite (DSB-SC)
Mod frequency: 0.1 Hz to 20 MHz
FM: Deviation: 0.25 Hz to 20 MHz
Mod frequency: upper limit dictated by 40 MHz system BW
ϕM: Peak deviation: ±180°
Mod frequency: upper limit dictated by 40 MHz system BW
Pulse: Pulse width: 30 ns to CW
PRF: 0.1 Hz to 1 MHz

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Ordering Information

The HP 8791 Model 2000 Advanced Agile Threat Simulator consists of the Model 10 hardware, Models 100 and 200 Instrument-on-a-Disk software, and optional microwave upconverters. HP also offers rental plans to help you accomplish three objectives:

- acquire state-of-the-art technology without a large cash outlay
- hedge against obsolescence, and
- acquire the equipment through operating budgets by financing "off-balance-sheet".

Contact your HP Sales Representative for detailed specifications and information on our convenient leasing plan.

To Receive:	Use Order Numbers:
HP 8791 Model 2000 Advanced Agile Threat Simulator consists of:	
Model 10 Frequency Agile Signal Simulator	**E2500A**
Extra FASS System Operating Manual	**opt 0B2**
Add all service manuals (for system and instruments)	**opt 0B3**
200V (200V–240V) power	**opt 0E3**
Delete Smart Interface console	**opt 1B6**
Model 200 Radar Simulator Instrument-on-a-Disk software	**E2501A**
Model 100 Precision Signal Generator Instrument-on-a-Disk software	**E2502A**

For information and specifications on microwave upconverters, contact your HP sales representative.

For more information, call your local HP sales office listed in the telephone directory white pages. Ask for the Electronic Instruments Department, or write to Hewlett-Packard:

United States
Hewlett-Packard
P.O. Box 10301
Palo Alto, CA 94303-0891

Canada
Hewlett-Packard Ltd.
6877 Goreway Drive
Mississauga, L4V 1M8 Ontario

Europe, Africa, Middle East
Hewlett-Packard S.A.
P.O. Box 529
1180 AM Amstelveen
The Netherlands

Japan
Yokogawa-Hewlett-Packard Ltd.
3-29-21 Takaido-Higashi
Suginami-ku, Tokyo 168

Elsewhere in the world, write to:
Hewlett-Packard Intercontinental
3495 Deer Creek Road
Palo Alto, CA 94304-1393

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