



28 ESSEX STREET • STRAND • LONDON • W.C.2.

INDEX  
VOLUME 36

1964

# INDEX

January to December

1964

Page	Page
<b>A</b>	
Aerial for Short-Wave Transmitters, A Portable, by O. Grünberg .....	108
Aerial Multi-Coupler, An .....	837
Aerial, The Contra-Wound Linearly Polarized Helical, by R. A. Clark and T. S. M. Maclean .....	80
Aerials, Frequency Scanning, by M. F. Radford .....	222
Aerials, The Calculation and Measurement of the Gains of End-Fire V.H.F. and U.H.F., by R. G. Manton .....	8
Aircraft Accident Data Recorder, An .....	20
Amplifier, Analysis of a Feedback, by C. D. West .....	326
Amplifier, A Self-Tuning 5kW Linear, by J. Wood .....	524
Amplifier Circuits, Low Voltage, High Input Impedance Hybrid, by F. H. Laishley .....	309
Amplifier for Repetitive Analogue Computation, A Single Stage, by R. E. King .....	770
Amplifier for Thermocouple Vacuum Gauges, A Reliable D.C., by U. Tallgren and U. Kracht .....	671
Amplifiers and Their Approximate Design, Some Precision Direct Coupled Transistor, by C. W. B. Grigson— Part 1 .....	454
Part 2 .....	540
Amplifiers: A New Approach Using Integrated Circuit Video Amplifiers, Gain Controlled Band-Pass, by M. D. Wood— Part 1 .....	150
Part 2 .....	234
Amplifiers, Transistor Low Drift D.C., by J. J. Pinto .....	304
(Letters to the Editor) .....	412, 486, 558
Amplifiers, Two Transistor-Operated Frequency-Selective, by S. Harkness .....	622
Amplifier with D.C. and A.C. Feedback Stabilization, A Transistor, by H. C. Bertoya .....	240
Analogue Teaching Equipment, An .....	827
Analysis of Feedback Amplifiers by Finding the Reciprocal of Gain, The, by B. Beddoe .....	92
Anechoic Chamber, A Radio Frequency .....	701
ARIEL 2—The Second Anglo-American Satellite .....	312
Automatic Control for a Shoe Warehouse .....	447
Avalanche Rectifiers, Silicon, by G. Duddridge .....	247
<b>B</b>	
Broadcasting Centre for France, A New .....	311
<b>BOOK REVIEWS</b> .....	47, 118, 186, 261, 334, 410, 488, 560, 634, 710, 784, 852
Abnormal Loads on Power Systems .....	489
Advances in Electron Tube Techniques, Vol. 2 .....	47
Amateur Radio .....	635
American Subminiature Electronic Component Parts Data Annual, 1963-64 .....	47
Analysis of Linear Systems, The .....	262
Assembly of Radio and Allied Electronic Equipment .....	488
Automatic Data Processing .....	186
Automatic Machines and Man (in German) .....	489
Automatic Voltage Regulators and Stabilizers .....	335
Basic Electric Circuits .....	488
Basic Pulse Circuits .....	560
Beginner's Guide to Electronics .....	561
Boolean Algebra and its Application .....	488
British Miniature Electronic Components Data Annual, 1963-64 .....	119
British Miniature and Microminiature Electronic Assemblies Data Annual, 1963-64 .....	47
British Transistor Diode and Semiconductor Devices Data Annual, 1963-64 .....	48
Cable Jointing .....	561
Cathode Processes in the Mercury Arc .....	853
Circuits and Components in Digital Techniques (in German) .....	711
Colour Television Explained .....	263
Communication Satellites .....	852
Computer Organization .....	489
Control System Design .....	710
Dictionary of Plastics .....	711
Digital Computer Design .....	187
Digital Computer Technology and Design, Vol. 2 .....	187
Digital Magnetic Recording .....	634
Digital Storage Systems .....	560
Diodes and Transistors General Principles .....	489
Earth Resistances .....	635
Electric Circuit Theory .....	119
Electric Filter Circuits .....	186
Electric Motors Installation and Maintenance .....	561
Electrical Circuits with Variable Parameters including Pulsed Control Systems .....	785
Electrical Engineer's Reference Book .....	411
Electrical Installation Work .....	561
Electrical Who's Who, 1964-65 .....	411
Electrohydraulic Servomechanisms .....	335
Electromagnetic Fields .....	261
Electromagnetic Slow-Wave Systems .....	634
Electromagnetism for Engineers .....	711
Electron Tube Handbook, 1964 .....	711
Electronic Circuits .....	489
Electronic Fundamentals and Applications .....	853
Electronic Information Display System .....	334
Electronic Theory of Catalysis on Semiconductors, The .....	119
Electronic Universal Vade-Mecum, Vols. 1 and 2 .....	711
Electronics for Students of Mechanical Engineering .....	489
Elements of Feedback and Control .....	785
Energy Band Theory .....	635
Engineer Index, 1856-1959, The .....	187
Essays in Electronics .....	411
Experimental Radio Engineering .....	561
Field-Coupled Surface Waves .....	561
Filament Winding (its Development, Manufacture, Applications and Design) .....	785
Fixed Capacitors .....	561
Flight Test Instrumentation, Vol. 2 .....	47
Foundations of Electrical Engineering .....	410
Frequency Filter Methods .....	784
Frequency of Self Oscillation .....	634
Fundamentals of Microwave Electronics .....	261
Gas Discharge Tubes .....	785
Handbook of High Vacuum Engineering .....	410
Handbook of Microwave Measurements, Vol. 1, 2 and 3 .....	561
How Television Works .....	263
Industrial Switchgear Installation and Maintenance .....	561
Industrial Transformers Installation and Maintenance .....	561
Information Theory (in German) .....	334
International Series of Monographs on Electronics and Instrumentation, Vol. 19: Controlled-Delay Devices .....	119
Introduction to Counting Techniques and Transistor Circuit Logic, An .....	711
Introduction to Electronics, An .....	784
Introduction to Industrial Radiology, An .....	335
Introduction to Integrated Semiconductor Circuits .....	560
Introduction to Lasers and Masers .....	186
Japanese Miniature Electronic Components and Assemblies Data Annual, 1964-1965 .....	561
Laser Abstracts, Vol. 1 .....	711
Magnetic Tape Recording .....	560
Magnetohydrodynamic Generation of Electrical Power .....	411
Mathematical Techniques in Electronics and Engineering Analysis .....	561
Matrices—Their Meaning and Manipulation .....	561
Matrix Analysis for Electrical Engineers .....	852
Mechanical and Electrical Vibrations .....	711
Microphones .....	119
Micropower Electronics .....	785
Microwaves (Proceedings of the 4th International Congress) .....	489
Microwave Tubes and Semiconductor Devices .....	47
Modern Dictionary of Electronics .....	263
Multilinear Analysis for Students in Engineering and Science .....	262
Nonlinear-Magnetic Control Devices .....	785
Optical Masers .....	335
Optical Processing of Information .....	335
Optimization Theory and the Design of Feedback Control Systems .....	710

	<i>Page</i>
Optimum Design of Digital Control Systems, Vol. 10	335
Photo-Electric Devices in Theory and Practice	411
Physics of Magnetic Recording, The	262
Precis d'Electromagnetisme Théorique	711
Pressure Measurement in Vacuum Systems	785
Principles of Coding, Filtering and Information Theory	334
Principles of Feedback Design	263
Principles of Radio and Electronics	334
Principles of Tunnel Diode Circuits	852
Printed and Integrated Circuits	118
Problems in Electronics	635
Problems of the Design and Accuracy of Complex Continuous Action Devices and Computer Mechanisms	263
Proceedings of the Symposium on Electron and Vacuum Physics, Hungary, 1962	711
Progress in Semiconductors, Vol. 7	47
Progress in Semiconductors, Vol. 8	635
Propagation of Radio Waves	561
Properties and Applications of Transistors	488
Pulse Circuits (in German)	335
Quantum Electronics, III	711
Radio Amateur's Handbook, The	489
RCA Phototube and Photocell Manual	187
Sampling System Theory and its Application, Vols. 1 and 2	784
Selected Papers on Semiconductor Microwave Electronics	785
Semiconductor Fundamentals: Devices and Circuits	186
Semiconductor Thermoelectric Devices	853
Short Dictionary of Electrical Engineering, A (in German)	48
Short Wave Amateur Radio	489
Space Vehicle Electronics	853
Square-Loop Ferrite Core Switching	784
Stereophony	489
Storage Batteries	853
Telecommunications	852
Telemechanics	335
Television Engineering, Vol. 1	119
Theory of Automatic Control	261
Theory of Electromagnetism, The	635
Theory of Psychological Measurement	335
Theory of Superconductivity	710
Transistor Amplifiers for Audio Frequencies	263
Transistor Applications	634
Transistor Electronics in Instrument Technology	263
Ultrasonic Delay Lines	118
Understanding Television	263
U.S.S.R. Direct Current Research (Reports of the Leningrad Direct Current Research Institute)	335
Vacuum and Solid State Electronics (An Introductory Course)	119
Vacuum Technology	410
Waves and Oscillations	561
Wireless and Electrical Trader Year Book, 1964	263

## C

Capacitance Measuring Circuit with Digital Presentation, A Simple, by S. L. Hurst	596
Cathode-Ray Storage Devices: Television by Telephone Line, by A. E. Cawkell	596
Chart Reader and Statistical Analyser, A, by J. A. Phillips	142
Cohn Structure for H.F. Band-Pass Filters, Systematic Development of, by K. E. Brown	216
Coincident Current Core Storage Unit, The CIRRUS, by I. R. Butcher	448
Coin Segregating and Counting Machine, An Automatic Colpitts' Oscillator, Matrix Analysis of the, by G. Zelinger	394
Communications in a Steel Mill	553
Computer Application in Operations Research, An Analogue, by D. Longley	378
Computing Service, University of London	463
Controlled Rectifier Circuits, Harmonic Voltages in the Output of, by R. Smith	832
Convertor, A Simple Digital to Analogue, by K. H. Edwards	178
Counter, A 50kc/s Cold-Cathode Decade, by R. D. Ryan	779
Counter with Anti-coincidence Network and Digital Display, A Bi-directional Decade, by A. F. Tassinari	173
Counting and Recording Insects in Agricultural Research, An Electronic Device for, by E. J. Brach and W. J. Mason	761
Counting Tubes, Improving the Performance of Cold Cathode, by L. Garamszegi and F. Szlavik	828
Coupling Circuits, Some Simple Dekatron, by A. J. Oxley	227
Current Transformers for the Examination of Current Waveforms, Wide Band, by F. J. U. Ritson and J. Wood	483
Cyclic Code Generators, The Synthesis of, by P. E. K. Chow and A. C. Davies	253
Cyclotron Wave Coupler, A Capacitively-Coupled Fast	109
COMMENTARIES	1, 71, 141, 215, 289, 363, 439, 511, 585, 659, 735, 807

## D

Data Link Equipment	226
Data Transmission System for Marshalling Yards, A	549
Delay Line, A Cold-Cathode Valve Binary, by D. Q. Mayne	557
Demodulation of a Frequency Modulated Signal Modulated by Two Tones, by G. May	816

	<i>Page</i>
Densitometer, A Four Decade Transistor Linear, by E. Gordy, P. Hasenpusch and G. F. Sieber	808
Detectors Using the Twin-T Circuit, Tuned, by T. Spencer	315
Diodes, Ultra-Stable Semiconductor Reference, by R. H. Murphy	40
Discriminator, A Transistorized Millivolt, by M. Birnbaum and V. Comanescu	110
Display System, An Alpha-Numeric	161
Distortion in Non-Linear Networks with Particular Reference to Carrier Transmission Systems, Amplitude, by W. Dougherty	390

## E

E.C.G. Recorder for Active Subjects, An, by H. Hirschberg	38
Echo Sounder, A Transistorized	778
Edge Guide, A Miniature Photo-Electric	485
E.D.P. System, A New Low-Cost	252
E.H.T. Transformers, True Third Harmonic Tuning of, by F. D. Bate	688
Electromagnetic Brake Activated by Eyebrow Muscles, An, by L. Vodovnik	694
Electron Spin Resonance Equipment	819
<b>ELECTRONIC EQUIPMENT</b>	50, 120, 188, 268, 336, (Including Exhibition Reviews)
	413, 490, 562, 636, 713, 786, 854

Airborne H.F. Equipment, Solid State	716
Altimeter, Micro-Miniature Radio	719
Amplifier, D.C.	491
Amplifier, Galvanometer Drive	273
Amplifier, L.F. Voltage	566
Amplifier, Magnetic	340
Amplifier, Miniature Servo	271
Analyser, Pulse Height	567
'Autobalance', Bridge	268
Balancing Machine, Dynamic	340
Beacon, Radio	717
Beacon, Transportable Radio	717
Blowers, Axial Flow	419
Bonder, Thermocompression	790
Bridge, Component	857
Bridge, Wheatstone	195
Calorimeter, Waveguide	565
Camera Tube, Photo-Electric High Speed	188
Capacitor Blocks, Multiple Silvered Mica	565
Capacitors, Discharge-Free	343
Capacitors, Polyester	562
Capacitors, Silvered Mica	340
Capacitors, Vacuum Variable	415
Cardio-Computer	123
Circuit Blocks, Digital	566
Circulator, Switchable	857
Climatic Cabinet	791
Coaxial Test Lines	336
Comparator, Sonic Gauge	640
Compensator, Thermo-Voltage	493
Computer, Digital	495
Computer, Educational Digital	272
Computer, High Speed	417
Computer, On-Line Mass Flow	416
Connectors, Multi-Pin	339
Connectors, Self-Latching	858
Construction System	640
Controller, Level	415, 492
Controller, Programme	563
Convertor, A.C.-D.C.	564
Convertor, Analogue to Digital	121, 195
Convertor, Counter	52
Convertor, Frequency	125
Counter, Batch	342
Counter, Electronic	418
Counter, Printing Pulse	495
Counters and Timers	413
Counters, Scintillation	637
Counting System	566
Counting System, Transistorized Pulse	190
Crimping Tool	419, 717
C.R.T. Instrument	53
Curve Tracer, Transistor	120
Data Logger	854
Data Logger, Digital	718
Data Logging System	490
Decade Assembly, Plug-in	52
Detector, Automatic Leak	195
Detector, Phase Sensitive	55
Detector, Photo-Electric	786
D.F. Equipment, Automatic V.H.F.	715
Digitizer	121
Display Tube, Alpha-Numeric	419
Display Unit, Half-Tone	416
Display Units	714
Distance Measuring Equipment	716
Divider, Frequency	120
Dosemeter, X-Ray	120
Drilling Machine, Printed Circuit	856
Electrometer	54
Electrometer, Multi-Range	641
Electron Spin Resonance Equipment	190
'Electron Stick'	190
Elements, Analogue Digital	343
Encoder, Digital Shaft	641
Encoders, Optical Shaft	53
Extensometer, Strain Gauged	719
Fibre Optic Filter	194
Filter Analyser, Radioactive	338
Filter, Tunable Rejection	717
Flaw Detector, Ultrasonic	420, 790

Flight Control Systems	717	Radar, A.T.C. Surveillance	714
Frames, Chassis	55	Radar, Secondary Surveillance	719
Gauge, Ultrasonic Level	191	Radiation Monitor	50
Gearheads, Precision	855	Radioactive Air Monitor	493
Generator, A.M. Signal	716	Radiotelephone	567
Generator, Double Pulse	494	Radiotelephone, Miniature	714
Generator, Pulse	195, 790	Radiotelephones, U.H.F.	713
Generator, Solid-State Wide Range Signal	418	Radiotelephones, V.H.F.	713
Generator, Standard Frequency	494	Ratemeter	50
Generator, Sweep	637	Ratiometer, Digital Voltmeter	789
Generator, V.L.F.	341	Ratiometer, Inductive	195
Generator, Waveform	53, 789, 858	Read-Out System, Digital	193
Generators, Hall Effect Voltage	413	Receiver, D.F.	273
Generators, Microwave Sweep	337	Receiver, High Stability H.F.	791
Hall Probe Kit	268	Receiver, Standard Frequency	52, 337
Headset-Microphone, Lightweight	336	Recorder, Galvanometer	562
Image Orthicons	859	Recorder, Miniature	120
Indicator, Electronic Multiple	494	Recorder, Portable Chart	273
Indicator, Sound Level	50	Recorder, Potentiometric	493
Inductors, H.F.	55	Recorder, Self-Balancing	788
Jacks, Test Point	51	Recorder, Strain and Temperature	269
Keying Device, Morse Code	413	Recorders, Time and Events	788
Knobs, Collet	53	Recording Heads, Magnetic	271
Level Measurement	639	Recording System, Flight Data	717
Light Operated Solid State Device	193	Reflectometers, Coaxial	271
Loudspeaker, Pillow	336	Relay, Count-Down	790
Machine Tool Control, Numerical	492	Relay, Dry Reed	341
Magnetic Film Logic	192	Relay, Electronic Time Lag	123
Magnetron, Rugged	565	Relay, Inserts, Reed	121
Magnetron, Tunable Pulse	270	Relays, Meter	124
Map, High Resolution Video	718	Relay, Miniature	786, 787
Marker, Digital Time Interval	190	Relay, Sensing	637
Measuring Equipment, Multi-Purpose	491	Relay, 7-Cam Ratchet	415
Megger, Electronic	122	Relay, Sub-Miniature	415, 641
Megohmmeter, Electronic	336	Relays, Voltage Sensing	857
Meter, Distortion	124, 339	Resistors and Capacitors, Miniature	339
Meter, Distortion Factor	121	Resistors, Metal Film	269
Meter, Humidity	856	Resistors, Precision	341
Meter, Impedance	341	Resistors, Wire Wound	786
Meter, Insulation	270	Selector, Digital Limit	343
Meter, Modulus	123	Servo System, Instructional	191
Meter, Moisture	854	Shielded Room Kits	788
Meter, Multi-Range	566, 791	Simulator, A.T.C.	718
Meter, Peak Programme	54	Simulator, Nor	787
Meter, pH-rH	122	Socket, Printed Circuit	342
Meter, Precision Sound Level	189	Solderability Test Machine	343
Meter, R.F. Power	563	Soldering Iron	639
Meters, Panel	638	Soldering Iron, Miniature	788
Meter, Solid State Control	855	Soldering Irons	858
Meter, Television Signal Strength	858	Solid State Circuits	495
Meter, Time-Frequency	272	'Spirit Level', Electronic	414
Meter, Transistor	338	Stabilizer, Digital Drift	417
Meter, Underwater Sound Velocity	194	Standard, Frequency	188, 791
Meter, Vibration	564	Standard, Portable Frequency	51
Meter, Vibration Frequency	125	Strain Gauge Equipment	125
Microphones, Carbon	637	Summing Unit, Transistorized	495
Microscope, Electron	188	Switch, Photo-Electric	786
Microvoltmeter, R.F.	854	Switch, Printed Circuit	641
Microwave Equipment	490	Switch, Snap-Action Delay	268
Milliwattmeter, Microwave	52	Switch, Sub-Miniature Reed	636
Modulator, Microvolt	120	Switches, Inductive Proximity	52
Moire Fringe Measuring Equipment	192	Switches, Proximity	789
Motors, Brushless D.C. Servo	857	Synchros, Brushless	859
Motors, External Rotor	715	Synthesizer, Frequency	416
Motors, Inertially Damped	856	Tachometer, Electronic	787
Motor, Slow Speed Induction	191	Tachometer, Industrial	565
Motor, Slow Speed Synchronous	420	Tape Reader, Punched	494
Motors, Two-Pole	563	Telephone Equipment, Optical	492
Moving Map Display	715	Television Camera, Transistorized	638
Multimeter, D.C.	492	Television System, Closed Circuit	413
Multimeter, Electronic	339, 640	Television Tuner, U.H.F.	338
Nucleonic Instrumentation	491	Temperature Measurement, Contactless	490
Nucleonic Instruments, Educational	194	Terminations, Microwave	636
Ohmmeter, Linear-Scale	124	Tester, In-Situ Transistor	189
Oscillator, Beat Frequency	269	Testmeter, Electronic	189
Oscillator, Portable	54	Test Set, Relay	562
Oscillator, Sine/Square Wave	415	Thermistor, Overload Protection	788
Oscillator, Transistor	125	Thermoelectric Cooling Modules	336
Oscillator, Wide Range	123, 719	Thermoelectric Generator Materials and Test Equipment	193
Oscillograph, Recording	413	Thermometer, Dewpoint	636
Oscillograph, Ultra-Violet Recording	189	Thermometer, Electronic	567, 638
Oscilloscope	51, 122, 124, 190, 419	Thickness Gauge, Radioactive	418
Oscilloscope Calibrator	636	Time-Base and Counter	859
Oscilloscope, Double Beam	718	Timer, Electronic	342
Oscilloscope, Educational	194	Timer, Precision Interval	268
Oscilloscope, Laboratory	789	Torque Testing Equipment	639
Oscilloscope, Large Screen	787	T.R. Cell Supplies	638
Oscilloscope, Modular	414	Traffic Control Unit, Radar	125
Oscilloscope, Storage	417	Tracer, A.F. Frequency Response	269
Oscilloscope, Transistorized	339	Transceiver, Airborne	490
Oscilloscope, 20Mc/s	493	Transceiver, Miniature	713
Oscilloscope, Wide Band	189	Transducer-Convertor	342
Packset, H.F.	713	Transducer, Displacement	189, 193
Parametric Amplifiers	337	Transducer, Pressure	639
'Peltier Batteries'	270	Transducers, Ceramic	192
Photovoltaic Cells	337	Transducers, Subminiature	858
Plotter, Keyboard Graph	564	Transformers, Variable	638
Plug, Attenuator	55	Transistor, Metal Oxide Silicon	856
Plug-in Units, Digital	491	Transistor Tester	54, 122
Potentiometer, Multi-Purpose	340	Transponder Units, Airborne	713, 714
Potentiometer, Students'	855	Trolley, Instrument	50
Potentiometers, Miniature	336	Ultrasonic Test Equipment	493
Potentiometers, Precision	271	'Unsoldering' Tool	272
Power Supplies, D.C.	272	Vibration Generating Equipment	857
Power Supplies, Low Voltage	342	Vibration Test Equipment	494
Power Supplies, Transistorized	338	Voltmeter, Digital	55, 124, 417
Power Supply, E.H.T.	192, 338	Voltmeter, Integrating Digital	420
Power Supply, Klystron	639	Voltmeter, Transistor	51
Power Supply, Regulated	562	Voltmeter, Transistorized	414
Power Supply, Transistor	419	Voltmeter, True R.M.S.	416
Power Unit, Current-Stabilized 400A	491	Voltmeter, Valve	124, 855
Power Unit, 400c/s	636	Wattmeter, U.H.F.	188
Power Unit, Stabilized	563		
Precision A.C. Divider	564		
'Prestincert' Tool Kit	271		
Printer, Strip	337		
Programmer	123		

Ferrite Core Stores, Lithium Nickel ... . . . .

687

	<i>Page</i>
Ferrite Core Parameter Measurements at Very High Switching Currents, by M. C. Stevens	470
Ferrite Store with Stepping Switch Addressing, Sequential Access, by M. D. A. B. Rackwe	612
Filter for Low Frequencies Using Operational Amplifiers, Tunable, by H. Sutcliffe	399
Filter with Variable Notch Frequency, A Simple Null, by J. L. Douce and K. H. Edwards (Letters to the Editor)	478 849
Flash Installation for Optical Tracking, Black Knight Electronic, by R. L. Aspden	88
Flash Tube Operation, A Transistor Circuit for Xenon, by P. G. M. Dawe	220
Frequency Deviation by a Simulated Frequency-Modulated Radar Technique, The Measurement of, by B. S. Rao and D. E. N. Davies	100
Frequency to Voltage Convertor, A Linear, by W. P. O'Grady	776
Function Synthesizer to Generation of Very Low Frequency Signals and Noise, Application of a Repetitive, by J. R. James and M. H. N. Potok	12
Furnace, A High-Temperature X-Ray Diffraction	83
<b>FRENCH</b> (Electronic Equipment and Summaries)	57, 127, 197, 275, 345, 421, 497, 571, 645, 721, 793, 861
<b>G</b>	
Garnet Delay Line, Experiments on a X-Band, by J. H. Collins, B. Yazgan and J. Cochrane	627
Gate Controlled Switch in D.C. Power Circuits, Applications of a, by M. J. Wright— Part 1	16
Part 2	84
Gauging Machine, Automatic	377
Grid Controlled Rectifiers, High Voltage Deuterium Filled, by B. O. Baker and R. J. Wheldon	24
<b>GERMAN</b> (Electronic Equipment and Summaries)	64, 134, 206, 282, 354, 430, 504, 578, 652, 728, 800, 868
<b>H</b>	
Hydrogen Bubble Chamber at C.E.R.N. Geneva, The British National	599
<b>I</b>	
Ignition Advance for Automobiles, An Electronic Method of, by A. R. Hayes	369
Ignition System, An Experimental Electronic, by W. Alexander and P. Sample	813
Image Amplifier for Quality-Control, An	469
Image Intensifier for Nuclear Research, An	529
Inertial Navigation System, A Ship's	29
Information Logging, Digital Flight	237
Integrate-and-Dump Operator for Serial Correlators, by R. M. Seeley	601
Integrator and its Application to the Maintenance of Sensitivity in Null-Measurement Systems, A Novel, by H. C. Bertoya (Correction)	750 849
Isolator, A Broad-Band Tapered Field Resonance, by J. H. Collins and T. M. Heng	250
<b>L</b>	
Language Laboratory, A	295
Laser for the Atomic Weapons Research Establishment, A	23
Laser Rangefinder, A	482
Line Scanning Transistor—Dissipation During Switch-off, by F. D. Bate	170
<b>LETTERS TO THE EDITOR</b>	48, 117, 184, 266, 412, 486, 558, 632, 712, 783, 849
Aliased Traces in L.F. Sampling Oscilloscope Ranges, Identification of	559
Amplifiers, Transistor Low Drift D.C.	412, 486
Arrays of $1\Omega$ Resistors, Infinite	117, 412, 783
Computing Element, A Negative Resistance	117
Current-Feedback, A Limitation of	266
Decoder, A Decimal to Binary	712
Delay Line, Number of Sections for a	185
Error-Function Limiter, Remarks on the	632
Frequency Divider Using a Phase Shift Oscillator, Transistorized	558
Frequency Multiplier, A Transistor	558
Inverse Impedance by De Morgan's Theorem, Computation of	267
Multiplier, A High Speed Analogue	117
Multiplicators, Multi-Electrode Valve	184
Negative Input Resistance of Transistors	633
Networks, Simple Tunable RC Null	849
Noise in Transistor Direct-Coupled Amplifiers, L.F.	558
Non-Linear CR Circuit Using Silicon Carbide Varistors	849
Planar Transistors as Grounded Collector Stages	412
Rise-Times in Transistor Logic Stages, Use of an Analogue Computer to Calculate	49
Sensing Device, A Simple D.C.	48
Signal Flow Graphs	486
Storage Circuit, A Short Term Analogue Data	185
Strain Rate-of-Change Switch	487
<b>P</b>	
Paging System, A Long Range	377
PAL Colour Television Receivers, Demodulation Circuits for, by W. Bruch— Part 1	512
Part 2	606
Pasture Growth, Electronic Assessment of, by F. J. Hyde and J. T. Lawrence	666
'Patients Monitor' for Hospital Out-Patients Department A, by J. A. Reynolds	30
Periscopes and Television for 'Dragon' Project	329
Phase Delay Circuit, A Frequency Compensated, by A. De'Sa and L. Molyneux	838
Phase Modulator, A Simple, by C. T. Kohn	530
Phase-Sensitive Detector, A General-Purpose, by E. A. Faulkner and R. H. O. Stannett	159
Photographic Positive-Negative Viewer, A	681
Pocket Radio for Police, Two-Way	165
Power Supply Using Transistors, A 100V 100mA Regulated, by R. E. Aitchison and W. S. Lamond	604
Product Convertors and their Applications, by A. Nathan	106
Pulse Modulator, A Wide-Range Audio-Frequency, by M. E. Bryan and W. Tempest	154
Pulse Period Meter with Short Response Time, Applied to Cardiotachometry, by P. A. Tove and J. Czekajewski	290
Pulse Phasemeter, A, by R. E. King	615
Punching Press, A Numerically Controlled	626
<b>PUBLICATIONS RECEIVED</b>	56, 126, 196, 274, 344, 409, 570, 720, 792, 860
<b>Q</b>	
Quartz Growing Plant, A	406
<b>R</b>	
Radar, A New Storm Warning	845
Radar, A New X-Band	533

	<i>Page</i>		<i>Page</i>
Radar, A River .. .. .. .. ..	459	Transformers, Their Equivalent Circuits and the Measurement of their Parameters, Toroidal Ratio, by A. J. Binnie and T. R. Foord .. .. ..	740
Radar, A Transistorized Marine .. .. .. .. ..	381	Transistor Feedback Amplifiers, The Input Resistance of, by E. de Boer .. .. .. .. ..	702
Radar Display, A Three-Dimensional .. .. .. .. ..	695	Transistor Oscillators, The Elimination of Residual Even-Harmonic Distortion in, by P. J. Baxandall .. .. .. .. ..	97
Radar Simulators, Ground Clutter and Obscuration in Ground .. .. .. .. ..	172	Transistor-Resistor Logic Circuits by Graphical Means, The Design of, by C. W. M. Barrow .. .. .. .. ..	660
Radiation Patterns of Radio Aerials, A Simple Balloon Technique for Measuring the, by C. S. L. Keay and R. E. Gray .. .. .. .. ..	322	Transmission Lines, Standing Waves on, by W. S. Metcalf .. .. .. .. ..	840
Radiotelephone, A Mobile .. .. .. .. ..	109	Transmitter, An 85Mc/s Transistorized, by A. E. Hilling .. .. .. .. ..	466
Radio Telescope at Jodrell Bank, A New .. .. .. .. ..	452	Transmitting Equipment, Developments in H.F. .. .. .. .. ..	403
Radio Telescope for Research, A New .. .. .. .. ..	149	Tunnel Diode Circuits for Computers .. .. .. .. ..	107
Receivers, Self-Tuning Communication .. .. .. .. ..	745	Tunnel Diode Relaxation Oscillator, Digital Computer Analysis of the, by A. L. Riemenschneider and C. W. Cox .. .. .. .. ..	382
Recorder, An Aircraft Accident Data .. .. .. .. ..	20		
Regulator Elements Using Transistors, by J. W. McPherson .. .. .. .. ..	162		
Regulator Using A.C. Control, A Transistorized High-Voltage, by I. Izumi and M. Kokubu .. .. .. .. ..	554		
Remote Control by Telephone .. .. .. .. ..	259		
Research Centre, The Allen Clark .. .. .. .. ..	325		
Resistance-Capacitance Selective Network, A Transistorized, by T. H. Appleby .. .. .. .. ..	746	<b>U</b>	
Resistance in the Presence of Reactance, A New Technique for the Recognition of, by E. R. Wigan .. .. .. .. ..	238	Ultrasonic Level Gauge, An .. .. .. .. ..	477
Ring Counters, An Economical Silicon Switching Transistor and its use in, by J. Palmer .. .. .. .. ..	519		
		<b>V</b>	
<b>S</b>		Voltage Measuring Circuit, A True R.M.S., by J. C. Cluley .. .. .. .. ..	300
Satellite Station, A Transportable .. .. .. .. ..	33	Voltage Stabilizers, An Improved Control System for A.C., by R. G. Ackland and N. M. Buckland .. .. ..	480
Sawtooth Generator with Negligible Step, A Transistor Linear, by J. K. Moss .. .. .. .. ..	772	Voltmeter, A Simple D.C., by M. R. Osborne .. .. ..	843
Scanner for Transistor Pairs used in Balanced Pre-Amplifiers, An Electronic, by R. R. Vierhout and A. J. H. Vendrik .. .. .. .. ..	630		
Scotland, The Electronic Industry in, .. .. .. .. ..	590	<b>W</b>	
SECAM Composite Signal, Extraction of Luminance from the, by G. Melchior and J. P. Douy .. .. .. .. ..	464	Weighing Equipment, An Automatic Continuous .. .. .. .. ..	385
SECAM Signal Decoding for Single-Gun Tubes, by P. Cassagne and G. Melchior .. .. .. .. ..	824	Welding of Plastic Materials, Ultrasonic .. .. .. .. ..	812
SEACOM—Stage 1 .. .. .. .. ..	389	Wirewound Resistors, Improvements in the Design of Precision, by J. R. Price .. .. .. .. ..	474
Security System, An Electronic .. .. .. .. ..	321		
Shaft Position Indicator, A Digital, by S. G. Smith and C. J. U. Roberts .. .. .. .. ..	72	<b>X</b>	
Simulator for Eurocontrol, An A.T.C. .. .. .. .. ..	105	Xerography Applied to a High Speed Computer Printer, by P. F. T. C. Stillwell and R. H. Dagnall .. .. ..	756
Skin Resistance, An Improved Technique for Measuring, by L. E. H. Lindahl, A. H. Christianson and R. N. Gooch .. .. .. .. ..	245		
Solar Cells for Use in Heart Machine .. .. .. .. ..	523		
Solar Powered Warning System, A .. .. .. .. ..	180	<b>AUTHORS</b>	
Spectrometer for Use at Audio and Sub-Audio Frequencies, An Electronic, by D. Llanwyn Jones .. .. .. .. ..	820		
Stabilization in Hybrid Electronic Apparatus, Voltage, by P. Visontai .. .. .. .. ..	764	<b>A</b>	
Stabilizer, A Simple, High-Performance Series, by D. J. Collins .. .. .. .. ..	330	Ackland, R. G. (with N. M. Buckland), An Improved Control System for A.C. Voltage Stabilizers .. .. .. .. ..	480
Stabilizer for Cold-Cathode Tube Circuits, A Voltage, by A. J. Oxley .. .. .. .. ..	548	Aitchison, R. E. (with W. S. Lamond), A 100V 100mA Regulated Power Supply Using Transistors .. .. .. .. ..	604
Stabilizer Tube Test Set, by D. T. Smith .. .. .. .. ..	260	Alcock, R. N., A Logarithmic Time-Base .. .. .. .. ..	404
Step Generator, A Low Frequency Random, by B. R. Wilkins .. .. .. .. ..	386	Alexander, W. (with P. Sample), An Experimental Electronic Ignition System .. .. .. .. ..	813
Strain Recording System, A Multi-Channel Tree, by C. I. Sach .. .. .. .. ..	736	Appleby, T. H., A Transistorized Resistance-Capacitance Selective Network .. .. .. .. ..	746
Substandards, Voltage and Current, by M. Pacak .. .. .. .. ..	550	Aspden, R. L., Black Knight Electronic Flash Installation For Optical Tracing .. .. .. .. ..	88
Switch, A Slow, by K. F. Knott .. .. .. .. ..	846		
Switching of Sensitive Thermocouples, Automatic, by J. L. Goldberg and H. M. King .. .. .. .. ..	591	<b>B</b>	
<b>SHORT NEWS ITEMS</b> .. .. .. .. .. 44, 114, 181, 264, 332, 407, 496, 568, 642, 707, 780, 850		Baker, B. O. (with R. J. Wheldon), High Voltage Deuterium Filled Grid Controlled Rectifiers .. .. .. .. ..	24
		Barrow, C. W. M., The Design of Transistor-Resistor Logic Circuits by Graphical Means .. .. .. .. ..	660
		Bate, F. D., Line Scanning Transistor—Dissipation during Switch-off .. .. .. .. ..	170
		Bate, F. D., True Third Harmonic Tuning of E.H.T. Transformers .. .. .. .. ..	688
		Baxandall, P. J., The Elimination of Residual Even-Harmonic Distortion in Transistor Oscillators .. .. .. .. ..	97
		Beddoe, B., The Analysis of Feedback Amplifiers by Finding the Reciprocal of Gain .. .. .. .. ..	92
		Bertoya, H. C., A Transistor Amplifier with D.C. and A.C. Feedback Stabilization .. .. .. .. ..	240
		Bertoya, H. C., A Novel Integrator and its Application to the Maintenance of Sensitivity in Null-Measurement Systems .. .. .. .. ..	750
		(Correction) .. .. .. .. ..	849
		Beynon, J. D. E. (with K. G. Nichols), A Digital Number Generator .. .. .. .. ..	34
		Binnie, A. J. (with T. R. Foord), Toroidal Ratio Transformers, Their Equivalent Circuits and the Measurement of their Parameters .. .. .. .. ..	740
		Birnbaum, M. (with V. Comanescu), A Transistorized Millivolt Discriminator .. .. .. .. ..	110

<i>Page</i>	<i>Page</i>		
er, E. de. The Input Resistance of Transistor Feedback Amplifiers .....	702	Forte, S. S., Microelectronics in Equipment Design— Part 1 .....	586
rach, E. J. (with W. J. Mason), An Electronic Device for Counting and Recording Insects in Agricultural Research .....	761	Part 2 .....	696
Brown, K. E., Systematic Development of Cohn Structure for H. F. Band-Pass Filters .....	448	<b>G</b>	
Bruch, W., Demodulation Circuits for PAL Colour Television Receivers— Part 1 .....	512	Garamszegi, L. (with F. Szlavik), Improving the Performance of Cold Cathode Counting Tubes .....	828
Part 2 .....	606	Gazey, B. K. (with J. C. Morris), An Underwater Acoustic Telephone for Free-Swimming Divers .....	364
Bryan, M. E. (with W. Tempest), A Wide-Range Audio-Frequency Pulse Modulator .....	154	Giblin, R. A., Noise Spectrum Measurements on Tunnel Diodes in the Frequency Range 5kc/s to 10Mc/s .....	766
Buckland, N. M. (with R. G. Ackland), An Improved Control System for A.C. Voltage Stabilizers .....	480	Goldberg, J. L. (with H. M. King), Automatic Switching of Sensitive Thermocouples .....	591
Butcher, I. R., The CIRRUS Coincident Current Core Storage Unit .....	534	Gooch, R. N. (with L. E. H. Lindahl and A. H. Christianson), An Improved Technique for measuring Skin Resistance .....	245
<b>C</b>			
Cassagne, P. (with G. Melchior), SECAM Signal Decoding for Single-Gun Tubes .....	824	Gordy, E. (with P. Hasenpusch and G. F. Sieber), A Four Decade Transistor Linear Densitometer .....	808
Cassagne, P. (with G. Melchior), Some Aspects of SECAM Colour Television Receiver Design .....	676	Gouriet, G. G., A New Approach to I.L.S. Modulation Depth Comparison .....	2
Cawkell, A. E., Cathode-Ray Storage Devices: Television by Telephone Line .....	142	Gray, R. E. (with C. S. L. Keay), A Simple Balloon Technique for Measuring the Radiation Patterns of Radio Aerials .....	322
Chow, P. E. K. (with A. C. Davies), The Synthesis of Cyclic Code Generators .....	253	Grigson, C. W. B., Some Precision Direct Coupled Transistor Amplifiers and Their Approximate Design— Part 1 .....	454
Christianson, A. H. (with R. N. Gooch and L. E. H. Lindahl), An Improved Technique for Measuring Skin Resistance .....	245	Part 2 .....	540
Clark, R. A. (with T. S. M. Maclean), The Contra-wound Linearly Polarized Helical Aerial .....	80	Grünberg, O., A Portable Aerial for Short-wave Transmitters .....	108
Cluley, J. C., A True R.M.S. Voltage Measuring Circuit .....	300		
Cochrane, J. (with J. H. Collins and B. Yazgan), Experiments on an X-Band Garnet Delay Line .....	627		
Collins, D. J., A Simple, High-Performance Series Stabilizer .....	330		
Collins, J. H. (with T. M. Heng), A Broad-Band Tapered Field Resonance Isolator .....	250		
Collins, J. H. (with B. Yazgan and J. Cochrane), Experiments on an X-Band Garnet Delay Line .....	627		
Comanescu, V. (with M. Birnbaum), A Transistorized Millivolt Discriminator .....	110		
Cox, C. W. (with A. L. Riemschneider), Digital Computer Analysis of the Tunnel Diode Relaxation Oscillator .....	382		
Czekajewski, J. (with P. A. Tove), Pulse Period Meter with Short Response Time, Applied to Cardiotachometry .....	290		
<b>D</b>			
Dagnall, R. H. (with P. F. T. C. Stillwell), Xerography Applied to a High Speed Computer Printer .....	756	Harkness, S., Two Transistor-Operated Frequency-Selective Amplifiers .....	622
Davies, A. C. (with P. E. K. Chow), The Synthesis of Cyclic Code Generators .....	253	Hasenpusch, P. (with G. F. Sieber and E. Gordy), A Four Decade Transistor Linear Densitometer .....	808
Davies, D. E. N. (with B. S. Rao), The Measurement of Frequency Deviation by a Simulated Frequency-Modulated Radar Technique .....	100	Hayes, A. R., An Electronic Method of Ignition Advance for Automobiles .....	369
Dawe, P. G. M., A Transistor Circuit for Xenon Flash Tube Operation .....	220	Heng, T. M. (with J. H. Collins), A Broad-Band Tapered Field Resonance Isolator .....	250
De'Sa, A. (with L. Molyneux), A Frequency Compensated Phase Delay Circuit .....	838	Hilling, A. E., An 85Mc/s Transistorized Transmitter .....	466
Dougherty, W., Amplitude Distortion in Non-Linear Networks with Particular Reference to Carrier Transmission Systems .....	390	Hirschberg, H., An E.C.G. Recorder for Active Subjects	38
Douce, J. L. (with K. H. Edwards), A Simple Null Filter with Variable Notch Frequency .....	478	Hurst, S. L., A Simple Capacitance Measuring Circuit with Digital Presentation .....	596
(Letters to the Editor) .....	849	Hyde, F. J. (with J. T. Lawrence), Electronic Assessment of Pasture Growth .....	666
Doury, J. P. (with G. Melchior), Extraction of Luminance from the SECAM Composite Signal .....	464		
Duddridge, G., Silicon Avalanche Rectifiers .....	247		
<b>E</b>			
Edwards, K. H., A Simple Digital to Analogue Convertor .....	178		
Edwards, K. H. (with J. L. Douce), A Simple Null Filter with Variable Notch Frequency .....	478		
(Letters to the Editor) .....	849		
<b>F</b>			
Faulkner, E. A. (with R. H. O. Stannett), A General Purpose Phase-Sensitive Detector .....	159		
Flanagan, G. (with L. Molyneux), A Low Speed Single Supply NOR Logic System .....	460		
Foord, T. R. (with A. J. Binnie), Toroidal Ratio Transformers, Their Equivalent Circuits and the Measurement of their Parameters .....	740		
<b>G</b>			
Garamszegi, L. (with F. Szlavik), Improving the Performance of Cold Cathode Counting Tubes .....	828		
Gazey, B. K. (with J. C. Morris), An Underwater Acoustic Telephone for Free-Swimming Divers .....	364		
Giblin, R. A., Noise Spectrum Measurements on Tunnel Diodes in the Frequency Range 5kc/s to 10Mc/s .....	766		
Goldberg, J. L. (with H. M. King), Automatic Switching of Sensitive Thermocouples .....	591		
Gooch, R. N. (with L. E. H. Lindahl and A. H. Christianson), An Improved Technique for measuring Skin Resistance .....	245		
Gordy, E. (with P. Hasenpusch and G. F. Sieber), A Four Decade Transistor Linear Densitometer .....	808		
Gouriet, G. G., A New Approach to I.L.S. Modulation Depth Comparison .....	2		
Gray, R. E. (with C. S. L. Keay), A Simple Balloon Technique for Measuring the Radiation Patterns of Radio Aerials .....	322		
Grigson, C. W. B., Some Precision Direct Coupled Transistor Amplifiers and Their Approximate Design— Part 1 .....	454		
Part 2 .....	540		
Grünberg, O., A Portable Aerial for Short-wave Transmitters .....	108		
<b>H</b>			
Harkness, S., Two Transistor-Operated Frequency-Selective Amplifiers .....	622		
Hasenpusch, P. (with G. F. Sieber and E. Gordy), A Four Decade Transistor Linear Densitometer .....	808		
Hayes, A. R., An Electronic Method of Ignition Advance for Automobiles .....	369		
Heng, T. M. (with J. H. Collins), A Broad-Band Tapered Field Resonance Isolator .....	250		
Hilling, A. E., An 85Mc/s Transistorized Transmitter .....	466		
Hirschberg, H., An E.C.G. Recorder for Active Subjects	38		
Hurst, S. L., A Simple Capacitance Measuring Circuit with Digital Presentation .....	596		
Hyde, F. J. (with J. T. Lawrence), Electronic Assessment of Pasture Growth .....	666		
<b>I</b>			
Izumi, I. (with M. Kokubu), A Transistorized High-Voltage Regulator Using A.C. Control .....	554		
<b>J</b>			
James, J. R. (with M. H. N. Potok), Application of a Repetitive Function Synthesizer to Generation of Very Low Frequency Signals and Noise .....	12		
<b>K</b>			
Kar, S. K., A Gated Astable Multivibrator .....	103		
Keay, C. S. L. (with R. E. Gray), A Simple Balloon Technique for Measuring the Radiation Patterns of Radio Aerials .....	322		
King, H. M. (with J. L. Goldberg), Automatic Switching of Sensitive Thermocouples .....	591		
King, R. E., A Pulse Phasemeter .....	615		
King, R. E., A Single Stage Amplifier for Repetitive Analogue Computation .....	770		
Knott, K. F., A Slow Switch .....	846		
Kohn, C. T., A Simple Phase Modulator .....	530		
Kokubu, M. (with I. Izumi), A Transistorized High-Voltage Regulator Using A.C. Control .....	554		
Kracht, U. (with U. Tallgren), A Reliable D.C.-Amplifier for Thermocouple Vacuum Gauges .....	671		
<b>L</b>			
Laishley, F. H., Low Voltage, High Input Impedance Hybrid Amplifier Circuits .....	309		
Lamb, W. G. P., Non-Linear CR Circuits Using Silicon Carbide Varistors .....	692		
(Letters to the Editor) .....	849		
Lamond, W. S. (with R. E. Aitchison), A 100V 100mA Regulated Power Supply Using Transistors .....	604		
Lawrence, J. T. (with F. J. Hyde), Electronic Assessment of Pasture Growth .....	666		
Lindahl, L. E. H. (with A. H. Christianson and R. N. Gooch), An Improved Technique for Measuring Skin Resistance .....	245		

	Page	Page	
Llanwyn Jones, D., An Electronic Spectrometer for Use at Audio and Sub-Audio Frequencies .. .. ..	820	Roberts, C. J. U. (with S. G. Smith), A Digital Shaft Position Indicator .. .. ..	72
Longley, D., An Analogue Computer Application in Operations Research .. .. ..	378	Ryan, R. D., A 50kc/s Cold-Cathode Decade Counter ..	779
<b>M</b>			
Maclean, T. S. M. (with R. A. Clark), The Contra-wound Linearly Polarized Helical Aerial .. .. ..	80	Sach, C. I., A Multi-Channel Tree Strain Recording System .. .. ..	736
Manton, R. G., The Calculation and Measurement of the Gains of End-Fire V.H.F. and U.H.F. Aerials ..	8	Sample, P. (with W. Alexander), An Experimental Electronic Ignition System .. .. ..	813
Mason, W. J. (with E. J. Brach), An Electronic Device for Counting and Recording Insects in Agricultural Research .. .. ..	761	Schagen, P. (with G. F. Weston), A Simple Electronic Milliammeter .. .. ..	21
May, G., The Demodulation of a Frequency Modulated Signal Modulated by Two Tones .. .. ..	816	Seeley, R. M., Integrate-and-Dump Operator for Serial Correlators .. .. ..	601
Mayne, D. Q., A Cold-Cathode Valve Binary Delay Line ..	557	Sieber, G. F. (with E. Gordy and P. Hasenpusch), A Four Decade Transistor Linear Densitometer .. .. ..	808
McPherson, J. W., Regulator Elements Using Transistors ..	162	Silver, D. E. P., A Differential Nuclear Magnetic Resonance Magnetometer .. .. ..	374
Melchior, G. (with J. P. Doury), Extraction of Luminance from the SECAM Composite Signal .. .. ..	464	Smith, D. T., Stabilizer Tube Test Set .. .. ..	260
Melchior, G. (with P. Cassagne), SECAM Signal Decoding for Single-Gun Tubes .. .. ..	824	Smith, R., Harmonic Voltages in the Outputs of Controlled Rectifier Circuits .. .. ..	832
Melchior, G. (with P. Cassagne), Some Aspects of SECAM Colour Television Receiver Design .. .. ..	676	Smith, S. G. (with C. J. U. Roberts), A Digital Shaft Position Indicator .. .. ..	72
Metcalf, W. S., Standing Waves on Transmission Lines ..	840	Spencer, T., Tuned Detectors Using the Twin-T Circuit .. .. ..	315
Miles, R. H. A., The Measurement of Permittivity and Conductivity at Temperatures up to 500°C .. .. ..	682	Stannett, R. H. O. (with E. A. Faulkner), A General-Purpose Phase-Sensitive Detector .. .. ..	159
Molyneux, L. (with A. De'Sa), A Frequency Compensated Phase Delay Circuit .. .. ..	838	Stevens, M. C., Ferrite Core Parameter Measurements at Very High Switching Currents .. .. ..	470
Molyneux, L. (with G. Flanagan), A Low Speed Single Supply NOR Logic System .. .. ..	460	Stillwell, P. F. T. C. (with R. H. Dagnall), Xerography Applied to a High Speed Computer Printer .. .. ..	756
Morris, D. J., The Shape and Performance of Multi-Aperture Magnetic Devices .. .. ..	440	Sutcliffe, H., Tunable Filter for Low Frequencies Using Operational Amplifiers .. .. ..	399
Morris, J. C. (with B. K. Gazey), An Underwater Acoustic Telephone for Free-Swimming Divers .. .. ..	364	Szlavik, F. (with L. Garamszegi), Improving the Performance of Cold Cathode Counting Tubes ..	828
Moss, J. K., A Transistor Linear Sawtooth Generator with Negligible Step .. .. ..	772		
Murphy, R. H., Ultra-Stable Semiconductor Reference Diodes .. .. ..	40		
<b>N</b>			
Nathan, A., Product Convertors and their Applications ..	106	Tallgren, U. (with U. Kracht), A Reliable D.C.-Amplifier for Thermocouple Vacuum Gauges .. .. ..	671
Nichols, K.G. (with J. D. E. Beynon), A Digital Number Generator .. .. ..	34	Tassinari, A. F., A Bi-directional Decade Counter with Anti-coincidence Network and Digital Display .. .. ..	173
Nichols, K. G., Some Transformations of the Nodal Admittance Matrix of a Network with Application to a Difference Amplifier .. .. ..	617	Tempest, W. (with M. E. Bryan), A Wide-Range Audio Frequency Pulse Modulator .. .. ..	154
<b>O</b>			
O'Grady, W. P., A Linear Frequency to Voltage Converter .. .. ..	776	Tove, P. A. (with J. Czekajewski), Pulse Period Meter with Short Response Time, Applied to Cardiotachometry .. .. ..	290
Osborne, M. R., A Simple D.C. Voltmeter .. .. ..	843		
Oxley, A. J., Some Simple Dekatron Coupling Circuits ..	227		
Oxley, A. J., A Voltage Stabilizer for Cold-Cathode Tube Circuits .. .. ..	548		
<b>P</b>			
Pacak, M., Voltage and Current Substandards .. .. ..	550	Vendrik, A. J. H. (with R. R. Vierhout), An Electronic Scanner for Transistor Pairs used in Balance Pre-Amplifiers .. .. ..	630
Palmer, J., An Economical Silicon Switching Transistor and its use in Ring Counters .. .. ..	519	Vierhout, R. R. (with A. J. H. Vendrik), An Electronic Scanner for Transistor Pairs used in Balance Pre-Amplifiers .. .. ..	630
Phillips, J. A., A Chart Reader and Statistical Analyser ..	216	Visontai, P., Voltage Stabilization in Hybrid Electronic Apparatus .. .. ..	764
Pinto, J. J., Semiconductor Time-Delay Circuits .. .. ..	166	Vodovnik, L., An Electromagnetic Brake Activated by Eyebrow Muscles .. .. ..	694
Pinto, J. J., Transistor Low Drift D.C. Amplifiers .. .. ..	304		
(Letters to the Editor) .. .. ..	412, 486, 558		
Poole, S., Telemetry Sampling Phenomena .. .. ..	296		
Potok, M. H. N. (with J. R. James), Application of a Repetitive Function Synthesizer to Generation of Very Low Frequency Signals and Noise .. .. ..	12		
Price, J. R., Improvements in the Design of Precision Wirewound Resistors .. .. ..	474		
<b>R</b>			
Rackowe, M. D. A. B., Sequential Access Ferrite Store with Stepping Switch Addressing .. .. ..	612	West, C. D., Analysis of a Feedback Amplifier .. .. ..	326
Radford, M. F., Frequency Scanning Aerials .. .. ..	222	Weston, G. F. (with P. Schagen), A Simple Electronic Milliammeter .. .. ..	21
Rao, B. S. (with D. E. N. Davies), The Measurement of Frequency Deviation by a Simulated Frequency-Modulated Radar Technique .. .. ..	100	Wheldon, R. J. (with B. O. Baker), High Voltage Deuterium Filled Grid Controlled Rectifiers .. .. ..	24
Reynolds, J. A., A 'Patients Monitor' for Hospital Out-Patients Departments .. .. ..	30	Wigan, E. R., A New Technique for the Recognition of Resistance in the Presence of Reactance .. .. ..	238
Riemenschneider, A. L. (with C. W. Cox), Digital Computer Analysis of the Tunnel Diode Relaxation Oscillator .. .. ..	382	Wilkins, B. R., A Low Frequency Random Step Generator .. .. ..	386
Ristic, V. M., A New Type of Free-Running Multivibrator .. .. ..	232	Wood, J. (with F. J. U. Ritson), Wide Band Current Transformers for the Examination of Current Waveforms .. .. ..	483
Ritson, F. J. U. (with J. Wood), Wide Band Current Transformers for the Examination of Current Waveforms .. .. ..	483	Wood, J., A Self-Tuning 5kW Linear Amplifier .. .. ..	524
<b>S</b>			
Sach, C. I., A Multi-Channel Tree Strain Recording System .. .. ..	736	Wood, M. D., Gain Controlled Band-Pass Amplifiers: A New Approach Using Integrated Circuit Video Amplifiers—	150
Sample, P. (with W. Alexander), An Experimental Electronic Ignition System .. .. ..	813	Part 1 .. .. ..	234
Schagen, P. (with G. F. Weston), A Simple Electronic Milliammeter .. .. ..	21	Part 2 .. .. ..	84
Seeley, R. M., Integrate-and-Dump Operator for Serial Correlators .. .. ..	601		
Sieber, G. F. (with E. Gordy and P. Hasenpusch), A Four Decade Transistor Linear Densitometer .. .. ..	808		
Silver, D. E. P., A Differential Nuclear Magnetic Resonance Magnetometer .. .. ..	374		
Smith, D. T., Stabilizer Tube Test Set .. .. ..	260		
Smith, R., Harmonic Voltages in the Outputs of Controlled Rectifier Circuits .. .. ..	832		
Smith, S. G. (with C. J. U. Roberts), A Digital Shaft Position Indicator .. .. ..	72		
Spencer, T., Tuned Detectors Using the Twin-T Circuit .. .. ..	315		
Stannett, R. H. O. (with E. A. Faulkner), A General-Purpose Phase-Sensitive Detector .. .. ..	159		
Stevens, M. C., Ferrite Core Parameter Measurements at Very High Switching Currents .. .. ..	470		
Stillwell, P. F. T. C. (with R. H. Dagnall), Xerography Applied to a High Speed Computer Printer .. .. ..	756		
Sutcliffe, H., Tunable Filter for Low Frequencies Using Operational Amplifiers .. .. ..	399		
Szlavik, F. (with L. Garamszegi), Improving the Performance of Cold Cathode Counting Tubes ..	828		
<b>T</b>			
Tallgren, U. (with U. Kracht), A Reliable D.C.-Amplifier for Thermocouple Vacuum Gauges .. .. ..	671		
Tassinari, A. F., A Bi-directional Decade Counter with Anti-coincidence Network and Digital Display .. .. ..	173		
Tempest, W. (with M. E. Bryan), A Wide-Range Audio Frequency Pulse Modulator .. .. ..	154		
Tove, P. A. (with J. Czekajewski), Pulse Period Meter with Short Response Time, Applied to Cardiotachometry .. .. ..	290		
<b>V</b>			
Vendrik, A. J. H. (with R. R. Vierhout), An Electronic Scanner for Transistor Pairs used in Balance Pre-Amplifiers .. .. ..	630		
Vierhout, R. R. (with A. J. H. Vendrik), An Electronic Scanner for Transistor Pairs used in Balance Pre-Amplifiers .. .. ..	630		
Visontai, P., Voltage Stabilization in Hybrid Electronic Apparatus .. .. ..	764		
Vodovnik, L., An Electromagnetic Brake Activated by Eyebrow Muscles .. .. ..	694		
<b>W</b>			
West, C. D., Analysis of a Feedback Amplifier .. .. ..	326		
Weston, G. F. (with P. Schagen), A Simple Electronic Milliammeter .. .. ..	21		
Wheldon, R. J. (with B. O. Baker), High Voltage Deuterium Filled Grid Controlled Rectifiers .. .. ..	24		
Wigan, E. R., A New Technique for the Recognition of Resistance in the Presence of Reactance .. .. ..	238		
Wilkins, B. R., A Low Frequency Random Step Generator .. .. ..	386		
Wood, J. (with F. J. U. Ritson), Wide Band Current Transformers for the Examination of Current Waveforms .. .. ..	483		
Wood, J., A Self-Tuning 5kW Linear Amplifier .. .. ..	524		
Wood, M. D., Gain Controlled Band-Pass Amplifiers: A New Approach Using Integrated Circuit Video Amplifiers—	150		
Part 1 .. .. ..	234		
Part 2 .. .. ..	84		
Wright, M. J., Applications of a Gate Controlled Switch in D. C. Power Circuits—	16		
Part 1 .. .. ..	84		
Part 2 .. .. ..	84		
<b>Y</b>			
Yazgan, B. (with J. Cochrane and J. H. Collins), Experiments on an X-Band Garnet Delay Line .. .. ..	627		
<b>Z</b>			
Zelinger, G., Matrix Analysis of the Colpitts' Oscillator ..	394		