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June 1966	Converters, rise time, for TDR	10452A-10456A	June 1966	Drift, eliminating in oscilloscopes ..	155A, 1407A
Mar. 1966	Converter, spectrum analyzer	K15-8551B	Aug. 1966	Dual channel vertical amplifier plug-in	1801A
Sept. 1966	Counters, for FM stereo measurements	—	E		
Aug. 1967	Counters, integrated-circuit	5216A, 5221A	Apr. 1966	Emitter follower stability	—
Sept. 1966	Counter plug-in, 12.4 GHz	5255A	July 1967	Errors in data amplifiers systems	2470A/8875A
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July 1967	Data amplifiers	2470A/8875A	May 1966	Feedback amplifier tuning with vector voltmeter	8405A
Nov. 1966	DC differential voltmeter/ratiometer	3420A/B	May 1966	Filter transfer function measurements with vector voltmeter	8405A
Mar. 1966	DC null voltmeter	419A	Dec. 1967	Flying clock experiments, 1967	5061A
Oct. 1965	DC standard	741A	Aug. 1966	Flying clocks, 1966	5060A
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June 1967	Defibrillator equipment	780 Series	Sept. 1966	FM stereo, pilot subcarrier measurement	—
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July 1967	Differential data amplifier	2470A/8875A	Sept. 1966	Frequency converter plug-in, 3-12.4 GHz	5255A
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June 1968	Digital power supply	6130A	Feb. 1968	Frequency measurement, CW, pulsed RF, and FM to 18 GHz	5256A, 5257A
June 1968	Digital-to-analog converter, high-speed	6933A	Apr. 1967	Frequency meter, 12.4 GHz	5240A
June 1968	Digital voltage source	6130A, 6933A	Mar. 1967	Frequency meter/FM discriminator	5210A
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Mar. 1967	Discriminator, pulse, for FM measurements	5210A	Aug. 1966	Frequency standard, cesium-beam ..	5060A
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May 1966	Distortion measurements with vector voltmeter	8405A			
Apr. 1967	Divider, frequency	5260A			

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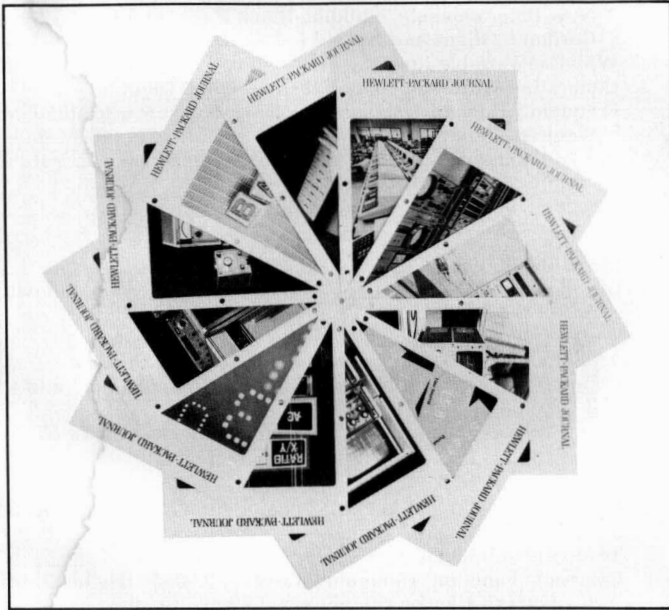
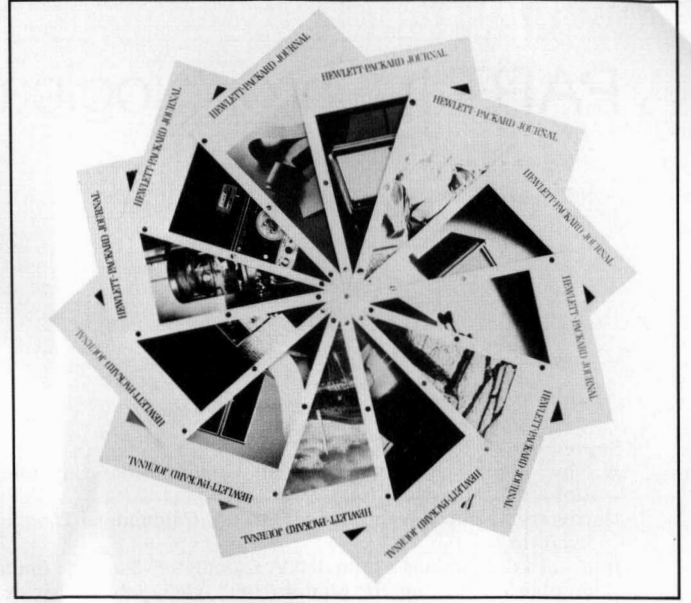
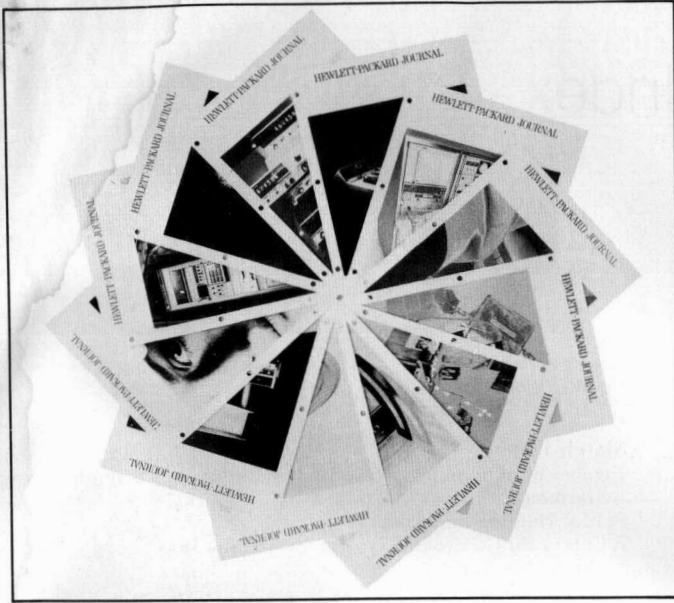
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354A	Coaxial Step Attenuators	June 1967	2350 Series	Hot Carrier Diodes	Dec. 1965
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463A	Precision Amplifier	May 1967		Generator	Nov. 1965
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741A	AC-DC Differential Voltmeter/ DC Standard	Oct. 1965	3420A/B	DC Differential Voltmeter/ Ratiometer	Nov. 1966
745A	AC Calibrator	June 1968	3434A	Comparator	Aug. 1967
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852A	Variable-persistence Display Unit for Spectrum Analyzer	Jan. 1968	4260A	Universal Bridge	Sept. 1966
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5221A	Integrated-circuit Counter	Aug. 1967	8410A, (8411A,	Network Analyzer, 0.1 to 12.4 GHz	Feb. 1967
5240A	12.4 GHz Digital Frequency Meter	Apr. 1967	8413A, 8414A, 8740A, 8741A, 8742A)		
5255A	Frequency Converter Plug-in, 3-12.4 GHz	Sept. 1966	8441A	Preselector	Jan. 1968
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5480A	Signal Analyzer and Averager	Apr. 1968	8601A	Generator/Sweeper	Aug. 1968
5480A	Signal Analyzer and Averager (application of)	May 1968	8875A	Data Amplifier	July 1967
5554A	Preamplifier	Mar. 1968	10452A to	Rise Time Converter	June 1966
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5582A	Linear Amplifier	Mar. 1968	10457A to	50- to 75-ohm Adapter	June 1966
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6130A	Digital Voltage Source	June 1968	10514A	Double-balanced Mixer, 0.2-500 Mc/s	Oct. 1965
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The Meaning of 'Frequency-Domain Oscilloscope,' Excerpts from an informal talk by *Roderick Carlson*
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- Introducing the Computing Counter, *Gary B. Gordon* and *Gilbert A. Reeser*
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Compact Function Generator Covers 0.0005 Hz to 5 MHz, *Raymond C. Hanson*
IC Logic Checkout Simplified, *Gary B. Gordon*
Pulsar Optical and Radio Emissions Observed Simultaneously, *Charles N. Taubman*
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- Real-Time Measurement and On-Line Processing of Acoustical and Other Audio-Frequency Spectra, *Wisn T. Kapuskar* and *Christopher J. Balmforth*
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- Graphical Output for the Computing Calculator, *Robert W. Colpitts*, *Dan Allen* and *Tom Vos*

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November 1969

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A Calibrated Real-Time Correlator/Averager/Probability Analyzer, *George C. Anderson and Michael A. Perry*

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Network Analysis in the Range 100 kHz to 110 MHz, *William A. Rytand and David R. Gildea*

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A Fast-Writing, High-Frequency Cathode-Ray Tube, *David Chaffee*

A Wideband Oscilloscope Amplifier, *Alan J. DeVilbiss*

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The Computing Counter Gets Its Keyboard, *Keith M. Ferguson*
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Timer/Counter/DVM: A Synergistic Prodigy?, *Kenneth J. Jochim and Rolf Schmidhauser*

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Automatic Error Plotting—a Report Card for Nonlinear Behavior, *Jonathan D. Garman*

Machine Tool Evaluation by Laser Interferometer, *Richard R. Baldwin*

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Very High and Very Low Resistances—Why and How They Are Measured, *Yoshihisa Kameoka and Jean E. Bonhomme*

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- Manipulating Digital Patterns With a New Binary Sequence Generator, *Edward S. Donn*
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Astronomers Find Optical Timing of Pulsars More Accurate, *Laurence D. Shergalis*
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- A Power-Thrifty Portable Oscilloscope, *Thomas K. Bohley, Robert E. Mast, and Donald R. Bloyer*
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Effective Stripline Device Characterization, *George R. Kirkpatrick*

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Everything You Always Wanted to Know About Rotational Microwave Spectroscopy
An Easy Way to Analyze Graphs, *Dean Millett and Ivar Larson*

July 1971

- General-Purpose Test System Gets Digital Capability, *Leif Gudnitz and Homer Tsuda*
Digital Testing versus Digital Testing
Optical Power Measurements Made Easy, *Charles L. Hicks and Michael R. Mellon*
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August 1971

- Lilliputian Measuring System Does Much, Costs Little, *Ian T. Band, Hans J. Jekat, and Eric E. May*
A Package for Portability and Serviceability
An Almost All-Solid-State Strip-Chart Recorder, *Charles K. Michener*

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- The Spectrum Analyzer, Oscilloscope for the Frequency Domain: A Special Issue
A Fully Calibrated, Solid State Microwave Spectrum Analyzer, *Richard C. Keiter*
Tracking Generators, *John Page*
A Low Frequency Spectrum Analyzer, *Irving H. Hawley, Jr.*

October 1971

- Price, Performance, Architecture, and the 2100A Computer, *Fred F. Coury*
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- A Bantam Power Supply for a Minicomputer, *Richard D. Crawford and Gregory Justice*
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- The 'Powerful Pocketful': an Electronic Calculator Challenges the Slide Rule, *Thomas M. Whitney, France Rodé, and Chung C. Tung*
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New Capabilities in Digital Low-Frequency Spectrum Analysis,
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The Incremental Sweep Generator—Point-by-Point Accuracy with
Swept-Frequency Convenience, *Charles A. Kingsford-Smith*
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A Common Digital Interface for Programmable Instruments: The
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Faster Gain-Phase Measurements with New Automatic 50 Hz-to-
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A "Voltmeter" for the Microwave Engineer, *Hugo Vifian, Frank K.
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Versatile Display Unit Extends Correlator Capability, *David J.
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December 1972

A New Series of Programmable Calculators, *Richard M. Spangler*
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Versatile Input/Output Structure Welcomes Peripheral Variety,
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January 1973

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February 1973

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Computer-Aided Design of Modular Power Supplies, *Willis C.
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March 1973

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A High-Performance Automatic Microwave Counter, *Richard F.
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Automating the Calibration Laboratory, *E. Robert Aikin and John
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William L. Crowley and France Rodé
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Lawrence Brunetti
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June 1973

Schottky-Barrier Diodes Structured for Better High-Frequency
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DMM and DAC Modules Expand Low-Cost Measuring System,
James F. Horner, Lewis W. Masters, and P. Thomas Mingle
Laser/Calculator System Improves Encoder Plate Measurements,
Glenn O. Herreman
Instrument Basics Without Pain, a book review

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Compact Function Generator with Enhanced Capability/Cost
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Automated Transceiver Testing, *Dimitry A. Bobroff*
Signal Processing Techniques for Automatic Transceiver Testing,
Robert G. Huenemann
Digitally-Controlled Current Sources for New Ways of Making
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June 1973 "Basic Electronic Instrument Handbook" review —

Dec. 1972	Basic-language calculator	9830A
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Feb. 1972	Book review, "Electronic Measurements and Instrumentation"	—
May 1973	Business pocket calculator	HP-80

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Mar. 1970	Calculator processes multichannel analyzer data	10619A
Sept. 1968	Calculator, programmable	9100A
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1925A	Word Generator	Apr. 1969	5082-2276/ 77/2830	Schottky-Diode Quads	June 1973
1930A	PRBS Generator	Apr. 1971	5082-2709/ 16/68/69	Beam-lead Schottky-Barrier Diodes	June 1973
2000B/C	Time-shared system for computer-assisted instruction.	Feb. 1971	5082-2800 Series	Hybrid Hot-Carrier Diodes	Feb. 1969
2060A	Digital Logic Module Test System	Mar. 1969	5082-7000/01	Numeric Indicator	Feb. 1969
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5470A	Fast Fourier Processor	June 1972			Jan. 1972
5471A	Fast Fourier Transform arithmetic unit	June 1972			Mar. 1973
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Nov. 1975		Calculator, business, pocket	HP-22	May 1975	Computer system for voiceband data channel measurements	5453A
June 1974		Calculator/counter systems, HP interface bus	5345A*	Mar. 1977	Computer systems	1000*
Apr. 1974		Calculator mass memory system	9880A	Aug. 1976	Computer systems	3000 Series II
May 1974		Calculator, pocket, programmable	HP-65	Nov. 1974	Computer systems, distributed	9700 Series
Nov. 1975		Calculator, pocket, programmable	HP-25	July 1977	Computer terminal, APL	2641A
Nov. 1976		Calculator, pocket, programmable	HP-67	June 1975	Computer terminal, CRT	2640A
Nov. 1976		Calculators, portable, printing	HP-91, HP-97	May 1976	Computer terminal, CRT with tape storage	2644A
Nov. 1976		Calculators, portable, programmable	HP-97		Connectors, coaxial APC-3.5	—
		Calculator, programmable, desktop. See desktop computers.		June 1977	Counter systems, HP interface bus	5345A*
Nov. 1975		Calculator, pocket, scientific	HP-21	June 1974	Counter, general-purpose	5345A*
Mar. 1974		Capacitance measurements	4271A*	Nov. 1973	Counter, high-resolution, module for 5300 system	5307A
Sept. 1976		Capacitance measurements	4261A*	May 1976	Counter, logarithmic (lab notebook)	—
Feb. 1975		Capacitance meter	4282A	July 1974	Counter, low-cost	5381A-82A
Jan. 1977		Cardiotocograph	8030A	Apr. 1975	Counter, 1100-MHz	5305A
May 1976		Cartridge, data, mini	—	Sept. 1975	Counter, microwave frequency	5341A*
Mar. 1976		Cesium beam frequency reference for severe environments	5062C	June 1974	Counter plug-in, automatic frequency converter	5354A
Sept. 1973		Cesium beam frequency standard, high performance beam tube for	5061A, option 004	June 1974	Counter plug-in, third input channel	5353A
June 1974		Channel C plug-in for 5345A counter	5353A	Mar. 1975	Counter/synchronizer for signal generator	8655A
Apr. 1976		Chromatography, gas, microprocessor control	5840A	July 1975	Counter/timer/DVM, universal	5328A*
Oct. 1975		Chromatography, liquid, flow control	1010B	Apr. 1975	Counter/timer, 75-MHz universal	5308A
Dec. 1974		Chromatography, reporting integrator for	3380A	June 1975	CRT terminal	2640A
Apr. 1974		Cineangiogram analysis	5693A	July 1977	CRT terminal, APL	2641A
Mar. 1977		Circuit design, computer-aided (OPNODE)	92817A	May 1976	CRT terminal with dual tape drives	2644A
Apr. 1977		Clip for oscilloscope probing of IC's	10024A	Dec. 1976	Current tracer	547A
Dec. 1976		Clip, logic	548A	May 1977	Cyclic redundancy check codes (CRC), used in signature analysis	5004A
Jan. 1975		Clock for systems using HP interface bus	59309A*			
June 1977		Coaxial components				
		attenuators, dc-26.5 GHz	8495D/K	Jan. 1975	Data acquisition systems, programmable	3050B*
		detectors, 0.01-26.5 GHz	8473C/33330C	Feb. 1977	Data acquisition systems, programmable	3052A*
		sliding load, 2-26.5 GHz	911C	July 1974	Data base management software (IMAGE)	24376B, 32215A, 16A
		switches, dc-26.5 GHz	33311C			
May 1974		Coaxial step attenuators, dc-18 GHz	8495A/B, 8496A/B			
Jan. 1975		Code converter, ASCII to parallel	59301A*	May 1976	Data cartridge, mini	—
Feb. 1975		Common driver circuit for guarded input	7047A	May 1975	Data channel measurements, analog, voiceband	5453A
Feb. 1976		Communications, data, desktop computer	9830A	Aug. 1974	Data channel measurements, analog, voiceband	4940A
Feb. 1974		Communications, digital, error detection	1645A	Nov. 1974	Data channel measurements, analog,	

PART 2: Subject Index (continued)

	voiceband	3770A	May 1974	Edgeline transmission in attenuators	8495A/B 8496A/B
Feb. 1974	Data channel measurements, error analyzer	1645A	Aug. 1974	Educational TV receiver	—
Feb. 1976	Data communications, desk-top computer	9830A	June 1974	Electronic counter, general-purpose	5345A*
Dec. 1975	Data domain, analog oscilloscope	1740A	Sept. 1975	Enclosures, electronic instrument	—
Nov. 1973	Data generator, 150 MHz PRBS	3760A	Aug. 1974	Envelope delay distortion measurements	4940A
Feb. 1977	Data logging systems, programmable	3051A*	Nov. 1974	Envelope delay distortion measurements	3770A
Aug. 1974	Delay distortion, Bell System	4940A	May 1975	Envelope delay distortion measurements	5453A
Nov. 1974	Delay distortion, CCITT recommendation	3770A	Feb. 1974	Error analyzer, data transmissions	1645A
Aug. 1977	Delay generator, 100-ps steps	8092A	Aug. 1976	Error-correcting memory	3000 Series II
June 1976	Desktop computers	9815A/9825A*	May 1977	Error detection by transition counting and signature analysis	5004A
Feb. 1976	Desktop computer, data communications	9830A	Nov. 1973	Error detector, communications test (150 MHz)	3761A
June 1977	Detector, 0.01-26.5 GHz	8473C/33330C	Mar. 1976	Error detector, communications test (50 MHz)	3780A
Oct. 1976	Digital IC tester	5045A	July 1974	Exposure control for X-ray system	43805
Dec. 1976	Digital IC trouble-shooting instruments and kits (logic probe, logic pulser, logic clip, current tracer)	545A,546A 547A,548A	Feb. 1977	Extending a digital multimeter's range	3435A, 3465A/B 3476A/B
Sept. 1976	Digital LCR meter	4261A*	F		
Mar. 1974	Digital LCR meter	4271A*	Aug. 1976	Fault control memory	3000 Series II
Oct. 1973	Digital logic analyzer	5000A	Dec. 1973	Fault locator, test desk	4913A
Nov. 1974	Digital logic course	5035T	Dec. 1976	Fault (low-impedance) localization in digital logic circuits	547A
Nov. 1973	Digital multimeter, hand-held	970A	Nov. 1976	FET, GaAs for microwaves	HFET-1000
Feb. 1977	Digital multimeters, low cost	3435A,3465A/B 3476A/B	Jan. 1977	Fetal monitoring	8030A
Aug. 1975	Digital pattern analyzer for triggering	1620A	Feb. 1974	Filters, VHF coaxial (lab notebook)	—
Nov. 1973	Digital pattern generator, communications test	3760A	Oct. 1975	Flow control in liquid chromatography	1010B
Mar. 1976	Digital pattern generator, communications test	3780A	Mar. 1976	FM, calibrated, signal generator	8654B
Feb. 1974	Digital pattern generator, communications test	1645A	Apr. 1975	Fourier analysis, band selectable	5451B
Apr. 1976	Digital processor in a gas chromatograph	5840A	Feb. 1975	Fourier analyzer	5451B
Sept. 1973	Digital storage in a spectrum analyzer	3580A	June 1974	Frequency converter plug-in	5354A
Jan. 1975	Digital-to-analog converter for HP-IB	59303A*	Sept. 1975	Frequency counter, 4.5 GHz	5341A*
June 1977	Digital-to-analog converter for HP-IB	59501A*	June 1974	Frequency counter	5345A*
May 1977	Digital troubleshooting by signature analysis	5004A	Nov. 1973	Frequency counter, high-resolution module for 5300 system	5307A
Feb. 1977	Digital voltmeter, 5/2 digit, auto-calibrating	3455A*	July 1974	Frequency counters, low cost	5381A,82A
Feb. 1977	Digital voltmeter, fast reading, systems	3437A*	Apr. 1975	Frequency counter, 1100-MHz	5305A
July 1975	Digital voltmeters, options, for universal counter	5328A*	June 1974	Frequency measurements, reciprocal	5345A*
Aug. 1975	Digital word generator, 8-bit parallel	8016A*	June 1974	Frequency profile measurements, pulsed RF	5345A*
Aug. 1977	Digital word generator, serial, 300 MHz	8084A/ 8080A 7920A	Mar. 1976	Frequency reference, cesium beam	5062C
Aug. 1977	Disc drive, 50 megabytes	9880A	Aug. 1974	Frequency shift measurements	4940A
Apr. 1974	Disc drive for desktop computer	9880A	Sept. 1973	Frequency standard, high-performance cesium beam	5061A, option 004
Oct. 1976	Discriminator (lab notebook)	—	Mar. 1975	Function generator, dual source	3312A
June 1975	Display, CRT terminal	2640A	May 1975	Function generator, low distortion	3551A/3552A
May 1976	Display, CRT terminal, magnetic tape	2644A	G		
Jan. 1975	Display, numeric for HP interface bus	59303A*	Nov. 1976	GaAs FET amplifier, chips	HFET 1000
Apr. 1977	Displays, small solid-state alphanumeric	HDSP-2000	Aug. 1974	Gain hits measurements	4940A
July 1977	Display station, APL	2641A	Apr. 1976	Gas chromatograph, digitally-controlled	5840A
Mar. 1974	Dissipation factor measurements	4271A*	Dec. 1974	Gas chromatograph reporting integrator	3380A
Sept. 1976	Dissipation factor measurements	4261A*	Nov. 1973	Generator, digital, 150 MHz	3760A
Feb. 1975	Dissipation factor measurements	4282A	July 1975	Generator, signal, phase modulated	86634A, 86635A
Apr. 1976	Distance measurements, surveying	3810A	July 1975	Generator, signal, synthesized 2.6 GHz	86603A
May 1975	Distortion measurements, amplitude	5453A	Generators, pulse; see pulse generators		
Aug. 1974	Distortion measurements, amplitude, phase, envelope delay, nonlinear	4940A	Generators, word; see word generators		
Nov. 1974	Distributed computer systems	9700 Series	Oct. 1975	Gradient programming, liquid chromatography	1010B
July 1977	Dragalong (in APL/3000)	3000	July 1976	Group delay detector	8505A*
Aug. 1974	Dropouts	4940A	Aug. 1974	Group delay measurements	4940A
E			Nov. 1974	Group delay measurements	3770A
Oct. 1976	Ear oximeter	47201A			

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May 1975	Group delay measurements	5453A	Dec. 1976	Logic-state analyzers, serial-to-parallel conversion	10254A
	H		Dec. 1975	Logic test, analog oscilloscope	1740A
Jan. 1977	Heart-rate monitoring, fetal	8030A	Aug. 1975	Logic trigger	1230A
Feb. 1975	High capacitance meter	4282A	May 1977	Logic troubleshooting by signature analysis	5004A
Sept. 1973	High-performance cesium beam tube	5061A, option 004	Aug. 1974	Loss measurements	4940A
Nov. 1973	High-resolution counter module for 5300 system	5307A	May 1975	Loss measurements	5453A
Feb. 1975	High-sensitivity X-Y recorder	7047A	Nov. 1974	Loss measurements	3770A
June 1976	HPL, desktop computer language	9825A*	May 1975	Loss measurements	3551A/3552A
Jan. 1975	HP-IB analyzer	59401A*	July 1974	Low-cost counters	5381A-82A
Jan. 1975	HP-IB, current status	—	Feb. 1977	Low-cost digital multimeters	3435A, 3465A/B,3476A/B
June 1974	HP-IB, counter systems	5345A*	Nov. 1973	Low-frequency measurements with high-resolution counter	5307A
Jan. 1975	HP-IB systems	—	Sept. 1973	Low-frequency spectrum analyzer	3580A
	HP interface bus, see HP-IB			M	
Apr. 1976	Horizontal distance and angle measurements	3810A	Feb. 1976	Machine positioning laser transducer	5501A*
	I		Jan. 1974	Machine tool calibration	5526A
Oct. 1976	IC tester, digital	5045A	May 1976	Magnetic tape cartridge, mini	—
Oct. 1976	IC testing, economic considerations	5045A	June 1976	Magnetic tape minicartridge, in desk-top computer	9815A/ 9825A*
Dec. 1976	IC troubleshooting instruments and kits	545A,546A, 547A,548A	May 1976	Magnetic tape storage, in CRT terminal	2644A
		24376B, 32215A-16A	Apr. 1974	Mass memory for desk-top computer	9880A
July 1974	IMAGE	24376B, 32215A-16A	Feb. 1977	Math functions in a digital voltmeter	3455A*
June 1976	Impact printer	9871A	Oct. 1974	Memory, semiconductor	21MX*
Aug. 1974	Impulse noise measurements	4940A	Sept. 1976	Meter, LCR digital	4261A*
May 1975	Impulse noise measurements	5453A	Aug. 1977	MFM code, for magnetic recording	7920A
Oct. 1976	Incoming inspection, digital ICs	5045A	Aug. 1974	Microcircuit TV receiver	—
Mar. 1974	Inductance measurement	4271A*	Apr. 1977	Micro-CPU chip (MC ²), CMOS/SOS	—
Sept. 1976	Inductance measurement	4261A*	Aug. 1975	Microprocessors, logic-state analysis of	1600A
July 1974	Information management software	24376B, 32215A-16A	Jan. 1977	Microprocessors, logic-state analyzer for	1611A
Mar. 1977	Integrated-circuit technology, viewpoint	—	Oct. 1974	Microprogrammable central processor	21MX
Dec. 1974	Integrator, chromatograph, reporting	3380A	Mar. 1977	Microprogramming aids	1000*
Jan. 1975	Interface, ASCII, for 5300-series instruments	5312A*	Feb. 1975	Microprogramming, performance improvement by	—
	Interface bus, see HP-IB.		May 1974	Microwave attenuators, dc-18 GHz	8495A/B-96A/B
Jan. 1974	Interferometer, straightness	5526A, option 30	June 1977	Microwave attenuators, dc-26.5 GHz	8495D/K
Apr. 1974	Inventory control system, desk-top computer	9880A	Sept. 1975	Microwave counter, 4.5 GHz	5341A*
	J		Nov. 1975	Microwave link analyzer, 140-MHz IF	3790A
	K		Nov. 1976	Microwave sweep oscillators, 5.9-12.4 GHz	86242C, 86250C
	L		July 1975	Modulator, phase, for signal generator	86634A, 86635A
July 1977	Language, computer, APL	3000 Series II	Dec. 1974	MPET/3000, multiprogramming executive for timesharing	32010A
Sept. 1975	Language, computer, ATLAS	9500D,9510D	Aug. 1976	Multilingual computer systems	3000 Series II
June 1976	Language, desktop computer, HPL	9825A*	Nov. 1973	Multimeter, digital, hand-held	970A
Jan. 1974	Laser interferometer, straightness	5526A, option 30	Feb. 1977	Multimeters, digital, low cost	3435A, 3465A/B,3476A/B
Feb. 1976	Laser transducer system	5501A*	Feb. 1977	Multimeters, extending the ranges of	—
Sept. 1976	LCR meter, automatic, digital	4261A*	Jan. 1976	Multiplexed communications test, frequency division	3745A*
Mar. 1974	LCR meter, 1 MHz automatic, digital	4271A*	Aug. 1976	Multiprogramming computer systems	3000 Series II
Apr. 1977	LED displays, alphanumeric	HDSP-2000	Jan. 1976	Multi-user real-time BASIC	—
July 1976	Line stretcher, electronic	8505A*		N	
Oct. 1975	Liquid chromatography, flow control	1010B	July 1976	Network analyzer, 0.5-1300 MHz	8505A*
June 1977	Load, sliding, 2-26.5 GHz	911C	Nov. 1974	Networks, computer	9700 Series
May 1976	Logarithmic counter (lab notebook)	—	Mar. 1975	Network measurements, 2-18 GHz	—
Oct. 1973	Logic analyzer	5000A	June 1976	NMOS LSI processor	9825A*
Dec. 1976	Logic clip, multifamily	548A	Mar. 1974	Noise, types, in signal generators	8654A
Nov. 1974	Logic lab	5035T	Aug. 1974	Noise measurements, telephone	4940A
Dec. 1976	Logic probe, multifamily	545A	May 1975	Noise measurements, telephone	5453A
Dec. 1976	Logic pulser, multifamily	548A	Aug. 1974	Nonlinear distortion measurements	4940A
Aug. 1975	Logic state analyzer	1600S	May 1975	Nonlinear distortion measurements	5453A
Jan. 1974	Logic state analyzer	1601L	Nov. 1975	Nonlinear distortion measurements on microwave links	3790A
Jan. 1977	Logic state analyzer for microprocessors	1611A		O	
			Dec. 1975	Operating systems, real-time	92001A,

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	(RTE-II, RTE-III)	92060A
Mar. 1977	OPNODE	92817A
Mar. 1977	Optimization, circuit, computer aided	92817A
Nov. 1976	Oscillators, sweep, 5.9-12.4 GHz	86242C, 86250C
Mar. 1975	Oscillator, sweep, 2-18 GHz	86290A
Dec. 1975	Oscilloscope, 100 MHz	1740A
Sept. 1974	Oscilloscope, 275 MHz	1720A
Dec. 1974	Oscilloscope, dual-delayed sweep, microprocessor-controlled, numeric display	1722A
Apr. 1977	Oscilloscope probes, miniature	10017A et al.
Feb. 1974	Oscilloscopes, low-cost, dc-15 MHz	1220A/1221A
Aug. 1975	Oscilloscope triggering on digital events	10250/ 1230A/1620A
Oct. 1973	Oscilloscope, used with logic analyzer	5000A
Dec. 1975	Oscilloscope, used with logic-state analyzer	1740A
Sept. 1976	Oscilloscope, variable persistence/ storage	1741A
Oct. 1976	Oximeter	47201A
Oct. 1976	Oxygen levels in blood, measurement of	47201A

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Nov. 1973	PCM systems, error detection	3760A/3761A
Mar. 1976	PCM systems, error detection	3780A
Aug. 1974	Peak-to-average ratio measurements on voiceband data channels	4940A
Aug. 1974	Phase distortion measurements	4940A
May 1975	Phase distortion measurements	5453A
Aug. 1974	Phase hits measurements	4940A
Aug. 1974	Phase jitter measurements	4940A
May 1975	Phase jitter measurements	5453A
July 1975	Phase-modulated signal generator plug-in; also, applications for	86634A, 86635A
June 1974	Plug-in, automatic frequency converter	5354A
June 1974	Plug-in, channel C	5353A
Nov. 1975	Pocket calculator, business	HP-22
May 1974	Pocket calculator, card programmable	HP-65
Nov. 1976	Pocket calculator, card programmable	HP-67
Nov. 1975	Pocket calculator, key programmable	HP-25
Nov. 1975	Pocket calculator, scientific	HP-21
Nov. 1976	Portable calculators	HP-91,HP-97
Dec. 1973	Portable strip-chart recorder	7155A
Sept. 1974	Power meter	435A
Oct. 1975	Power meter, digital	436A*
Oct. 1975	Power sensor, high-sensitivity	8484A
July 1976	Power splitter, 3-way	11850A/B
June 1977	Power supplies, 200W, wide range	6002A*
July 1974	Power supply/amplifier, bipolar	6825A-27A
June 1977	Power supply programmer (HP-IB)	59501A*
Dec. 1973	Power supplies, switching regulator, modular, 4-28V, 300 W	62600J
Apr. 1975	Power supply, switching regulated, 5V, 500 W	62605M
June 1976	Printer, impact	9871A
Dec. 1974	Printer-plotter for chromatographs	3380A
Jan. 1975	Printer, thermal, for instruments	5150A*
Jan. 1975	Printer with clock option	5150A*
Nov. 1976	Printing calculators	HP-91,HP-97
Apr. 1977	Probes, oscilloscope, miniature	10017A et al.
Oct. 1975	Probes, time interval	5363A*
June 1976	Processor, NMOS LSI	9825A
Apr. 1977	Processor, CPU, CMOS/SOS	—
May 1974	Programmable calculator, pocket-sized	HP-65
Nov. 1976	Programmable calculator, pocket-sized	HP-67
Nov. 1975	Programmable calculator, pocket-sized	HP-25
June 1976	Programmable computer, desk-top	9815A/9825A*
Oct. 1976	Programmable IC tester	5045A
July 1977	Programming language, APL	3000
Sept. 1975	Programming language ATLAS	9500D,9510D
June 1976	Programming language HPL	9825A*
May 1977	Pseudorandom binary sequences (PRBS) for signature analysis	5004A

Mar. 1976	Pseudorandom binary sequences (50 MHz) for testing digital communications	3780A
Nov. 1973	Pseudorandom binary sequences (150 MHz) for testing digital communications	3790A 5345A*
June 1974	Pulsed RF frequency measurements	5345A*
Mar. 1974	Pulse generator, 20 MHz, counted burst	8011A
Oct. 1973	Pulse generator, 50 MHz, 16V, counted burst	8015A
Aug. 1977	Pulse generator, 1 GHz	8080-Series
Aug. 1977	Pulse generator, dual-output with 1/2 frequency	8092A/8080A
Sept. 1974	Pulse generator, variable risetime to 1 ns	8082A

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July 1974	QUERY	24376B, 82215A-6A
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Jan. 1974	Ray-trace program	—
Jan. 1976	Real-time BASIC	92101A
Mar. 1977	Real-time executive operating system	1000*
Nov. 1974	Real-time executive systems, in distributed networks	9700 Series
Dec. 1975	Real-time executive systems, RTE-II, RTE-III	92001A,92060A
Dec. 1973	Recorder, strip-chart, portable	7155A
Feb. 1975	Recorder, X-Y, high-sensitivity	7047A
Jan. 1975	Relay actuator for HP interface bus	59306A*
Mar. 1974	Resistance measurements	4271A*
Mar. 1975	RF plug-in, 2-18 GHz	86290A
Dec. 1975	RTE-II real-time executive system	92001A
Dec. 1975	RTE-III real-time executive system for large memories	92060A

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Nov. 1974	Satellite computer systems	9601,9610
Aug. 1974	Satellite-relayed TV	—
Jan. 1975	Scanner for calculator-based systems	3495A*
Jan. 1975	Scanner option for printer	5150A*
Jan. 1976	Selective level measuring set	3745A*
Dec. 1976	Serial-to-parallel conversion for logic-state display	10254A
May 1977	Servicing digital equipment by signature-analysis circuits	5004A
Mar. 1974	Signal generator, 10-520 MHz	8654A
Mar. 1976	Signal generator, calibrated FM	8654B
Mar. 1974	Signal generator noise specifications	8654A
July 1975	Signal generator, phase modulated	86635A
Mar. 1976	Signal generator synchronizer/counter	8655A/ 8654B
July 1975	Signal generator, synthesized 2.6 GHz	86603A
Oct. 1976	Signal-level reference (lab notebook)	—
May 1977	Signature analysis	5004A
Apr. 1977	Silicon-on-sapphire (SOS), CPU chip	—
Aug. 1974	Single-frequency interference measurements	4940A
May 1975	Single-frequency interference measurements	5453A
June 1977	Sliding load, 2-26.5 GHz	911C
Apr. 1976	Slope distance measurements	3810A
July 1976	Source, RF, tracking	8505A*
Mar. 1977	Sparse Y matrix, in circuit analysis	92817A
Oct. 1976	Spectrophotometry applied to blood oxygen measurement	47201A
Sept. 1973	Spectrum analyzer, 5 Hz to 50 kHz	3580A
May. 1975	Spectrum analyzer, 10 Hz to 13 MHz	3571A/ 3044A/3045A*
Dec. 1975	Spooling, in RTE systems	—
May 1977	Square root algorithm, calculator	—
June 1974	State-machine design	5345A*

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Sept. 1976	Storage/variable persistence oscilloscope	1741A	Apr. 1975	Timer/counter, 75-MHz universal	5308A
Jan. 1974	Straightness interferometer	5526A, option 30	Dec. 1974	Timeshared system, BASIC/3000	MPET/3000
Dec. 1973	Strip chart recorder, portable, battery-powered	7155A	Jan. 1975	Timing generator for HP interface bus	59308A*
July 1977	Structured programming, APL/3000	3000	Apr. 1976	Total station	3810A
Apr. 1976	Surveying, distance and angle measurements	3810A	Feb. 1976	Transducer, laser	5501A*
Nov. 1976	Sweep oscillators, 5.9-12.4 GHz	86242C, 86250C	Aug. 1974	Transient measurements on voiceband data channels	4940A
Mar. 1975	Sweep oscillator, 2-18 GHz	86290A	Nov. 1976	Transistor, FET GaAs microwave	HFET 1000
Jan. 1975	Switch, VHF, for HP interface bus	59307A*	Apr. 1975	Transistor process, 5-GHz	—
Apr. 1975	Switching regulated power supply, 5V, 500W	62605M	May 1977	Transition counting algorithms	5004A
Dec. 1973	Switching regulated power supplies, modular, 4-28V, 300W	62600J	Aug. 1974	Transmission impairment measuring set	4940A
June 1977	Switches, microwave, dc-26.5 GHz	33311C	May 1975	Transmission parameter analyzer	5453A
Mar. 1976	Synchronizer/counter for signal generator	8655A	Aug. 1975	Trigger probes/recognizers	10250/1230A/1620A
July 1975	Synthesized signal generator, 2.6 GHz	86603A	June 1977	Trigonometric algorithms, calculator	—
Nov. 1974	Systems, distributed computer	9700 Series	May 1977	Troubleshooting logic circuits by signature analysis	5004A
Feb. 1977	Systems voltmeter, fast reading	3437A*	U		
T			July 1975	Universal counter/timer/DVM	5328A*
May 1976	Tape cartridge, mini	—	Apr. 1975	Universal counter/timer, 75-MHz	5308A
Nov. 1974	Telephone data channel measurements, analog	3770A	V		
Aug. 1974	Telephone data channel measurements, analog	4940A	Apr. 1974	Ventricular function, analysis of cineangiograms	5693A
May 1975	Telephone data channel measurements, analog	5453A	Feb. 1977	Voltmeters, digital	3455A*, 3437A*, 3435A, 3465A/B, 3476A/B
Feb. 1974	Telephone data channel measurements, error analysis	1645A	Sept. 1976	Variable-persistence/storage oscilloscope	1741A
Dec. 1974	Telephone measurements, loop-holding device	3770A	Apr. 1976	Vertical distance measurements	3810A
Jan. 1976	Telephone measurements, multichannel systems	3745A*	Jan. 1975	VHF switch for HP interface bus	59307A*
May 1975	Telephone measurements, transmission test	3551A/3552A	Aug. 1977	Vibrations, mechanical analogy for servo system	7920A
Aug. 1974	Television by satellite, receiver for	—	Mar. 1977	Viewpoints, integrated-circuit technology	—
Feb. 1976	Terminal (calculator), data communications	9830A	Aug. 1976	Virtual-memory computer systems	3000 Series II
June 1975	Terminal, computer, CRT	2640A	July 1977	Virtual workspace, APL/3000	3000
July 1977	Terminal, CRT, APL	2641A	May 1975	Voiceband data channel analyzer	5453A
May 1976	Terminal, CRT, with dual tape drives	2644A	Aug. 1974	Voiceband data channel measurements, analog	4940A
Dec. 1973	Test desk cable fault locator	4913A	Nov. 1974	Voiceband data channel measurements, analog	3770A
July 1976	Test sets, network analysis	8502A/8503A	July 1975	Voltmeter options for universal counter	5328A*
Oct. 1976	Tester, digital IC	5045A	W		
Feb. 1977	Testing a multimeter abusively	3435A, 3465A/B, 3476A/B	Feb. 1977	Waveform measurements with digital voltmeter	3437A*
Nov. 1976	Thermal printer, calculator	HP-91, HP-97	Aug. 1977	Word generator, 300 MHz	8084A
Sept. 1974	Thermocouple power meter	435A	Aug. 1975	Word generator, multichannel	8016A*
Apr. 1974	Thermometer, platinum, digital	2802A	X		
Dec. 1975	Thick-film hybrid oscilloscope amplifier	1740A	July 1974	X-ray system for bench use	43805
June 1974	Time-interval averaging	—	Feb. 1975	X-Y recorder, high-sensitivity	7047A
Oct. 1975	Time interval probes	5363A*	Y		
Dec. 1974	Time interval measurements, very short	1722A	Mar. 1975	YIG-tuned oscillator	—
Feb. 1977	Time-related voltage measurements	3437A*	Z		
July 1975	Timer/counter/DVM, universal	5328A*	Apr. 1976	Zenith angle measurements	3810A

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Model	Instrument	Month/Year	HP-22	Calculator	Nov. 1975
HP-21	Calculator	Nov. 1975	HP-25	Calculator	Nov. 1975
*21MX	Computers	Oct. 1974	HP-65	Programmable Pocket Calculator	May 1974
*21MXE-Series	Computers	Mar. 1977	HP-67	Programmable Pocket Calculator	Nov. 1976
			HP-91	Printing Portable Calculator	Nov. 1976
			HP-97	Programmable Printing Portable Calculator	Nov. 1976

*Asterisk indicates instruments compatible with the HP interface bus (HP-IB).

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435A	Power Meter	Sept. 1974	*5150A	Thermal Printer	Jan. 1975
*436A	Power Meter	Oct. 1975	5300B	8-Digit Mainframe	Apr. 1975
545A	Logic Probe	Dec. 1976	5305A	1100-MHz Frequency Counter	Apr. 1975
546A	Logic Pulser	Dec. 1976	5307A	High-Resolution Counter	Nov. 1973
547A	Current Tracer	Dec. 1976	5308A	75-MHz Universal Timer/Counter	Apr. 1975
548A	Logic Clip	Dec. 1976	*5312A	ASCII Interface	Jan. 1975
911C	Sliding Load	June 1977	*5328A	Universal Counter	July 1975
970A	Probe Multimeter	Nov. 1973	*5341A	Frequency Counter	Sept. 1975
HFET-1000	GaAs FET	Nov. 1976	*5345A	Electronic Counter	June 1974
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1010B	Liquid Chromatograph	Oct. 1975	5354A	Automatic Frequency Converter	
1220A/1221A	Oscilloscopes, 15 MHz	Feb. 1974		0.015-4.0 GHz	June 1974
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1600A/S	Logic State Analyzer	Aug. 1975	5381A/5382A	Frequency Counters	July 1974
1601L	Logic State Analyzer	Jan. 1974	5451B	Fourier Analyzer	Feb. 1975
1607A	Logic State Analyzer	Aug. 1975	5451B	Fourier Analyzer with BSFA	
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	Oscilloscope	Sept. 1976	*6002A	DC Power Supply, 200W	June 1977
HDSP-2000	Solid-State Alphanumeric Display	Apr. 1977	6825A/6A/7A	Bipolar Power Supply/Amplifiers	July 1974
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*3050B	Automatic Data		8496A/B	Step Attenuators, dc-18 GHz	May 1974
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3435A	Digital Multimeter	Feb. 1977	8654A	Signal Generator, 10-520 MHz	Mar. 1974
*3437A	System Voltmeter	Feb. 1977	8654B	Signal Generator with FM	Mar. 1976
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Adler, Robin		Oct. 1973	Courtin, Erich	Jan.	1977	Fowles, Richard G.	Aug.	1974
Ainsworth, Gerald		Oct. 1976	Crawford, Thomas	Nov.	1973	Fox, Kenneth A.	Dec.	1975
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Arnold, David		May 1976				Frohwerk, Robert A.	May	1977
Ashkin, Peter B.		Apr. 1977						
Atchley, Robert L.		May 1975	Dack, David G.	Jan.	1976			
Averett, Linda W.		Dec. 1975	Dalichow, Rolf	July	1976			
	B		Damon, Noel E.	Aug.	1974	Gadol, Adele M.	Dec.	1975
Bailey, Paul W.		June 1977	Daniels, Jerry W.	May	1975	Gammill, Lawrence A.	Apr.	1977
Baker, Mark		Oct. 1973/ Oct. 1976	Danielson, Dan D.	Mar.	1975	Globas, Gert	Sept.	1974
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Barney, Dick B.		June 1976	Dickey, Shane	Nov.	1974	Gordon, David E.	Dec.	1976
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			Drake, Harris Dean	Mar.	1977			
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						Hay, Robert R.	Mar.	1974
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Collison, Robert R.		Mar. 1976	Farrington, David	Apr.	1977	Hood, James M.	Dec.	1973/ Aug. 1977
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			Finch, Carolyn M.	Apr.	1977	House, Charles H.	Dec.	1975
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HP-92	Printing Financial Calculator	Oct. 1977	3467A	Logging Multimeter	Dec. 1978
1000	Computer Systems	Oct. 1978	3582A	Spectrum Analyzer, .02 Hz to 25.5 kHz	Sept. 1978
DS/1000	Distributed Systems/1000	Mar. 1978			
1000 F-Series	Computers	Oct. 1978	3585A	Spectrum Analyzer, 20 Hz to 40 MHz	June 1978
1350A	Graphics Translator	May 1978			
1602A	Logic State Analyzer	Feb. 1978	3754A	Access Switch	Aug. 1978
1610A	Logic State Analyzer	Feb. 1978	4262A	LCR Meter, Automatic	Dec. 1977
1611A	Logic State Analyzer	Feb. 1978	5342A	Microwave Frequency Counter	May 1978
1615A	Logic Analyzer	Feb. 1978	5359A	Time Synthesizer	Aug. 1978
1743A	Oscilloscope, 100 MHz, Δ time	Dec. 1977	5370A	Universal Time Interval Counter	Aug. 1978
2026	Data Entry/Communications System	Mar. 1978	5420A	Digital Signal Analyzer	Oct. 1977
			7221A	X-Y Plotter	Sept. 1977
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			8501A	Storage Normalizer	Jan. 1978
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			8672A	Synthesized Signal Generator	Nov. 1977
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			12790A	Multipoint Interface for HP 1000 Computers	Oct. 1978
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2608A	Printer, 400 lines per minute	Nov. 1978			
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A		
Feb. 1979	Accelerometer, hybrid	
Apr. 1979	Accounts receivable,	HP 250
May 1979	Address extension chip	
Sept. 1979	Air flow measurements in the pulmonary lab	47804S
July 1979	AMIGO/300 operating system	HP 300
Nov. 1979	Amplitude modulation measurements	8901A
May 1979	Assembly language, desktop computer	9835A
July 1979	Asynchronous data communications controller	31264A
Mar. 1979	Automatic circuit board testing	DTS/70,3060A
Dec. 1979	Automatic paper advance, X-Y plotter	9872S,7221S,7220S
B		
June 1979	BASIC, business computer	HP 300
Apr. 1979	BASIC, business computer	HP 250
May 1979	BASIC, desktop computer	9835A
Jan. 1979	Battery-powered universal counter	5314A,5315A
Jan. 1979	Bipolar integrated circuit chip, MRC	
Mar. 1979	Board test language	9825A/3060A
Mar. 1979	Board testing, automatic	DTS/70,3060A
Dec. 1979	Bus extender, fiber optic	12050A
Aug. 1979	Bus extender, telephone compatible	37201A
Apr. 1979	Business computer, entry level	HP 250
June 1979	Business computer	HP 300
July 1979	Business computer	HP 300
Sept. 1979	Business computer	HP 3000 Series 33
C		
Dec. 1979	Calculator, handheld	HP-34C
Apr. 1979	Capacitance DLTS	
Dec. 1979	Capacitance/voltage measurements	4140A
Mar. 1979	Circuit-board testing, automatic	DTS/70,3060A
Oct. 1979	Communications, data analyzer	1640A
June 1979	Computer, business	HP 300
July 1979	Computer, business	HP 300
May 1979	Computer, desktop	9835A
July 1979	Computer power supply	63312F
Apr. 1979	Computer, small-business	HP 250
Sept. 1979	Computer system, low-cost general-purpose	HP 3000 Series 33
Apr. 1979	Conductance DLTS	
Feb. 1979	Control system, linear step motor	7225A
May 1979	Controller, desktop	9835A

Jan. 1979	Counter chip, multiple-register	
Jan. 1979	Counter, universal, 100-MHz, low-cost	5314A
Jan. 1979	Counter, universal, 100-MHz, reciprocal	5315A/B
Dec. 1979	Current measurements, picoampere	4140A

D

Apr. 1979	Data base management	HP 250
June 1979	Data base management	HP 300
Oct. 1979	Data communications analyzer	1640A
Apr. 1979	Deep-level transient spectroscopy (DLTS)	
May 1979	Desktop computer	9835A
Feb. 1979	Digital LCR meters, multifrequency	4274A/75A
Aug. 1979	Digital pattern generator	8170A
Feb. 1979	Digital X-Y plotter	7225A
Nov. 1979	Discriminator, charge count	8901A
Aug. 1979	Discriminator with controllable slope	8566A
July 1979	Disc drive, Winchester type	HP 300, 7910K
June 1979	Display, integrated	HP 300
July 1979	Display, integrated	HP 300
Sept. 1979	Displays, X-Y, selectively blanked	1741A/002

E

Sept. 1979	Electromagnetic interference suppression, computer	HP 3000 Series 33
May 1979	EMI design	9835A
Jan. 1979	Emitter function logic (EFL)	
Dec. 1979	Equation solver, handheld calculator	HP-34C
Dec. 1979	Extender, HP Interface Bus, fiber optic	12050A
Aug. 1979	Extender, HP Interface Bus, telephone	37201A

F

Mar. 1979	FASTRACE	DTS/70
Mar. 1979	Fault isolation in analog circuit boards	3060A
Mar. 1979	Fault isolation in digital circuit boards	DTS/70
Dec. 1979	Fiber optic HP-IB link	12050A
Nov. 1979	FM discriminator, charge count	8901A
Aug. 1979	FM discriminator, controllable slope	8566A
Nov. 1979	Frequency measurements	8901A
Jan. 1979	Frequency measurements to 100 MHz	5314A,5315A/B
Nov. 1979	Frequency modulation measurements	8901A
Jan. 1979	Function generator/synthesizer, 0 to 21 MHz	3325A

G

July 1979	General I/O channel	31262A
Aug. 1979	Generator, logic pattern	8170A

May 1979 Generator, pulse, programmable 8160A

H

Dec. 1979 HP-IB extender, fiber optic 12050
Aug. 1979 HP-IB extender, telephone 37201A
Oct. 1979 HP-IB interface for logic analyzers 1610A/003,1615A/001

I

Apr. 1979 IMAGE/250 HP 250
June 1979 IMAGE/300 HP 300
Mar. 1979 In-circuit board testing 3060A
Aug. 1979 Instrument systems, HP-IB extender for 37201A
Jan. 1979 Integrated-circuit chip, bipolar, MRC
June 1979 Integrated display system HP 300
July 1979 Integrated display system HP 300
Jan. 1979 Integrated injection logic (I²L)
Dec. 1979 Interface bus extender, fiber optic 12050A
Aug. 1979 Interface bus extender, telephone 37201A
Apr. 1979 Inventory control HP 250

L

June 1979 Language subsystem HP 300
Feb. 1979 LCR meters, multifrequency 4274A,4275A
Feb. 1979 Linear step motor plotter 7225A
Oct. 1979 Logic analyzers, HP-IB interfaces for 1610A/003,1615A/001
Aug. 1979 Logic pattern generator 8170A
Sept. 1979 Lung function measurements 47804S

M

Apr. 1979 Manufacturing reporting HP 250
Oct. 1979 Microprocessor lab 5036A
Aug. 1979 Microwave spectrum analyzer 8566A
Nov. 1979 Modulation analyzer 8901A
Oct. 1979 Monitor/simulator/analyzer for data communications 1640A
Jan. 1979 Multiple-register counter (MRC) chip
Sept. 1979 Multiprogramming executive operating system HP 3000 Series 33

N

Oct. 1979 Network analyzer, 4 to 1300 MHz 8754A

O

July 1979 Operating system, AMIGO/300 HP 300
Sept. 1979 Operating system, MPE-III HP 3000
Apr. 1979 Order entry HP 250
Sept. 1979 Oscilloscopes, selectively blanked X-Y displays 1741A/002
Aug. 1979 Oscillator, local, synthesized sweeping 8566A

P

Dec. 1979 Paper advance,automatic X-Y plotter 9872S,7221S,7220S
Jan. 1979 Period measurements 5314A,5315A/B
Nov. 1979 Phase modulation measurements 8901A
Dec. 1979 Picoammeter/dc voltage source synchronized 4140A
Feb. 1979 Plotter, digital X-Y 7225A
Dec. 1979 Plotter, X-Y, with paper advance 9872S,7221S,7220S
Sept. 1979 Pneumotach for pulmonary measurements 47804S
Jan. 1979 Portable universal counters 5314A,5315A
Nov. 1979 Power measurements 8901A
July 1979 Power supply, computer 63312F
Oct. 1979 "Practical Microprocessors" (coursebook) 5036A
May 1979 Pulse generator, 50 MHz, programmable 8160A
Aug. 1979 Pulse generator, logic patterns 8170A
Sept. 1979 Pulmonary function measurements, automated 47804S

R

Jan. 1979 Ramp generator, precision; synthesizer/function generator 3325A
Jan. 1979 Ratio measurements 5314A,5315A/B
Dec. 1979 Recorder, X-Y, with paper advance 9872S,7221S,7220S
Jan. 1979 Reliability in electronic equipment
Sept. 1979 Remote computer troubleshooting HP 3000 Series 33
Nov. 1979 RF modulation measurements 8901A
Oct. 1979 RF Network Analyzer 4 to 1300 MHz 8754A
Dec. 1979 Root finder, handheld calculator HP-34C
June 1979 RPG, business computer HP 300

S

Apr. 1979 Sales analysis HP 250
Apr. 1979 Semiconductor process development, DLTS system
Oct. 1979 Serial data analyzer 1640A
June 1979 Shipping container HP 300
Nov. 1979 Signal generator 11715A
Jan. 1979 Signal source, programmable synthesizer/function generator, 0 to 21 MHz 3325A
June 1979 Silicon-on-sapphire processor HP 300
July 1979 Silicon-on-sapphire processor HP 300
Dec. 1979 SOLVE: equation solver HP-34C
Sept. 1979 SOS processor HP 3000 Series 33
Mar. 1979 Simulator for digital board testing, TESTAID DTS-70
Nov. 1979 Source, AM/FM 11715A
Aug. 1979 Source, logic pattern 8170A
May 1979 Source, pulses, programmable 8160A
Aug. 1979 Spectrum analyzer, 100 Hz to 22 GHz 8566A
Feb. 1979 Step motors, linear 7225A
Jan. 1979 Synthesis, frequency, fractional-N 3325A
Jan. 1979 Synthesizer/function generator, 0 to 21 MHz 3325A
May 1979 System 35, 9800 Series 9835A
Aug. 1979 Systems, HP-IB extender for 37201A
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T

Mar. 1979 TESTAID program generator for digital board testing DTS-70
Jan. 1979 Time-interval measurements 5314A,5315A/B
Sept. 1979 Triggered X-Y oscilloscope displays 1741A/002
Mar. 1979 Troubleshooting circuit boards automatically DTS/70-3060A
Sept. 1979 Troubleshooting, computer, remote HP 3000 Series 33
Oct. 1979 Troubleshooting, microprocessor, training 5036A

U

Jan. 1979 Universal counter, 100-MHz, low-cost 5314A
Jan. 1979 Universal counter, 100-MHz, reciprocal 5315A/B

V

Nov. 1979 VCO measurements 8901A
July 1979 Virtual memory operating system HP 300
Mar. 1979 Virtual memory for digital board tester DTS-70

X

Sept. 1979 X-Y displays, selectively blanked 1741A/002
Feb. 1979 X-Y plotter 7225A
Dec. 1979 X-Y plotters with paper advance 9872S,7221S,7220S

Y

Aug. 1979 YIG-tuned mixer 8566A

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A Programmable Selective Level Meter (Wave Analyzer) with Synthesized Tuning, Autoranging, and Automatic Calibration, *Paul L. Thomas*
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Nov. 1980	Alarms, heart-rate monitoring	78501A, 78502A
Nov. 1980	Alarms, system self-test	78501A, 78502A
July 1980	Amplifier, horizontal, CRT display	HP-85
July 1980	Amplifier, vertical, CRT display	HP-85
Aug. 1980	Analyzer, audio	8903A
May 1980	Analyzer, logic state	1610B
May 1980	Analyzer, logic state	1611A Opt 001
May 1980	Analyzer, wave	3586A/B/C
Sept. 1980	Angle measurement, electronic	3820A
Sept. 1980	Antenna assembly	9845T, 3820A
Dec. 1980	Area fill, graphics images	9845C
Nov. 1980	Arrhythmia monitoring	78501A, 78502A
Oct. 1980	Assembler, table driven	64000
Aug. 1980	Audio analyzer	8903A
B		
July 1980	BASIC, personal computer	HP-85
Dec. 1980	BASIC language, graphics	9845C
Aug. 1980	Buffer IC	HP-85
C		
Mar. 1980	Calculator system, personal	HP-41C
Aug. 1980	Calculator with integrate key	HP-34C
Mar. 1980	Card reader	82104A
Nov. 1980	Cardiotach	78501A, 78502A
Apr. 1980	Carrier return loss measurements	
Sept. 1980	Cassegrain structure, telescope	3820A
Nov. 1980	Central station	78501A, 78502A
Feb. 1980	Chemical analysis, spectrophotometric	8450A
Mar. 1980	CMOS, bulk	HP-41C
Dec. 1980	Color graphics, CRT	9845C
Dec. 1980	Color specification models	9845C
Jan. 1980	Communications system measurements	3779A/B
Oct. 1980	Compiler, Pascal	64000
July 1980	Computer, personal	HP-85
Apr. 1980	Converter, frequency, 40 GHz	5355A
Sept. 1980	Coordinate measurements, large-scale, non-contact	9845T, 3820A
Apr. 1980	Counter, microwave, 26.5 GHz	5343A
Apr. 1980	Counter system, 40 GHz	5345A/55A/56A
Apr. 1980	Counter, universal	5345A
Aug. 1980	CPU design	HP-85
Dec. 1980	Cursor, tracking	9845C
Apr. 1980	CW frequency measurements	5355A, 5345A
D		
Sept. 1980	Deflection measurement	9845T, 3820A
July 1980	Delta-distance code, tape storage	HP-85
May 1980	Demultiplexing buses	1610B, 1611A
Oct. 1980	Development system, logic	64000
Feb. 1980	Diffraction gratings, holographic	
July 1980	Digital servo design	HP-85
Oct. 1980	Directed-syntax softkeys	64000
June 1980	Disc management software	
Sept. 1980	Distance correction, air temperature and pressure	3820A
June 1980	Distance measurement, electronic	3850A
Sept. 1980	Distance measurement, electronic	3820A
Aug. 1980	Distortion measurements	8903A
Dec. 1980	Dominant/nondominant color	9845C
June 1980	Dynamic distance measurements	3850A
E		
Nov. 1980	ECG monitoring	78501A, 78502A
Nov. 1980	Echoplex	78501A, 78502A
Oct. 1980	Electronic bench	
June 1980	Electronic distance meter	3850A
Sept. 1980	Electronic total station	3820A
Nov. 1980	Emulator, IBM 3270	32229A
Oct. 1980	Emulators, microprocessor	64000
Jan. 1980	End-to-end measurements	3779A/B
May 1980	FDM system testing	3586A/B/C
Nov. 1980	Fibrillation detector	78501A, 78502A
Jan. 1980	Fixtures, impedance test	16091/2/3/4A
Aug. 1980	Floating audio source	8903A
Apr. 1980	Frequency measurements to 26.5 GHz	5343A
Apr. 1980	Frequency measurements to 40 GHz	5355A
G		
May 1980	Generator, level, synthesized	3336A/B/C
Sept. 1980	Glossary, optical and mechanical terms	3820A
Dec. 1980	Graphical peripheral control	9845C
Dec. 1980	Graphics, color, CRT	9845C
July 1980	Graphics, personal computer	HP-85
Sept. 1980	Gravity sensing system	3820A
H		
Apr. 1980	Harmonic heterodyne frequency converter, 40 GHz	5355A
Apr. 1980	Heads, frequency converter	5356A/B/C
Sept. 1980	Height-of-standards error	3820A
July 1980	HP-IB interface, personal computer	82937A
Sept. 1980	HP-IB interface, distance meter	38001A
I		
Nov. 1980	IBM/HP 3000 interactive mainframe link (3270 emulator)	32229A
Jan. 1980	Impedance analyzer, 1-1000 MHz	4191A
June 1980	Industrial distance meter	3850A
Nov. 1980	Inquiry and development facility (IDF)	32229A
July 1980	Integer processing, fast	HP-85
July 1980	Integrated circuit, buffer	HP-85
Aug. 1980	Integrated circuit, CPU	HP-85
July 1980	Integrated circuit, CRT controller	HP-85
Aug. 1980	Integrated circuit, keyboard controller	HP-85
July 1980	Integrated circuit, printer controller	HP-85
Aug. 1980	Integrated circuit, RAM controller	HP-85
July 1980	Integrated circuit, read/write amplifier	HP-85
Aug. 1980	Integrated circuit, ROM	HP-85

Aug. 1980	Integrated circuit, ROM		Aug. 1980	Polysilicon resistors	HP-85
July 1980	Integrated circuit, tape controller	HP-85	June 1980	Position control	3850A
Aug. 1980			July 1980	Power supply, personal computer	HP-85
July 1980	Integrated circuit, translator(TC)	82937A	July 1980	Preallocation, variable	HP-85
Aug. 1980	Integration, numerical, by calculator	HP-34C	Apr. 1980	Prescaler, 0.4-1.6 GHz	
Nov. 1980	Intelligent network processor (INP)		Jan. 1980	Primary multiplex analyzer	3779A/B
Nov. 1980	Interactive Mainframe Link/3000 (IML/3000)	32229A	Mar. 1980	Printed circuit hybrid technology	HP-41C
Oct. 1980	Intermediate language	64000	Mar. 1980	Printer, thermal	82143A
Sept. 1980	Interpolation, sinusoidal patterns	3820A	July 1980	Printhead, thermal	HP-85
Nov. 1980	Intrinsics, IML/3000	32229A	Oct. 1980	PROM programmer	64500A
July 1980	I/O interfaces, personal computer	82937A	Apr. 1980	Pulsed RF frequency measurements	5355A
K					
Aug. 1980	Key, calculator, for integration	HP-34C	Q		
Aug. 1980	Keyboard controller IC	HP-85	Nov. 1980	QRS-matched filter	78501A, 78502A
L					
Oct. 1980	LALR parsing	64000	R		
Sept. 1980	Lasing diode, GaAs	3820A	Aug. 1980	RAM cell, two-read/one-write	HP-85
May 1980	Level generator	3336A/B/C	Aug. 1980	RAM controller IC	HP-85
Dec. 1980	Light pen, raster-scan CRT	9845C	July 1980	Random number generation	HP-85
Oct. 1980	Linker, table-driven	64000	Nov. 1980	Reconfiguration, automatic	78501A, 78502A
Mar. 1980	Liquid crystal display	HP-41C	Jan. 1980	Reflection coefficient measurements, 1-1000 MHz	4191A
Oct. 1980	Logic development system	64000	Sept. 1980	Refractive index, air, group velocity	3820A
May 1980	Logic state analyzer	1610B	Oct. 1980	Resource allocation	64000
May 1980	Logic state analyzer	1611A Opt 001	Jan. 1980	RF impedance analyzer	4191A
Aug. 1980	LSI circuit design	HP-85	Sept. 1980	Roelof's prism adaptor	11429A
M					
June 1980	Mass storage management software		Nov. 1980	SDLC	78501A, 78502A
Dec. 1980	Memory design, color graphics display	9845C	May 1980	Selective level meter	3586A/B/C
Mar. 1980	Memory modules	82106A	Nov. 1980	Self-test system, four-level	78501A, 78502A
Apr. 1980	Microcode development technique		May 1980	Signal generator, synthesized	3336A/B/C
Oct. 1980	Microprocessor development system	64000	Aug. 1980	Signal-to-noise measurements	8903A
May 1980	Microprocessor testing	1610B,1611A	Aug. 1980	SINAD measurements	8903A
Apr. 1980	Microwave frequency measurements	5343A	Aug. 1980	Software development system	HP-85
Apr. 1980	Microwave frequency measurements	5355A	June 1980	Software for mass storage management	
Mar. 1980	Microwave spectrum analyzer	8559A	Feb. 1980	Spectrophotometer, ultraviolet/visible	8450A
Sept. 1980	Mirror mount	3820A	Mar. 1980	Spectrum analyzer 0.1 to 21 GHz	8559A
June 1980	Moving target measurements	3850A	Aug. 1980	State-variable filters	8903A
Sept. 1980	Multifunction sequence	3820A	June 1980	Static monitoring	3850A
May 1980	Multiphase clocking	1610B,1611A	Nov. 1980	Superaster	78510A
Jan. 1980	Multiplex system analyzer	3779A/B	May 1980	Synthesizer/level generator	3336A/B/C
Nov. 1980	Multi-processor architecture	78501A, 78502A	T		
N					
Aug. 1980	NMOS circuit design	HP-85	Sept. 1980	Telescope, catadioptric	3820A
Aug. 1980	Notch filter, digitally tuned	8903A	Jan. 1980	Telephone system measurements	3779A/B
Aug. 1980	Numerical integration by calculator	HP-34C	May 1980	Thermal converter, rms-to-dc	
O					
Sept. 1980	Optical angle encoder	3820A	Dec. 1980	3-D graphics, dominant area shading	9845C
Feb. 1980	Optical system, folded	8450A	Sept. 1980	Tilt meter, gravity sensing	3820A
Sept. 1980	Optical system, total station	3820A	Nov. 1980	Trends monitoring	78501A, 78502A
Aug. 1980	Oscillator, audio	8903A	Sept. 1980	Triangulation measurements	9845T, 3820A
July 1980	Output control, vectored	HP-85	Aug. 1980	Two-read/one-write memory	HP-85
P					
Oct. 1980	Pascal compiler	64000	U		
Nov. 1980	Patient information center	78501A, 78502A	Feb. 1980	Ultraviolet/visible spectrophotometer	8450A
Nov. 1980	Patient monitoring	78501A, 78502A	V		
Jan. 1980	PCM system analyzer	3779A/B	Dec. 1980	Vector generation	9845C
			June 1980	Velocity measurements	3850A
W					
			May 1980	Wave analyzer	3586A/B/C

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Model	Product	Month/Year	Model Number	Product	Month/Year
			1611A Opt 001	Logic State Analyzer	May 1980
HP-34C	Calculator	Aug. 1980	3336A/B/C	Synthesizer/Level Generator	May 1980
HP-41C	Calculator System	Mar. 1980	3586A/B/C	Selective Level Meter	May 1980
HP-85	Personal Computer	July 1980	3779A/B	Primary Multiplex Analyzer	Jan. 1980
		Aug. 1980	3820A	Total Station	Sept. 1980
		Aug. 1980	3822A	Coordinate Determination System (9845T, 3820A)	Sept. 1980
1610B	Logic State Analyzer	May 1980			

3850A	Industrial Distance Meter	June 1980	16094A	Probe Fixture	Jan. 1980
4191A	RF Impedance Analyzer	Jan. 1980	32229A	IML/3000	Nov. 1980
5316A	Universal Counter	Sept. 1980	38001A	HP-IB Distance Meter Interface	June 1980
5335A	Universal Counter	Sept. 1980			Sept. 1980
5343A	Microwave Frequency Counter	Apr. 1980	64000	Logic Development System	Oct. 1980
5345A	Electronic Counter	Apr. 1980	64100A	Development Station	Oct. 1980
5355A	Automatic Frequency Converter	Apr. 1980	64300A	Logic Analyzer	Oct. 1980
5356A/B/C	Frequency Converter Heads	Apr. 1980	64500A	PROM Programmer	Oct. 1980
8450A	UV/Vis Spectrophotometer	Feb. 1980	78501A	Patient Information Center	Nov. 1980
8559A	Spectrum Analyzer 0.1-21 GHz	Mar. 1980	78502A	Patient Information Center	Nov. 1980
8903A	Audio Analyzer	Aug. 1980	78510A	Display	Nov. 1980
9845C	Color Graphics Computer	Dec. 1980	78511A	Equipment Cabinet	Nov. 1980
9876A	Thermal Graphics Printer	Nov. 1980	78571A	Single-Channel Recorder	Nov. 1980
10264A	General-Purpose Personality Module for 1611A	May 1980	78572A	Dual-Channel Recorder	Nov. 1980
			82104A	Card Reader	Mar. 1980
			82106A	Memory Modules	Mar. 1980
11429A	Roelof's Prism Adaptor	Sept. 1980	82143A	Thermal Printer	Mar. 1980
14451A	Circuit Analyzer Board	Nov. 1980	82903A	HP-85 16K RAM Module	July 1980
16091A	Coaxial Fixture Set	Jan. 1980	82936A	HP-85 ROM Module	July 1980
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Baeverstad, Harold L., Jr.	Dec. 1980	Ishida, Connie J.	Nov. 1980	Offermann, Robert W.	Apr. 1980
Batham, Andrew	Jan. 1980			Ogden, Deborah J.	May 1980
Bausch, James F.	July 1980	James, Gerald E.	Feb. 1980	Ohkawara, Hideo	Jan. 1980
Becker, J. Steven	Dec. 1980	Jekat, Hans J.	Apr. 1980	O'Neill, Peter M.	May 1980
Belding, Richard L.	Mar. 1980	Jensen, Ronald C.	Sept. 1980	P	
Blancke, Timothy B.	Nov. 1980	Jewett, Robert A.	Dec. 1980	Pearson, Robert	Jan. 1980
Bologlu, Ali	Apr. 1980	Johnson, Douglas R.	Sept. 1980	Pontis, George D.	Aug. 1980
Bourque, Jacques Gregori	Oct. 1980	Johnson, Norman L.	Mar. 1980	Porter, Frederick J.	Dec. 1980
Boyan, Corydon J.	Aug. 1980			Pratt, William C.	Dec. 1980
Boyd, Patrick V.	Mar. 1980	K		Q	
Brown, Troy L.	June 1980	Kahan, William M.	Aug. 1980	Quick, Roger D.	Mar. 1980
Bruderer, Clark C.	Dec. 1980	Keil, Ronald W.	July 1980	R	
Bryant, Mike	Jan. 1980	Kerr, Brian W.	Oct. 1980	Rueter, James M.	Nov. 1980
Buck, Dean	June 1980	Kerschner, Ronald K.	Sept. 1980	Russell, Homer C.	July 1980
		Knudsen, Knud L.	Feb. 1980	S	
		Koepke, Larry L.	Apr. 1980	Saponas, Thomas A.	Oct. 1980
C				Sasaki, Gary D.	Sept. 1980
Collins, Douglas J.	July 1980	L		Sayed, Mohamed M.	Apr. 1980
Conklin, David R.	Mar. 1980	LaFollette, Robert J.	Sept. 1980	Schleifer, Arthur	Feb. 1980
Cox, Roger	Oct. 1980	Lau, Chung Y.	Aug. 1980	Schneider, Richard F.	Apr. 1980
D		Lo, Clement C.	July 1980	Schwartz, Alfred	Feb. 1980
DeVilbiss, Alan J.	Oct. 1980	Low, Robert N.	Mar. 1980	Sims, David J.	Sept. 1980
DiPietro, David M.	Sept. 1980	Lowe, David J.	Mar. 1980	Smith, David E.	June 1980
Donnelly, James B.	Oct. 1980	Lynch, Todd R.	July 1980	Spreadbury, Brian G.	July 1980
Dykes, Mark	Jan. 1980		Aug. 1980	Steiger, Gerald W.	Mar. 1980
F		M		Steiner, Glenn C.	Feb. 1980
Felsenstein, Ronald E.	Apr. 1980	Marathe, Vijay V.	Mar. 1980	Stettiner, Robert L.	Nov. 1980
Fleming, James H.	Mar. 1980	Marton, Virgil	Jan. 1980	Stewart, James B.	Oct. 1980
Foote, James D.	Aug. 1980	Maze, Craig	Mar. 1980	Sugihara, Noriyuki	Jan. 1980
Fredrickson, Robert W.	Dec. 1980	McDonley, P. Alan	Oct. 1980	Sweetser, David J.	July 1980
Frost, John B.	Dec. 1980	McOmber, Val D.	Sept. 1980	T	
		Mikkelsen, Tim I.	July 1980	Thomas, Paul L.	May 1980
G		Mills, Nelson A.	July 1980	W	
George, David M.	Sept. 1980		Aug. 1980	Ward, Michael J.	Sept. 1980
Goldberg, Jeffrey M.	Nov. 1980	Molinari, David H.	Mar. 1980	Wasinger, Gerald F.	Sept. 1980
Gort, Alfred F.	Sept. 1980	Monnier, Richard E.	Feb. 1980	Weber, Lynn	Feb. 1980
Greenley, Gordon A.	Oct. 1980	Moore, Charles E.	Sept. 1980	Widmayer, Robert W.	Feb. 1980
H		Morganthaler, Mark P.	Feb. 1980	Willis, Barry G.	Feb. 1980
Hale, William L.	Dec. 1980	Morris, Donald L.	Mar. 1980	Winslow, Phillip D.	May 1980
Hanna, Kim L.	Nov. 1980	Morrill, Justin S., Jr.	May 1980	Wong, John J.	Mar. 1980
Hanna, William A.	June 1980	Musch, Bernard E.	Mar. 1980	Y	
Hansen, John D.	May 1980	Muterspaugh, Milo E.	Oct. 1980	Yackle, Brad E.	Oct. 1980
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raphy Column, *John Kelly, Timothy R. Groves, and Heui Pei Kuo*
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New Plotting Technology Leads to a New Kind of Electrocardiograph, Peter H. Dorward, Steven J. Koerper, Martin K. Mason, and Steven A. Scampini

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Oct. 1981	Detector IC	HEDS-5000			
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May 1981	Electron beam lithography system				
Oct. 1981	Encoder, shaft, optoelectronic	HEDS-5000,4700A			
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Feb. 1981	Fast switching signal generator	8662A			
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June 1981	Logic simulation, VLSI	
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May 1981	Memory, pattern	
Nov. 1981	Micro-grip drive	7580A
Dec. 1981	Model, electron beam exposure and development	
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Apr. 1981	Monitor, application	32260A
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Aug. 1981	MOSFET, power	HPWR-6501
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Apr. 1981	Standard product cost system	32260A
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Mar. 1981	Stress compensated crystal cut	
June 1981	Structured design, VLSI	
Dec. 1981	Surface-acoustic-wave devices	
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Mar. 1981	Temperature, turnover	
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Dec. 1981	Transducer, pressure		Mar. 1981	Virtual terminals	2626A
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Aug. 1981	Transients, ac power line		July 1981	Voltage D-to-A converter	3497A,44429A
Sept. 1981	Transition time, variable	8161A	Aug. 1981	Voltage regulation, sine-wave	65000A
June 1981	Transistor characterization program				
July 1981	Tree switch	3497A,44421A			
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U					
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Mar. 1981	User interface design	2626A	Mar. 1981	Windows, CRT terminal	2626A
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Jan. 1981	Vector-scan graphics	9111T,1350S	Apr. 1981	Work order control system	32260A
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X					
Y					
			Nov. 1981	Y-axis arm	7580A

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HP-85A	Personal Computer	July 1981	9872B	Graphics Plotter	Nov. 1981
HP 1000	Computer	July 1981	9915A	Modular Computer	July 1981
HEDS-1000	High-Resolution Reflectance Sensor	Jan. 1981	10023A	Temperature Probe	Mar. 1981
1350S	Display System	Jan. 1981	10811A/B	Crystal Oscillator	Mar. 1981
2626A	Display Station	Mar. 1981	14360A	CO ₂ Sensor	Sept. 1981
HEDS-3000	Digital Bar Code Wand	Jan. 1981	14361A	Airway Adaptor	Sept. 1981
3054A	Automatic Data Acquisition/Control System	July 1981	16095A	Probe Test Fixture	Sept. 1981
3054C	Data Acquisition/Control System	July 1981	16096A	Test Fixtures	Sept. 1981
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3456A	Digital Voltmeter	Apr. 1981	44422A	20-Channel Thermocouple Acquisition	July 1981
3497A	Data Acquisition/Control Unit	July 1981	44425A	16-Channel Isolated Digital Input	July 1981
3498A	Extender	July 1981	44426A	100-kHz Reciprocal Counter	July 1981
4192A	LF Impedance Analyzer	Sept. 1981	44427A/B	10-Channel Strain Gauge/Bridge Assembly	July 1981
4700A	PageWriter Cardiograph	Oct. 1981	44428A	16-Channel Actuator Output	July 1981
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6012A	Power Supply	Aug. 1981	44430A	Dual-Output 0-20 mA or 4-20 mA D-to-A Converter	July 1981
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8161A	Pulse Generator	Sept. 1981	92080A	DATA CAP/1000	Jan. 1981

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- A Portable Computer for Field, Office, or Bench Applications, Donald E. Morris, Anthony S. Ridolfo, and Donald L. Morris
 A Telephone Interface for HP-IL Controllers, Sidnee Snell and Brian G. Spreadbury
 HP-IL and the HP-75 Portable Computer, Dennis C. York
 High-Capability Electronics Systems for a Compact, Battery-Operated Computer, Elizabeth Brooks, Robert J. Livengood, Rex C. Smith, and Timothy F. Myers
 Handpulled Magnetic Card, Mass Storage System for a Portable Computer, Kenneth R. Hoecker, James R. Schwartz, Francis A. Young, and Dean R. Johnson
 The HP-75 Production Card Recorder, David B. Patton
 Integration of the HP-75's Handpulled Card Reader Electronics in CMOS, Thomas J. Arnold and Billy E. Thayer
 A New Family of Pulse and Pulse/Function Generators, Michael Fleischer, Helmut Rossner, and Uwe Neumann
 Designing Bipolar Integrated Circuits for a Pulse/Function Generator Family, Christian Hentschel, Adolf Leiter, Stephan Traub, Horst Schweikardt, and Volker Eberle

July 1983

- A High-Speed System for AC Parametric Digital Hardware Analysis, Andreas Wilbs and Klaus-Peter Behrens
 A High-Speed Data Generator for Digital Testing, Ulrich Hübner, Werner Berkel, Heinz Nüsse, and Josef Becker
 High-Speed Data Analyzer Tests Threshold and Timing Parameters, Dieter Kible, Bernhard Roth, Martin Dietze, and Ulrich Schöttmer
 Data Analyzer Software/Firmware Design, Roberto Mottola and Eckhard Paul
 Power Supplies for the Stimulus/Response System, Ulrich Otto and Horst Link
 New Multi-Frequency LCZ Meters Offer Higher-Speed Impedance Measurements, Tomio Wakasugi, Takeshi Kyo, and Toshio Tamamura

August 1983

- VLSI Technology Packs 32-Bit Computer System into a Small Package, Joseph W. Beyers, Eugene R. Zeller, and S. Dana Seccombe
 An 18-MHz, 32-Bit VLSI Microprocessor, Kevin P. Burkhart, Mark A. Forsyth, Mark E. Hammer, and Darius F. Tanksalvala

Instruction Set for a Single-Chip 32-Bit Processor, James G. Fiasconaro
 VLSI I/O Processor for a 32-Bit Computer System, Fred J. Gross, William S. Jaffe, and Donald R. Weiss
 High-Performance VLSI Memory System, Clifford G. Lob, Mark J. Reed, Joseph P. Fucetola, and Mark A. Ludwig
 18-MHz Clock Distribution System, Clifford G. Lob and Alexander O. Elkins
 128K-Bit NMOS Dynamic RAM with Redundancy, John K. Wheeler, John R. Spencer, Dale R. Beucler, and Charlie G. Kohlhardt
 Finstrate: A New Concept in VLSI Packaging, Arun K. Malhotra, Glen E. Leinbach, Jeffery J. Straw, and Guy R. Wagner
 NMOS-III Process Technology, James M. Mikkelsen, Fung-Sun Fei, Arun K. Malhotra, and S. Dana Seccombe
 Two-Layer Refractory Metal IC Process, James P. Roland, Norman E. Hendrickson, Daniel D. Kessler, Donald E. Novy, Jr., and David W. Quint
 NMOS-III Photolithography, Howard E. Abraham, Keith G. Bartlett, Gary L. Hillis, Mark Stolz, and Martin S. Wilson

September 1983

A Color Presentation Graphics Workstation, Sharon O. Mead, William R. Taylor, Kenneth A. Mintz, and Catherine M. Potter
 Designing Software for High-Performance Graphics, Robert R. Burns and Dale A. Luck
 Logic Design for a Graphics Subsystem, Craig W. Diserens, Curtis L. Dowdy, and William R. Taylor
 A High-Resolution Color Monitor, Mark Hanlon, Geoffrey G. Moyer, and Paul G. Winninghoff
 The Graphics Workstation as an Extensible Computer Terminal, Edward Tang, Otakar Blazek, Thomas K. Landgraf, Paula H. Ng, and Stephen P. Pacheco
 A Computer-Aided Test and Tracking System, Michael R. Perkins, Susan Snitzer, and Charles W. Andrews
 Product Design of a Friendly Color Graphics Workstation, Dennis C. Thompson, Kenneth D. Boetzer, Mark A. Della Bona, and Badir M. Mousa
 AUTO PLOT/2700: A Single Approach to Custom Chart Generation, Stanley A. Balazer and John M. Perry
 PAINTBRUSH/2700: A General-Purpose Picture Creator, John R. Alburger, Jim L. Davis, Diane A. Rodriguez, and Barbara A. Stanley

October 1983

Ultrasound Imaging: An Overview, H. Edward Karrer and Arthur

M. Dickey
 History of HP's Ultrasound System, John T. Hart
 An Ultrasound Imaging System, Lawrence W. Banks
 Quantitative Analysis for Ultrasound Imaging, Rachel M. Kinicki
 A Physician's View of Echocardiographic Imaging, Richard L. Popp, M.D.
 An Acoustic Transducer Array for Medical Imaging—Part I, John Larson, III
 An Acoustic Transducer Array for Medical Imaging—Part II, David G. Miller
 Transducer Test System Design, George A. Fisher
 Radiated Power Characteristics of Diagnostic Ultrasound Transducers, Thomas L. Szabo and Gary A. Seavey
 A Scan Conversion Algorithm for Displaying Ultrasound Images, Steven C. Leavitt, Barry F. Hunt, and Hugh C. Larsen
 Ultrasound Image Quality, Richard A. Snyder and Richard J. Conrad
 Coherent Speckle in Ultrasound Images, Paul A. Magnin

November 1983

Device-Independent Software for Business Graphics, Yvonne Temple
 A Decision Support Chartmaker, Janet Elich Morris and Richard J. Simms, Jr.
 An Easy-to-Use Chartmaker, Martha Seaver, Robert W. Dea, and Richard J. Simms, Jr.
 Convenient Creation and Manipulation of Presentation Aids, Chayaboon Purnaveja and Janet Swift
 Graphics Capabilities on a Laser Printer, Tamara C. Baker, William J. Toms, James C. Bratnober, and Gerald T. Wade
 Special Report: The Center for Integrated Systems, Frederick H. Gardner

December 1983

Control Hardware for an Ultrasound Imaging System, Richard H. Jundanian, Janet R. Accettura, and John N. Dukes
 Ultrasound System Software, Joseph M. Luszcz, William A. Koppes, David C. Hempstead, and Robert J. Kunz
 Electronic Scanner for a Phased-Array Ultrasound Transducer, Ronald D. Gatzke, James T. Fearnside, and Sydney M. Karp
 A Mixing Scheme to Focus a Transducer Array Dynamically, Robert N. McKnight
 Display System for Ultrasound Images, Raymond G. O'Connell, James R. Mniece, and Alwyn P. D'Sa
 Fused Silica Capillary Columns for Gas Chromatography, Paul A. Larson, Bruce L. Ryder, and Thomas J. Stark

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Subject	Month	C		
A		Calculator, handheld, computer science	May	Color graphics
Acoustic imaging	Oct.	Calculator, handheld, scientific	May	Color palettes
Acoustic lens	Oct.	Calibration, electronic	May	Columns, fused silica capillary
A-to-D interface, card reader	June	Cardiac analysis, ultrasound	Jan.	Comparator, LCZ measurement
Autopeaking	May	Card reader, handpulled	Jan.	Compatibility, system testing
		Card recorder, production	Oct.	Compensation, laser measurements
B		Cassette drive, HP-IL	June	Compilers, high-level languages, logic development
Bank switching, memory	Dec.	Center for Integrated Systems	June	Complex function calculations, handheld calculator
Bit manipulation, handheld calculator	May	Chart files	May	Complex matrix calculations, handheld calculator
Booster integrated circuit	June	Chartmaker software packages	Nov.	Component testing
Bresenham algorithm	June	Chromatograph, gas	Nov.	Computer, portable
B-tree	Nov.	Chromatograph columns	Nov.	Contacts, external, VLSI
Bt-tree	Nov.	Clock, IC, 18-MHz	Jan.	Controller, memory, VLSI
Bucket Brigade	Feb.	Clock, IC, 18-MHz	Dec.	Controller, ultrasound system
Business graphics software	Feb.	CMOS IC, analog plus digital circuits	Aug.	CPU, 32-bit, VLSI
Bus, internal, HP-IB based design	Nov.	CMOS IC, card reader	Aug.	
Bus, memory processor	Nov.	CMOS IC, HP-IL interface	June	D
	Dec.	CMOSC process	June	Data acquisition/control, HP-IL
	Aug.	Code, MFM	Jan.	Data bases, HPMail
		Code, three-level, HP-IL	June	Data logging
			Jan.	

Register map, HP-IL interface IC Jan.
 Relative error, complex functions May
 Restriction, DSG/3000 Nov.
 ROM/RAM intrinsics strategy Sept.

S

Safety, ultrasound intensity levels Oct.
 Sample point, programmable July
 Scanner, ultrasound system Dec.
 Self-describing (SD) files Nov.
 Servo, velocity control May
 Signal generator, synthesized, 2-26.5 GHz May
 Sine shaper (Booster IC) June
 Slope generator (Snake IC) June
 Snake integrated circuit June
 Software analyzer subsystem Mar.
 Software, data acquisition/control Feb.
 Software, performance overview Mar.
 Software, ultrasound system Dec.
 Sorting, DSG/3000 Nov.
 Speckle, coherent, ultrasound image Oct.
 Stanford University, Center for Integrated Systems Nov.
 State analysis subsystem Mar.
 State diagrams, HP-IL Jan.
 Step-recovery diode bias May
 Storage cell, VLSI RAM Aug.
 Substrate, multilayer Aug.
 Synthesized signal generator, 2-26.5 GHz May

T

Tablet, graphics Sept./Nov.
 Task management system Dec.
 Terminal, color graphics Sept.
 Terminal software, logic development system Mar.
 Testing, automated, VLSI parameter July/Aug.
 Testing, on-chip capability Aug.
 TGC (time gain compensation) Oct./Dec.
 32-bit computer system Aug.
 Timing analyzer July
 Timing analyzer subsystem Mar.
 Timing chip (Rate IC) June
 TM/frame card Dec.
 Transducer design, phased-array Oct.
 Transducer, ultrasound Oct./Dec.
 Transformation, DSG/3000 Nov.
 Transformation matrices, HPDRAW Nov.
 Transport system, electronic mail Feb.
 Transport mechanism, cassette drive May
 Triggering, data generator/analyzer July
 Tri-state pod July
 Trucks, master and slave Feb.
 TSAM (HPToolset file access method) Feb.
 Tungsten, IC metal process Aug.
 Tuning, automatic, YIG-tuned multiplier May
 Two-layer resist process Aug.

U

Ultrasound intensity, definitions and measurement Oct.
 Ultrasound, radiated power Oct.
 Ultrasound system, medical Oct./Dec.
 Ultrasound transducer, fabrication Oct.
 University research, industry support Nov.

V

Valve, flow control, GC Jan.
 VCR, ultrasound system Oct./Dec.
 Vector list Sept.
 Vector ratio detector July
 Vector-to-raster conversion Nov.
 Video processing Dec.
 Video recording, ultrasound images Dec.
 VLSI process, NMOS-III Aug.
 Voltage generation, analog July

W

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 Workstation, color graphics Sept.
 Workstation, design Mar.

Y

Yield improvement, VLSI Aug.
 YIG-tuned multiplier, 2-26.5 GHz May

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HP-11C	Calculator	Jan.	10772A	Turning Mirror	Apr.
HP-15C	Scientific Programmable Calculator	May	10773A	Flatness Mirror	Apr.
HP-16C	Programmable Calculator	May	10774A/75A	Straightness Reflector	Apr.
HP-41	Handheld Computer	Feb.	10776A	Straightness Accessory Kit	Apr.
HP-75	Portable Computer	June	10777A	Optical Square	Apr.
HP 9000	Computer	Aug.	10784A	Base	Apr.
346B	Noise Source	Apr.	10785A	Post and Height Adjuster	Apr.
2700	Color Graphics Workstation	Sept.	11726A	Service Support Kit	May
3056DL	Data Logging System	Feb.	13273T	Data Tablet	Sept.
3421A	Data Acquisition/Control Unit	Feb.	16064A	Comparator/Handler Interface	July
3468A	Multimeter	Feb.	19091	Fused Silica Capillary Columns	Dec.
3478A	Multimeter	Feb.	19306A/B/C	Electronic Flow Controller/ Pressure Regulator	Jan.
4145A	Semiconductor Parameter Analyzer	Apr.	21200A	2.5-MHz Transducer	Oct.
4276A	LCZ Meter	July	21205A	3.5-MHz Transducer	Oct.
4277A	LCZ Meter	July	21206A	3.5-MHz Transducer	Oct.
5508A	Measurement Display	Apr.	21210A	5.0-MHz Transducer	Oct.
5518A	Laser Head	Apr.	21211A	5.0-MHz Transducer	Oct.
5528A	Laser Measurement System	Apr.	32108A	HPDRAW	Nov.
5790A	Gas Chromatograph	Jan.	32109A	HPEASYCHART	Nov.
5880A	Gas Chromatograph	Jan.	32110A	Business Graphics Package	Nov.
8111A	Pulse/Function Generator	June	32250A	DSG/3000	Nov.
8112A	Pulse Generator	June	32350A	HPToolset	Feb.
8116A	Pulse/Function Generator	June	36570A	HPMAIL	Feb.
8180A	Data Generator	July	36583	2680A Graphics Package	Nov.
8181A	Extender	July	44468A	Data Acquisition/Control Package ROM	Feb.
8182A	Data Analyzer	July	55280A	Linear Measurement Kit	Apr.
8673A	Synthesized Signal Generator	May	55288A	Dimensional Metrology Analysis System	Apr.
8970A	Noise Figure Meter	Apr.	64100A	Development Station	Mar.
10751A	Air Sensor	Apr.	64110A	Development Station	Mar.
10752A	Material Temperature Sensor	Apr.	64155A	Memory Controller	Mar.
10753A	Tripod	Apr.	64271A	Emulation Controller	Mar.
10766A	Linear Interferometer	Apr.	64302A	48-Channel Analyzer	Mar.
10770A	Angular Interferometer	Apr.			

64600S	Timing Analyzer	Mar.	82160A	HP-IL Interface Module	Jan.
64620S	Logic State/Software Analyzer	Mar.	82161A	Digital Cassette Drive	May/June
77020A	Ultrasound Imaging System	Oct./Dec.	82166A	HP-IL Converter	Jan.
77200A	Scanner	Oct./Dec.	82166C	HP-IL Interface Kit	Jan.
77400A	Display Subsystem	Oct./Dec.	82168A	Acoustic Coupler	June
77900A	Controller	Oct./Dec.	92233B	Book	July/Nov.

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Abraham, Howard E.	Aug.	Fucetola, Joseph P.	Aug.	Luszcz, Joseph M.	Dec.	Seavey, Gary A.	Oct.
Accettura, Janet R.	Dec.	Fulghum, Kipper K.	Mar.	Lutnesky, Gary G.	June	Seccombe, S. Dana	Aug.
Alburger, John R.	Sept.	Fuller, Ian J.	Feb.			Shelley, David J.	May
Andrews, Charles W.	Sept.			Magnin, Paul A.	Oct.	Shenoy, Anil K.	Feb.
Arnold, Thomas J.	June	Gardner, Deane A.	Apr.	Malhotra, Arun K.	Aug.	Simms, Richard J., Jr.	Nov.
Augenblick, Kurt B.	Jan.	Gardner, Frederick H.	Nov.	Mason, Lee S.	June	Slutz, Robert	Aug.
		Gatzke, Ronald D.	Dec.	May, Gregory J.	June	Smith, Douglas H.	Jan.
Baker, Tamara C.	Nov.	Gilson, Charles W.	May	McClellan, Paul J.	May	Smith, Jeffrey H.	Mar.
Balazer, Stanley A.	Sept.	Glitzke, Carlton E.	Mar.	McKnight, Robert N.	Dec.	Smith, Martin W.	Mar.
Baldwin, Richard R.	Apr.	Goodwin, Bryce S., Jr.	Mar.	Mead, Sharon O.	Sept.	Smith, Rex C.	June
Bame, Paul D.	Mar.	Gross, Fred J.	Aug.	Mikkelson, James M.	Aug.	Snell, Sidnee	June
Banks, Lawrence W.	Oct.	Grote, Richard H.	Apr.	Miller, David G.	Oct.	Snitzer, Susan	Sept.
Bartlett, Keith G.	Aug.	Hackleman, David E.	Jan.	Mintz, Kenneth A.	Sept.	Snyder, Richard A.	Oct.
Becker, Josef	July	Hall, Lawrence A.	Aug.	Mniece, James R.	Dec.	Spencer, John R.	Aug.
Behrens, Klaus-Peter	July	Hammer, Mark E.	Aug.	Morris, Donald E.	June	Spreadbury, Brian G.	June
Berkel, Werner	July	Hanlon, Mark	Sept.	Morris, Donald L.	June	Stanley, Barbara A.	Sept.
Beucler, Dale R.	Aug.	Hanna, John E.	Mar.	Morris, Janet Elich	Nov.	Stark, Lawrence A.	May
Beyers, Joseph W.	Aug.	Harper, Steven L.	Jan.	Mottola, Roberto	July	Stark, Thomas J.	Dec.
Bircher, Carolyn M.	Feb.	Hart, John T.	Oct.	Mousa, Badir M.	Sept.	Steinmetz, Charles R.	Apr.
Blazek, Otakar	Sept.	Heinz, William W.	May	Moyer, Geoffrey G.	Sept.	Stolz, Mark	Aug.
Boetzer, Kenneth D.	Sept.	Hempstead, David C.	Dec.	Murphy, Andrew J.	Jan.	Straw, Jeffery J.	Aug.
Bowlin, Stan W.	Mar.	Hendrickson, Norman E.	Aug.	Myers, Timothy F.	June	Swain, Howard L.	Apr.
Bratnover, James C.	Nov.	Hentschel, Christian	June	Neuder, David L.	Mar.	Swift, Janet	Nov.
Brooks, Elizabeth	June	Hillis, Gary L.	Aug.	Neumann, Uwe	June	Szabo, Thomas L.	Oct.
Bunting, Harry	Apr.	Hoecker, Kenneth R.	June	Ng, Paula H.	Sept.		
Burkhart, Kevin P.	Aug.	Hübner, Ulrich	July	Novy, Donald E., Jr.	Aug.	Tamamura, Toshio	July
Burns, Christopher	Apr.	Hunt, Barry F.	Oct.	Nüssele, Heinz	July	Tang, Edward	Sept.
Burns, Robert R.	Sept.			Nygaard, Richard A., Jr.	Mar.	Tanksalvala, Darius F.	Aug.
Buskirk, William A.	May	Ikemoto, Jin-ichi	Apr.			Tanzini, Joseph P.	May
				O'Connell, Raymond G.	Dec.	Taylor, William R.	Sept.
Casale, Michael A.	Jan.	Jaffe, William S.	Aug.	Otto, Ulrich	July	Temple, Yvonne	Nov.
Chambers, Donald R.	Apr.	Johnson, Dean R.	June			Terrell, William C.	Aug.
Conrad, Richard J.	Oct.	Johnson, Horace R., Jr.	Jan.	Pacheco, Stephen P.	Sept.	Tesler, Joel D.	Mar.
Cox, Rick M.	Apr.	Johnson, Norman L.	Jan.	Palmer, Frederick J.	Mar.	Thayer, Billy E.	June
Cusack, J. Edwin	Jan.	Jundanian, Richard H.	Dec.	Patton, David B.	June	Thompson, Dennis C.	Sept.
				Paul, Eckhard	July	Tillman, Robert L.	Jan.
Davis, Jim L.	Sept.	Karp, Sydney M.	Dec.	Perkins, Michael R.	Sept.	Toms, William J.	Nov.
Davis, Michael W.	Mar.	Karrer, H. Edward	Oct.	Perry, John M.	Sept.	Traub, Stephan	June
Dea, Robert W.	Nov.	Kessler, Daniel D.	Aug.	Popp, Richard L., M.D.	Oct.	Trautman, Jack P.	Feb.
DeBoer, Douglas F.	Aug.	Kible, Dieter	July	Potter, Catherine M.	Sept.	Truhe, Larry E.	Apr.
Della Bona, Mark A.	Sept.	Kinicki, Rachel M.	Oct.	Purnaveja, Chayaboon	Nov.		
DesJardin, Lawrence A.	Feb.	Kohlhardt, Charlie G.	Aug.			Vietor, John J.	Jan.
DeVilbiss, Alan J.	Mar.	Koppes, William A.	Dec.	Quenelle, Robert C.	Apr.		
Dickey, Arthur M.	Oct.	Kunz, Robert J.	Dec.	Quick, Roger D.	Jan.	Wade, Gerald T.	Nov.
Dietze, Martin	July	Kyo, Takeshi	July	Quint, David W.	Aug.	Wagner, Guy R.	Aug.
Diserens, Craig W.	Sept.					Wakasugi, Tomio	July
Dowdy, Curtis L.	Sept.	Lage, Craig S.	Jan.	Reed, Mark J.	Aug.	Weiss, Donald R.	Aug.
Dryden, Paul C.	Jan.	LaMaster, Frederick P.	Aug.	Ressmeyer, James J.	Feb.	Wheeler, John K.	Aug.
D'Sa, Alwyn P.	Dec.	Landgraf, Thomas K.	Sept.	Richey, David B.	Mar.	Wickliff, Robert G., Jr.	Mar.
Dukes, John N.	Dec.	Landsness, Carl J.	Jan.	Ridolfo, Anthony S.	June	Wilbs, Andreas	July
		Larsen, Hugh C.	Oct.	Rodriguez, Diane A.	Sept.	Williams, Steven R.	Mar.
Eberle, Volker	June	Larson, John D., III	Oct.	Roland, James P.	Aug.	Wilson, Martin S.	Aug.
Elkins, Alexander O.	Aug.	Larson, Paul A.	Dec.	Romano, John P.	Mar.	Winninghoff, Paul G.	Sept.
Evvett, Eric A.	May	Larson, Ronald K.	May	Rossner, Helmut	June	Wolpert, David L.	Feb.
		Leavitt, Steven C.	Oct.	Roth, Bernhard	July	Woodruff, David C.	Apr.
		Leinbach, Glen E.	Aug.	Rowland, Fred W.	Jan.	Wuerz, Lawrence J.	Apr.
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Fiasconaro, James G.	Aug.	Link, Horst	July	Scharrer, John A.	Mar.	Young, Francis A.	June
Fisher, George A.	Oct.	Livengood, Robert J.	June	Schöttmer, Ulrich	July		
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 Disc Drive Error Detection and Correction Using VLSI, *Peter M. Galen*
 Head Positioning in a Large Disc Drive, *R. Frank Bell, Eric W. Johnson, R. Keith Whitaker, and Roger V. Wilcox*
 Mechanical Design of a Large Disc Drive, *James H. Smith*
 High-Capacity Disc Drive Servomechanism Design, *Stephen A. Edwards*
 Speech Output for HP Series 80 Personal Computers, *Loren M. Koehler and Timothy C. Mackey*
 Speech Output for HP 1000 and HP 3000 Computer Systems, *Elizabeth R. Hueftle and Jeffrey R. Murphy*

February 1984

- A New Series of High-Performance Real-Time Computers, *Marlu E. Allan, Nancy Schoendorf, Craig B. Chatterton, and Don M. Cross*
 An Adaptable 1-MIPS Real-Time Computer, *David A. Fotland, Lee S. Moncton, and Leslie E. Neft*
 Designing a Low-Cost 3-MIPS Computer, *Donald A. Williamson, Steven C. Steps, and Bruce A. Thompson*
 Floating-Point Chip Set Speeds Real-Time Computer Operation, *William H. McAllister and John R. Carlson*
 Comprehensive, Friendly Diagnostics Aid A-Series Troubleshooting, *Michael T. Winters and John F. Shelton*
 New Real-Time Executive Supports Large Programs and Multiple Users, *Douglas O. Hartman, Steven R. Kusmer, Elizabeth A. Clark, Douglas V. Larson, and Billy Chu*
 New Software Increases Capabilities of Logic Timing Analyzer, *David L. Neuder*

March 1984

- A New 32-Bit VLSI Computer Family: Part II—Software, *Michael V. Hetrick and Michael L. Kolesar*
 HP-UX: Implementation of UNIX on the HP 9000 Series 500 Computer System, *Scott W. Y. Wang and Jeff B. Lindberg*
 An Interactive Run-Time Compiler for Enhanced BASIC Language Performance, *David M. Landers, Timothy W. Tillson, Jack D. Cooley, and Richard R. Rupp*
 A Local Area Network for the HP 9000 Series 500 Computers, *John J. Balza, H. Michael Wenzel, and James L. Willits*
 Data Communications for a 32-Bit Computer Workstation, *Vincent C. Jones*
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 Identification and Quantitation of PTH Amino Acids, *Bernd Glatz*

- and *Rainer Schuster*
 Design of the HP 1090 Control System, *Herbert Wiederoder, Roland Martin, and Juergen Ziegler*
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 Automatic Liquid Chromatograph Injection and Sampling, *Wolfgang Kretz and Hans-Georg Härtl*
 Mobile Phase Preheater Ensures Precise Control of LC Column Temperature, *Helge Schrenker*
 A Low-Cost LC Filterphotometric Detection System, *Axel Wiese, Bernhard Dehmer, Thomas Dörner, and Günter Höschele*
 A High-Speed Spectrophotometric LC Detector, *Joachim Leyrer, Günter E. Nill, Detlev Hadbawnik, Günter Höschele, and Joachim Dieckmann*
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May 1984

- Putting a 32-Bit Computer System in a Desktop Workstation, *Jack L. Burkman, Robert L. Brooks, Ronald P. Dean, Paul F. Febvre, and Michael K. Bowen*
 Color Graphics Display for an Engineering Workstation, *Daniel G. Schmidt*
 BASIC Language Graphics Subsystem for a 32-Bit Workstation, *Kenneth W. Lewis, Alan D. Ward, and Xuan Bui*
 I/O Features of Model 520 BASIC, *Gary D. Fritz and Michael L. Kolesar*
 A Compact, Reliable Power Supply for an Advanced Desktop Computer, *Jack L. Burkman, Howell R. Felsenthal, Thomas O. Meyer, and Warren C. Pratt*
 Compact 32-Bit System Processing Units, *Kevin W. Allen, Paul C. Christofanelli, Robert E. Kuseski, Ronald D. Larson, David Maitland, and Larry J. Thayer*

June 1984

- A Parametric Test System for Accurate Measurement of Wafer-Stage ICs, *Yoh Narimatsu and Keiki Kanafuji*
 Powerful Test System Software Provides Extensive Parametric Measurement Capability, *Takuo Banno*
 A High-Speed 1-MHz Capacitance/Conductance Meter for Measuring Semiconductor Parameters, *Tomoyuki Akiyama and Kenzo Ishiguro*
 An Electronic Tool for Analyzing Software Performance, *Gail E. Hamilton, Andrew J. Blasciak, Joseph A. Hawk, and Brett K. Carver*
 Counter Module Simplifies Measurements on Complex Waveforms, *Donald J. Smith, Johnnie L. Hancock, and Thomas K. Bohley*

July 1984

- A New Handheld Computer for Technical Professionals, *Susan L. Wechsler*
 Soft Configuration Enhances Flexibility of Handheld Computer Memory, *Nathan Meyers*
 Custom CMOS Architecture for a Handheld Computer, *James P. Dickie*
 Packaging the HP-71B Handheld Computer, *Thomas B. Lindberg*
 Module Adds Curve-Fitting and Optimization Routines to the H71B, *Stanley M. Blascow, Jr. and James A. Donnelly*
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Laurence W. Grodd and Charles M. Patton
 Plug-In Module Adds FORTH Language and Assembler to a Hand-
 held Computer, Robert M. Miller

August 1984

Touchscreen Personal Computer Offers Ease of Use and Flexibility,
 Srinivas Sukumar
 Operating System and Firmware of the HP 150 Personal Computer,
 Laurie E. Pollero Wood and Charles H. Whelan
 The HP 150 Touchscreen: An Interactive User Input Device for a
 Personal Computer, Peter R. Straton, Scott R. McClelland, and
 Thomas E. Kilbourn
 Applications Software for the Touchscreen Personal Computer,
 Peter S. Showman, Karl W. Pettis, Karlie J. Arkin, Jeffrey A. Spoel-
 stra, John Price, W. Bruce Culbertson, and Robert D. Shurtleff, Jr.
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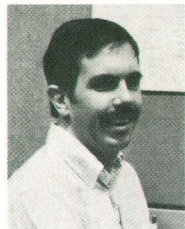
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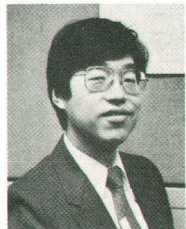
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John R. Sontag



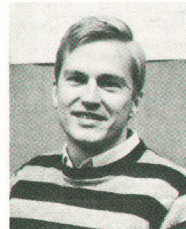
A native of Pittsburgh, Pennsylvania, John Sontag attended Carnegie-Mellon University, receiving his BSEE degree in 1979. After coming to HP's Data Systems Division the same year, he contributed to the development of RTE drivers for HP 1000 Computers and to the HP Micro/1000 Computer. He later worked on HP-UX and is now the HP-UX I/O project manager. John and his wife, who is also an HP engineer, live in Santa Clara, California and have one son. He's active in his church, leading a youth group and a marriage preparation program. During his leisure time he enjoys sailing, skiing, volleyball, and taking his son to the park.

Gary Shiu-Fan Ho



Born in Hong Kong, Gary Ho studied computer science and electrical engineering at the University of California at Berkeley. He earned his BS degree in 1975, his MS degree in 1977, and his PhD degree in 1979 and worked at Bell Laboratories before coming to HP in 1982. He has held several engineering and management positions and is currently section manager for HP-UX for HP Precision Architecture. He's named as inventor on two patents related to multiprocessor virtual memory management and distributed update verification. Gary and his wife live in San Jose, California and have one child.

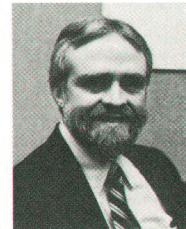
Steven R. Kusmer



With HP since 1979, Steve Kusmer is the project manager for HP-UX operating systems for HP 9000 Series 800 Computers. Before working on HP-UX, he contributed to the development of hardware and operating systems for HP 1000 Computers. An alumnus of Cor-

nell University, he holds a 1979 BSEE degree. He's a member of the ACM and coauthor of two papers, one a 1984 HP Journal article on RTE system software for HP 1000 Computers. Steve is married and lives in San Francisco. He holds a black belt in Korean karate and likes running and backpacking.

Frederick W. Clegg



With HP since 1975, Fred Clegg is one of the R&D section managers responsible for software development for HP 9000 Series 800 Computers. He has held management and engineering positions for several computer development efforts, including the HP 300 and HP 9000 Series 500 Computers. Born in Atlanta, Georgia, he holds a BS degree in engineering science from Oakland University (1965) and MS and PhD degrees in electrical engineering from Stanford University (1967 and 1970). He was an assistant professor in electrical engineering at Santa Clara University before coming to HP. He's the author or coauthor of 11 papers and other material related to fault-tolerant computing, user interfaces, and the implementation of the UNIX operating system on HP computers. Fred and his wife and daughter live in Cupertino, California. An avid pilot, he moonlights as a certified flight instructor. He's also a skier and amateur radio operator (W6IYO).

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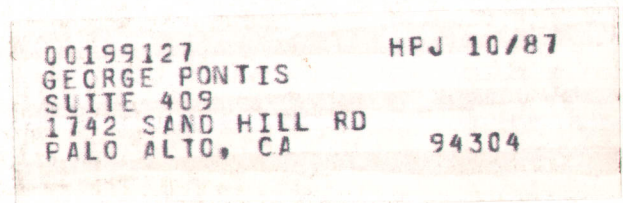
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ming the compliance voltage of the tester's parametric measurement units (PMU). Since R_s and the forced current are known, the actual output level can easily be calculated with sufficient accuracy. It is:

$$V_{out} = V_{measure} - V_{drop} = V_{measure} - R_s I_f \quad (16)$$

For best results, 0.1% resistors are recommended for R_s .

Summary

In the HP 82000 IC Evaluation System, the resistive divider method offers advantages in operating speed and

measurement accuracy. The method has its restrictions and does not ensure testability of every DUT.

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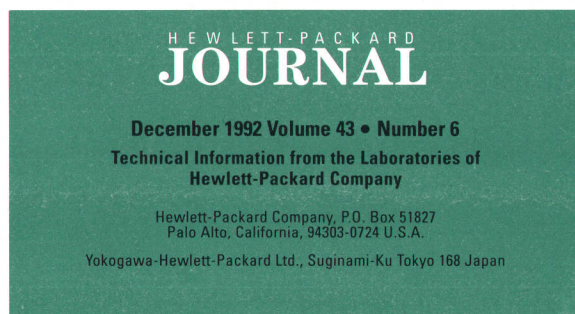
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Beck, Patricia A.	Feb.	Chau, Samuel H.	June	Engel, Glenn R.	Dec.
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Goodnow, John W.	June	Luszcz, Joseph M.	Aug.	Schlater, Rodney T.	Oct.
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