Electronic Design 1980 Index of Articles

Analog Circuits

The 1980 index of articles is divided into 15 major subject categories:

Analog Circuits
Circuit Design
Communications
Components
Computer Boards
Computer Systems
Fiber Optics
Instruments
Management & Careers
Memories
Microprocessors & Logic Chips
Packaging & Production
Peripherals
Power
Software

Types of articles are described by codes:

D:	Design
N&T:	News & Technology
IFD:	Ideas for Design
SR:	Special Report
PF:	Product Feature

Circuit Design

Communications

DEC introduces software for X.25 networks . . .N&T, Sept. 27, p. 38

Demodulator chip provides 88-dB s/n. . .PF, Aug. 2, p. 115

Demultiplexer holds down idle channel noise . . .PF, April 12, p. 184

Diagnostic trees simplify data-comm-network repair. . .D, Oct. 11, p. 159

Disk director automates transceiving on private-line communications network. . .PF, March 1, p. 130

Four registers of protocol chip ask very little help from CPU. . .N&T, March 15, p. 41

Full-duplex modem runs on phone-line power . . .PF, Oct. 11, p. 290

Hybrid amps deliver power, strength for mobile comm. . .PF, Jan. 18, p. 132

Hybrid receiver/amplifier simplifies data comm. . .PF, Feb. 15, p. 198

ICs ride the tidal wave of data comm, telecomm . . .SR, June 7, p. 109

Interface 80 gives designers, users the latest words on data comm. . .SR, March 1, p. 37

ISSCC: Telecomm LSI climbs in density, voltage. . .SR, Feb. 15, p. 57

Local-comm nets link office equipment. . .N&T, July 5, p. 35

Local-distribution components will stock the office of the future. . .N&T, April 26, p. 42

LSI chips move into cellular communications . . .N&T, July 5, p. 31

LSI devices decipher encryption problems. . . N&T, Oct. 25, p. 52

LSI synthesizer family brings low-cost versatility to rf comm. . .PF, Feb. 1, p. 102

Manchester coder/decoder operates in two modes. . .PF, Aug. 16, p. 208

Medium-haul modem transmits 9600 bits/s. . . PF, May 24, p. 168

Message for the 80s: Technologies mix to bind tele and data comm. . .SR, Jan.4, p. 86

μP-based devices simplify data-comm networks . . .N&T, June 7, p. 38

Modem-and-telephone-in-one simplifies data-comm setups. . .PF, April 12, p. 183

Modem performance comes in many packages . . .SR, April 12, p. 67

Multidrop data multiplexer works well beyond FDM-system rates. . .PF, April 12, p. 202

Multi-μPs untangle comm switching, but protocol snag remains. . .N&T, June 21, p. 33

Multiplexer system gets smarter. . .PF, Sept. 13, p. 153

Networks keep the data and words traveling. . . SR, April 12, p. 78

New challenge in component testing: Putting a codec through its paces. . .D, Feb. 1, p. 59

NMOS filter chip passes CMOS in power drain . . .N&T, Feb. 15, p. 19

One chip closes in on SLIC functions. . .D, Sept. 27, p. 85

One CMOS chip holds PCM codec and filters . . .N&T, Oct. 11, p. 31

Packet system puts local networks on cable TV . . .N&T, Oct. 11, p. 42

PC card universalizes modem interfacing. . . N&T, March 15, p. 36

Phone circuit sends speech together with 1200-baud data. . .N&T, July 5, p. 36

PPM receiver interfaces with a microprocessor . . .IFD, Sept. 1, p. 170

Programmable data-comm chip unloads CPUs by running synchronous line protocols. . .D, April 12, p. 99

Programmable signal-processor LSI rivals analog-circuit filters. . .D, Feb. 15, p. 137

Quadrature phase shifter improves modulation range of SSBM. . .IFD, Oct. 11, p. 214

Separate stations let 255 users share ZNET. . . PF, Sept.1, p. 82

Serial digital bus heads for industrial systems . . .D, Sept. 13, p. 137

Shared codecs: The quick, easy, and low-cost alternative to per-channel chips. . .D, April 12, p. 107

Signal processor fast enough to do real-time voice-band. . .D, Feb. 15, p. 86

Silence the Russian 'woodpecker' with a noise blanker having 80-dB dynamic range. . .IFD, March 15, p. 297

Stable ac-level detector monitors microwave radio-link pilot tones. . .IFD, May 10, p. 239

Synthesizer chip set permits any radio-channel spacings. . .PF, Jan. 18, p. 134

Systems of chips will serve the future of telecommunications. . .N&T, Oct. 11, p. 38

Team an array processor with a μP for super performance in data comm. . .D, April 12, p. 115

Three LSI circuits simplify digital-switching systems. . .D, Oct. 25, p. 163

Transistor generates vhf shot noise. . .IFD, May 10, p. 242

TV color-burst crystal generates clock and interrupt signals for μP. . .IFD, March 29, p. 115

Components

Add interdigit blanking to multiplexed plasma displays. . .IFD, Sept. 27, p. 80

Adhesive-free LCDs cost less. . .N&T, Aug. 16, p. 40

Aluminum electrolytic capacitors: low-cost but high-performance. . .PF, March 15, p. 339

Audio sockets reduce manufacturing costs. . . PF, Sept. 1, p. 90

Bar-graph chip lights LEDs in series; minimizes current drain for displays. . .IFD, Jan. 18, p. 116

BiMOS control chip extends battery life in camera's photoflash circuit. . .IFD, Feb. 15, p. 154

CCDs in optical touch panels deliver high resolution. . .D, Sept. 27, p. 139

Ceramic capacitors replace high-cost tantalums at high frequencies. . .N&T, March 1, p. 25

Chip components can be flow-soldered on both sides of a board to boost density . . .D, Jan. 18, p. 90

Circuit design improves trim factors of thick-film resistors. . .N&T, Feb. 1, p. 33

Color sensor chip frees camera from blooming. . .N&T, Jan. 18, p. 23

Connector terminates cables in just 30 s. . .PF, April 26, p. 120

Copper-based system lowers the cost of thick-film resistors. . .N&T, Nov. 22, p. 38

Damping helps step motors keep their grip and take advantage of hold torque. . .D, April 26, p. 199

Detector combines sensitivity, speed. . .PF, May 10, p. 326

Detector senses polarity difference between two bipolar signals. . .IFD, April 26, p. 216

Dielectric isolation boosts outputs of photovoltaic chips. . .N&T, Aug. 2, p. 28

Display assemblies interface easily. . .PF, May 10, p. 296

Display drivers combine ASCII decoder and 18-segment drive. . .PF, Feb. 15, p. 192

Driver/amp for MOSFETs does it all on one chip. . .PF, Feb. 15, p. 190

ECC: Fiber optics, tantalum caps, and plastic resistors share spotlight. . .SR, April 12, p. 47

Ersatz gold brings genuine benefits to capacitors, resistors. . .SR, Jan. 4, p. 92

External timing circuit salvages appliance motors. . .IFD, July 5, p. 134

Fast DMOS optocouplers beat SSRs in speed and reed relays in performance. . .N&T, March 29, p. 60

Flat-panel displays getting help from many technologies. . .N&T, March 29, p. 34

Focus on capacitors: Performance charges with improved dielectrics in small packages. . . SR, March 1, p. 119

Focus on pots and trimmers: It's survival of the fittest. . .SR, May 24, p. 125

Front-panel LED uses plastic lens to display two highly visible colors. . .PF, Jan. 18, p. 128

Glass-like metal alloy cuts transformer core losses radically. . .N&T, Feb. 1, p. 26

Hall-effect works in two-state switches. . .D, July 5, p. 125

Heaters warm LCDs in frigid environments. . .PF, Oct. 11, p. 310

High-efficiency LEDs deliver as much light as incandescents. . .PF, March 1, p. 142

IC pressure transducer—first to pack op amps. . .N&T, Sept. 27, p. 33

Inlay clad strip supersedes selective plating of keyswitch. . .N&T, Aug. 16, p. 37

Keyboard smartens up for process control. . .PF, Feb. 1, p. 111

Key-operated switch improves security. . .PF, Sept. 1, p. 216

Laser trimming shrinks Mylar capacitors . . .N&T, June 21, p. 36

LCD provides big display with low power. . .PF, June 7, p. 258

LCDs, touch switches team up in multimode display panel. . .N&T, April 12, p. 34

Lens cap eases T-1 LED mounting. . .PF, Sept. 1, p. 250

Low-battery threshold detector draws only 2 μA of standby current. . .IFD, Feb. 15, p. 156

Low-cost pressure sensors take up little space . . .PF, April 26, p. 111

Low-cost, single-chip sensors more than triple pressure range. . .PF, March 29, p. 132

Low-cost transducers give 0.25% linearity/hysteresis. . .PF, Jan. 4, p. 190

Low-power LCD drivers handle dot displays. . .PF, June 21, p. 170

Materials (gold, nongold): big issue in connectors. . .N&T, Sept. 27, p. 41

Membrane-based keyboard keeps life up, cost down. . .PF, Sept. 1, p. 211

Metal-film resistors bring improved tolerance, tempco to general use. . .PF, Jan. 18, p. 124

Metal-glass strips strengthen transformers. . . N&T, Jan. 18, p. 23

Computer Boards

Computer Systems

Modular μP-based system simplifies industrial control. . .N&T, Nov. 22, p. 40

MOTEL makes Motorola, Intel buses interchangeable. . .N&T, April 12, p. 23

NCC '80 covers computer, processing reliability. . .SR, May 10, p. 81

New architecture goes beyond array processors. . .N&T, Aug. 2, p. 25

Pattern processor packs hardware, software generators. . .N&T, Nov. 8, p. 36

Ready-made multiplexer simplifies multitasking. . .D, July 19, p. 153

Self-prompting computer is easy to use. . .PF, May 10, p. 103

64-k RAMs bring ½-Mbyte on board HP L Series computer. . .N&T, Oct. 25, p. 40

Standard and custom hardware expand interface options. . .D, May 10, p. 169

System employs multiple CPUs as masters or slaves. . .N&T, April 12, p. 23

System performance hinges on CPU architecture. . .SR, May 10, p. 115

The right bus evokes the system's best. . .SR, May 10, p. 125

32-bit minis go to gate-array logic and 64-kbit RAMs. . .N&T, Nov. 22, p. 39

32-bit supermini puts 3 processors to work. . . N&T, May 24, p. 34

UNIX with Workbench will service superminis . . .N&T, Nov. 8, p. 30

VERSAbus conquers 16-bit μPs and challenges 32-bitters. . .N&T, March 1, p. 28

Fiber Optics

Calculate performance into fiber-optic links . . .D, Aug. 16, p. 161

Choose detectors for their differences, to suit different fiber-optic systems. . .D, April 26, p. 165

Connector-emitter-detector package pushes coupling losses below 1 dB. . .N&T, April 12, p. 29

Connectors speed up terminations of fiber-optic cables with low loss. . .PF, April 12, p. 201

Double-window fiber handles both 850 and 1300 nm. . .PF, April 12, p. 188

Emitters and detectors—4 perspectives. . .SR, Jan. 18, p. 58

Emitters, detectors sport 10-in. fiber-optic pigtail. . .PF, April 26, p. 117

Fiber-optic buses will carry data fast and far . . .N&T, Oct. 25, p. 48

Fiber-optic links transmit power. . .N&T, April 12, p. 23

Fiber-optic semis carve out wider infrared territory. . .SR, Jan. 18, p. 52

Fiber optics debuts in telecomm, but lags in data comm. . .N&T, Sept. 1, p. 40

Hybrid optoreceiver gives broad bandwidth, low noise. . .PF, April 12, p. 185

Kevlar stretching gives fiber-optic cables more strength at reduced size. . .PF, Feb. 1, p. 101

LEDs or DLs: Which light source shines brightest in fiber-optic telecomm systems? . . .D, April 12, p. 131

Miniaturized, high-speed, EMI-proof optical links fill the bill in computer systems. . .D, March 1, p. 67

Optic connectors mate duplex cables. . .PF, Oct. 25, p. 209

Optimize optical modem cost/performance through emitter, detector, and fiber selection. . .D, April 12, p. 125

Pigtailed emitters, detectors cut optical connection costs. . .PF, Jan. 4, p. 200

Plastic housing cuts fiber-optic insertion losses. . .N&T, Dec. 6, p. 33

Put analog transmissions on a fiber-optic loop . . .D, Aug. 16, p. 171

Straight-pull tool breaks fibers better. . .PF, May 24, p. 140

Test results help match emitters to fiber-optic cables. . .N&T, Jan. 18, p. 34

Three technologies forge a better fiber-optic link. . .D, May 24, p. 65

Universal fiber-optic receiver-amp works over wide sensitivity range. . .N&T, Feb. 1, p. 23

Instruments

Analog scope gets smart—and gets on the GPIB, too. . .PF, March 29, p. 122

Analyzer + emulation = faster board testing . . .D, Oct. 11, p. 177

ATE brings speedy, complete testing via signature analysis to LSI-board production. . .D, Feb.1, p. 75

ATE packs new weapons as LSI invades components and boards. . .SR, Feb. 1, p. 41

ATE system finds dynamic faults in real time . . .N&T, June 21, p. 79

ATE tests more devices, functions, and nodes . . .N&T, July 19, p. 34

Audio-distortion analyzer works with IEEE-488 bus. . .PF, Nov. 8, p. 161

Automatic board testers check functions, shorts . . .N&T, Jan. 4, p. 21

Automatic test equipment attacks LSI problems. . .N&T, Oct. 11, p. 49

Automatic test system checks PC-board LSI devices at 5 MHz. . .PF, Jan. 4, p. 172

Automatic test systems grow with components and boards. . .SR, Oct. 11, p. 125

Automatic tester saves space. . .PF, May 24, p. 144

Board tester goes in-circuit or functional. . .PF, Nov. 8, p. 167

Capture fast waveforms accurately with a 2-channel programmable digitizer. . .D, Feb. 1, p. 50

Compact digital meter features BCD outputs . . .PF, April 26, p. 119

Computer program discloses the best board-test sequence. . .D, Oct. 11, p. 169

Computer-like design makes oscilloscope extremely versatile. . .N&T, Sept. 27, p. 36

Computers: Development system distributes emulation. . .PF, Dec. 6, p. 152

Controller offers the right touch for fast test and measurement. . .PF, Feb. 1, p. 120

Converter board joins linear tester. . .PF, Sept. 27, p. 188

Counter brings best resolution to one-shots, does math, and reads volts. . .D, April 26, p. 137

Counter/timer sets trigger levels by itself . . .N&T, Feb. 15, p. 20

Counter/timers raise handshake speed and add auto-triggering. . .PF, March 1, p. 138

DMM sets the pace in low-cost ATE. . .D, Sept. 1, p. 101

DMMs, switch elements improve wafer testing . . .N&T, March 29, p. 23

DPM keeps digits high, power low. . .PF, Sept. 13, p. 179

Development systems wrestle with 16-bit μPs and multiuser problems. . .N&T, April 26, p. 97

Differential 3½-digit module cuts DPM costs . . .N&T, Sept. 1, p. 88

Digital storage scope expands bandwidths, reduces display jitter. . .PF, April 12, p. 253

Digital voltmeter gets speedy, accurate results . . .D, June 7, p. 149

Digitizer turns scope into low-cost recorder . . .PF, Sept. 13, p. 185

Dual-channel electrometer/DMM measures ratios or differences. . .D, March 29, p. 67

Dual-clock analyzers—troubleshooters plus . . .N&T, Sept. 1, p. 86

European instruments tailor LSI to the task . . .N&T, Oct 11, p. 81

Field-service testers sharpen on-site skills . . .N&T, Oct. 11, p. 109

50-MHz portable oscilloscope gives 'brilliant' high-cost performance. . .PF, March 29, p. 124

First benchtop ADC tester will be a hard act to follow. . .PF, March 1, p. 140

Focus on microwave and rf instruments: High-quality readings come easy. . .PF, June 21, p. 141

Focus on oscilloscopes: Storage and bandwidth increase. . .PF, Sept. 1, p. 179

For complete μP design, logic analyzers finish what development systems start. . .D, March 29, p. 81

Frequency-response tester does it all. . .PF, July 5, p. 155

Function generators span wide range with sweeps. . .N&T, Oct. 11, p. 62

Glitch-stretcher probe resolves invisible pulses . . .IFD, Nov. 8, p. 158

GPIB controllers handle programmable supplies. . .N&T, Feb. 15, p.19

Hand-held DMM expands resolution to 4½ digits. . .PF, Nov. 8, p. 162

Hand-held multimeter ranges automatically . . .PF, June 7, p. 216

Higher math, automatic functions come easy to μP-based counters. . .N&T, April 26, p. 71

High-level language models ATE LSI. . .N&T, Oct. 25, p. 32

IC testers turn complex semis to good account . . .N&T, Oct. 11, p. 95

In-circuit emulators set breakpoints, coast to stop. . .PF, April 26, p. 113

In-circuit tester answers μP-board challenge. . . D, Nov. 8, p. 97

Instruments: LF analyzer measures impedance, gain. . .PF, Dec. 6, p. 137

Instrument to slash 90% of system-integration effort. . .N&T, Dec. 6, p. 32

Linear amplifier provides 500 W up to 35 MHz . . .N&T, Sept. 1, p. 91

Logic analyzer offers most channels, memory for $2000. . .PF, Jan. 18, p.144

Logic analyzer premiers with 32-channel timing . . .PF, June 7, p. 218

Management & Careers

Memories

Microprocessor & Logic Chips

Packaging & Production

Peripherals

Power

Software