

ANNUAL INDEX of Articles—1961

The annual index of *ELECTRONIC INDUSTRIES* has been arranged by subjects for easy reference to related topics. The first figure indicates the month in which the article appeared; the second figure indicates the page number.

BOOKS

A-C Control Devices and Assemblies, Part I	
A-C Motor Controllers, Part II	Gerhart W. Heumann 10-76
Advanced Calculus, 2nd Edition	David V. Widder 11-76
Airborne Radar	Donald J. Povesil 4-82
An Engineering Approach to Cytoscopic Instruments	
	Elliott J. Siff & Claude L. Emmerich 3-74
An Introduction to Electrotechnology	S. J. Kowolski 4-78
An Introduction to the Theory & Practice of Transistors	
	J. R. Tillman & F. F. Roberts 7-72
A Review of New Electronic Textbooks	6-246
Advances in X-Ray Analysis, Vol. 4	10-72
ASM Metals Handbook, 8th Edition, Vol. 1—Properties and Selection of Metals	11-72
Computer Logic	Ivan Flores 7-72
Automatic Control & Computer Engineering, Vol. 1	10-82
Cybernetics, 2nd Edition	Norbert Wiener 9-83
Digital Applications of Magnetic Devices	2-62
Conversion Factors & Tables, 3rd Edition	
	O. T. Zimmerman & L. Lavine 10-72
Electronic Engineering Principles, 3rd Edition	
	John D. Ryder 3-74
Electronic Equipment Reliability	
	G. W. A. Drummer & N. Griffin 3-74
Modern Mathematics for the Engineer, 2nd Series	
	Edwin F. Beckenbach 10-82
Electronic Maintainability Vol. III	1-62
Electronic Radio and Microwave Physics	
	D. E. Clark & H. J. Mend 11-76
Operational Electricity	Charles I. Hubert 10-72
Elements of Electronics, 2nd Edition	
	Henry V. Hickey & William M. Villines, Jr. 5-72
Elements of Maser Theory	Arthur A. Vuylsteke 8-78
Plasmas and Controlled Fusion	
	David J. Rose & Melville Clark, Jr. 10-76
Elements of Nuclear Engineering	Glenn Murphy 9-83
Error-Correcting Codes	W. W. Peterson 8-88
Sensory Communication	10-82
Field Computations in Engineering and Physics	
	A. Thom and C. J. Apelt 9-80
Foundation for Electric Network Theory	Myril B. Reed 5-80
Statistical Processes and Reliability Engineering	
	Dimitris N. Chorofas 10-82
Frequency-Power Formulas	Paul Penfield, Jr. 1-64
The Design of Small Direct-Current Motors	
	A. F. Puchstein 10-72
High Fidelity Sound Engineering	Norman H. Crowhurst 7-76
High-Frequency Magnetic Materials, Their Characteristics and Principal Applications	
	W. J. Polydoroff 3-78
Inertial Guidance	Charles S. Draper, et al 1-62
Introduction to Ceramics	W. D. Kingery 2-55
Introduction to the Statistical Dynamics of Automatic Control Systems	V. V. Solodovnikov 3-74
Management Models & Industrial Applications of Linear Programming, Vol. I	
	A. Charnes & W. W. Cooper 10-76
Iterative Arrays of Logical Circuits	F. C. Henkle III 7-72
Laplace Transformation, 2nd Edition	William T. Thompson 3-78
Management Control Systems	1-64
Mathematical Handbook for Scientists and Engineers	Granino A. Korn & Theresa M. Korn 8-79
Microwave Antennas	A. Z. Fradin 9-83
NMR and EPR Spectroscopy	4-82
Principles of Feedback Control	C. H. Witte 2-55
Printed Circuits: Their Design and Application	J. M. C. Duques 8-68
Progress in Astronautics and Rocketry, Vol. 1	4-72
Solid Propellant Rocket Research	
Progress in Semiconductors, Vol. 5	9-83
Radio Transmitters	
	Laurence F. Gray & Richard Graham 4-78

Semiconductor-Diode Parametric Amplifiers	L. A. Blackwell & K. L. Kotzebue 11-72
Sequential Decoding	John M. Wozencraft & Barney Reiffen 7-72
Static Relays for Electronic Circuits	L. Thourel 9-80
Statistical Processes and Reliability Engineering	C. Maxwell Stanley 8-78
The Antenna	Dimitris N. Chorofas 5-72
The Consulting Engineer	8-78
The Control of Multi-Variable Systems	
	Mihajlo D. Mesarovic 2-62
The Encyclopedia of Spectroscopy	2-62
Theory and Application of Ferrites	Roland F. Soohoo 4-72
The Physical Theory of Transistors	Leopoldo B. Voldes 9-80
The Theory and Design of Inductance Coils, 2nd Ed.	
	W. G. Welsby 1-62
Transform Calculus for Electrical Engineers	
	Roger Legros & A.V.J. Martin 8-68
Transistor Circuit Analysis	
	Maurice V. Joyce & Kenneth K. Clarke 4-78
Transistor Logic Circuits	Richard B. Hurley 8-68
Transmission of Information	Robert M. Fano 9-84
Vacuum Technology Transactions, 6th Vol.	1-66
Value Engineering, Vol. 2	9-80

BROADCAST

A Simple, Inexpensive DC Restorer	Oliver K. Allen 4-200
FCC Adopts FM-Stereo Standards	6-445
Inexpensive Remote Pickup Transmitters	9-200

CHARTS, NOMOGRAPHS, DIRECTORIES

Coil Winding Nomographs	Harold N. Miller 6-63
1961 Coming Events Calendar	1-108
Cues for Broadcasters—1950-1961	6-448
Determining Waveguide Wavelength	E. H. Hatcher 6-89
1962 Directory of Microwave Equipment	
	Manufacturers 11-119
Electronic Hardware: Tube & Transistor Sockets	
	Part 2 V. S. Glittens 3-117
1961 Electronic Industries Directory	6-249
1961 Military Electronic Procurement Directory	6-115
1961 NEDA Battery Index	6-241
Nomograph for Potentiometer Loading	
	John J. O'Connor 2-108
New Receiving & Special Purpose Tubes	6-91
Pressure-Measuring Instruments	6-133
Rigid Rectangular Waveguide Tables	6-81
Rise Time for Medium Power Transistors	
	Kurt P. Kuffer 6-228
1961 Roster of Assoc. Serving the Electronic Industries	6-25
1961 Semiconductors Replacement Guide	6-151
Shunt D. C. Regulated Nomographs	6-230
360° Transmission Line Nomograph	Allan Lytel 11-117
Ultrasonic Frequency Spectrum Chart	6-457
Vacuum Tubes	6-91
Wire & Cable	6-61
Tunnel Diode Noise Nomograph	L. E. Dickens 9-110

CIRCUITS

Adjusting L and C Values	Gene J. Hegedus 6-461
A Transmitter Combining Network	W. E. Junker 9-113
Analyze Feedback in Transistor Amplifiers	
	James C. Looney 9-98
Using the S-Plane for Filters	John J. Jones 10-92
Analyzing Non-Linear Circuits	Vincent Petrucci 10-112
Analyzing Realistic Cathode Follower	
	Raymond E. Lafferty 5-98
A Simple, Inexpensive DC Restorer	Oliver K. Allen 4-200
Designing a Common-Emitter Blocking Oscillator	
	Joseph J. Rolfe 7-110
Designing Solid State Commutators	
	Jerome E. Toffler 5-92

ANNUAL INDEX of Articles—1961

The annual index of *ELECTRONIC INDUSTRIES* has been arranged by subjects for easy reference to related topics. The first figure indicates the month in which the article appeared; the second figure indicates the page number.

BOOKS

A-C Control Devices and Assemblies, Part I	
A-C Motor Controllers, Part II	Gerhart W. Heumann 10-76
Advanced Calculus, 2nd Edition	David V. Widder 11-76
Airborne Radar	Donald J. Povesil 4-82
An Engineering Approach to Cytoscopic Instruments	Elliott J. Siff & Claude L. Emmerich 3-74
An Introduction to Electrotechnology	S. J. Kowolski 4-78
An Introduction to the Theory & Practice of Transistors	J. R. Tillman & F. F. Roberts 7-72
A Review of New Electronic Textbooks	6-246
Advances in X-Ray Analysis, Vol. 4	10-72
ASM Metals Handbook, 8th Edition, Vol. 1—Properties and Selection of Metals	11-72
Computer Logic	Ivan Flores 7-72
Automatic Control & Computer Engineering, Vol. 1	10-82
Cybernetics, 2nd Edition	Norbert Wiener 9-83
Digital Applications of Magnetic Devices	2-62
Conversion Factors & Tables, 3rd Edition	
Electronic Engineering Principles, 3rd Edition	O. T. Zimmerman & L. Lavine 10-72
Electronic Equipment Reliability	John D. Ryder 3-74
Modern Mathematics for the Engineer, 2nd Series	G. W. A. Drummer & N. Griffin 3-74
Electronic Maintainability Vol. III	Edwin F. Beckenbach 10-82
Electronic Radio and Microwave Physics	D. E. Clark & H. J. Mend 11-76
Operational Electricity	Charles I. Hubert 10-72
Elements of Electronics, 2nd Edition	Henry V. Hickey & William M. Villines, Jr. 5-72
Elements of Master Theory	Arthur A. Vuysteke 8-78
Plasmas and Controlled Fusion	David J. Rose & Melville Clark, Jr. 10-76
Elements of Nuclear Engineering	Glenn Murphy 9-83
Error-Correcting Codes	W. W. Peterson 8-88
Sensory Communication	10-82
Field Computations in Engineering and Physics	
Foundation for Electric Network Theory	A. Thom & C. J. Apelt 9-80
Statistical Processes and Reliability Engineering	Myril B. Reed 5-80
Frequency-Power Formulas	Dimitris N. Chorofas 10-82
The Design of Small Direct-Current Motors	Paul Penfield, Jr. 1-64
High Fidelity Sound Engineering	A. F. Puchstein 10-72
High-Frequency Magnetic Materials, Their Characteristics and Principal Applications	Norman H. Crowhurst 7-76
Inertial Guidance	W. J. Polydoroff 3-78
Introduction to Ceramics	Charles S. Draper, et al 1-62
Introduction to the Statistical Dynamics of Automatic Control Systems	W. D. Kingery 2-55
Management Models & Industrial Applications of Linear Programming, Vol. I	V. V. Solodovnikov 3-74
Iterative Arrays of Logical Circuits	A. Charnes & W. W. Cooper 10-76
Laplace Transformation, 2nd Edition	F. C. Henkle III 7-72
Management Control Systems	William T. Thompson 3-78
Mathematical Handbook for Scientists and Engineers	1-64
Microwave Antennas	Granino A. Korn & Theresa M. Korn 8-79
NMR and EPR Spectroscopy	A. Z. Fradin 9-83
Principles of Feedback Control	4-82
Printed Circuits: Their Design and Application	C. H. Wilts 2-55
Progress in Astronautics and Rocketry, Vol. 1	J. M. C. Duques 8-68
Solid Propellant Rocket Research	4-72
Progress in Semiconductors, Vol. 5	9-83
Radio Transmitters	
	Laurence F. Gray & Richard Graham 4-78

Semiconductor-Diode Parametric Amplifiers	L. A. Blackwell & K. L. Kotzebue 11-72
Sequential Decoding	John M. Wozencraft & Barney Reiffen 7-72
Static Relays for Electronic Circuits	L. Thourel 9-80
Statistical Processes and Reliability Engineering	C. Maxwell Stanley 8-78
The Antenna	Dimitris N. Chorofas 5-72
The Consulting Engineer	2-70
The Control of Multi-Variable Systems	Mihajlo D. Mesarovic 8-78
The Encyclopedia of Spectroscopy	2-62
Theory and Application of Ferrites	Roland F. Soohoo 4-72
The Physical Theory of Transistors	Leopoldo B. Voldes 9-80
The Theory and Design of Inductance Coils, 2nd Ed.	W. G. Welsby 1-62
Transform Calculus for Electrical Engineers	8-68
Transistor Circuit Analysis	Roger Legros & A.V.J. Martin 8-68
Transistor Logic Circuits	Maurice V. Joyce & Kenneth K. Clarke 4-78
Transmission of Information	Richard B. Hurley 8-68
Vacuum Technology Transactions, 6th Vol.	Robert M. Fano 9-84
Value Engineering, Vol. 2	1-66

BROADCAST

A Simple, Inexpensive DC Restorer	Oliver K. Allen 4-200
FCC Adopts FM-Stereo Standards	6-448
Inexpensive Remote Pickup Transmitters	9-200

CHARTS, NOMOGRAPHS, DIRECTORIES

Coil Winding Nomographs	Harold N. Miller 6-63
1961 Coming Events Calendar	1-108
Ches for Broadcasters—1950-1961	6-448
Determining Waveguide Wavelength	E. H. Hatcher 6-89
1962 Directory of Microwave Equipment	
Manufacturers	11-119
Electronic Hardware: Tube & Transistor Sockets	
Part 2	V. S. Glittens 3-117
1961 Electronic Industries Directory	6-249
1961 Military Electronic Procurement Directory	6-115
1961 NEDA Battery Index	6-241
Nomograph for Potentiometer Loading	
New Receiving & Special Purpose Tubes	John J. O'Connor 2-108
Pressure-Measuring Instruments	6-91
Rigid Rectangular Waveguide Tables	6-133
Rise Time for Medium Power Transistors	6-81
1961 Roster of Assoc. Serving the Electronic Industries	Kurt P. Kuffer 6-228
1961 Semiconductors Replacement Guide	6-25
Shunt D. C. Regulated Nomographs	6-151
Transmission Line Nomograph	Allan Lytel 6-230
Ultrasonic Frequency Spectrum Chart	1-117
Vacuum Tubes	6-457
Wire & Cable	6-91
Tunnel Diode Noise Nomograph	L. E. Dickens 6-110

CIRCUITS

Adjusting L and C Values	Gene J. Hegedus 6-461
A Transmitter Combining Network	W. E. Junker 9-113
Analyze Feedback in Transistor Amplifiers	
Using the S-Plane for Filters	James C. Looney 9-98
Analyzing Non-Linear Circuits	John J. Jones 10-92
Analyzing Realistic Cathode Follower	Vincent Petrucci 10-112
A Simple, Inexpensive DC Restorer	Raymond E. Lafferty 5-98
Designing a Common-Emitter Blocking Oscillator	Oliver K. Allen 4-200
Designing Solid State Commutators	Joseph J. Rolfe 7-110
	Jerome E. Toffler 5-92

Developing an Oscillator for 450-470 MC	Nick Goncharoff	1-198
Direct Coupling and DC Stability	Albert N. DeSautels	5-94
Electronic Ignition Systems Designs	Dr. A. V. J. Martin	7-164
#59-90° Emitter-Follower Phase Shifter	E. G. Fonds	8-118
Putting Diode Modulators to Work	George W. Ogar	7-86
Solid Networks	J. J. Bowe	5-120
Solid State Pulse Modulators	R. L. Blesle, Jr.	8-98
S-Plane Aids Filter Design	John J. Jones	2-98
Switching Drawings Show Logic	Hillel Pitlik	7-103
The Electrically Variable Inductor	J. L. Kiser	6-144
Using Insertion Parameters for Filter Design	Helms J. Kammin	2-95
Using Jacobians for Frequency-Selective Networks	Thomas R. Nisbet & Dr. William W. Happ	1-86

COMMUNICATION SYSTEMS

Designing a Frequency Division Multiplexer	Major Donald H. Nowakowski & Richard C. Benoit, Jr.	8-120
Designing RFI-Free Communication Systems	I. Mazzolotti & K. Engelson	5-114
Details for a Transistorized FM Wireless Mike	Samuel J. Lanzalotti	2-200
Developing an Oscillator for 450-470 MC	Nick Goncharoff	1-198
Eliminating Signal Ambiguity	Stanley W. Torode & Dennis L. Freeman	4-101
Equating Noise-Temperature with "Noise Figure"	Donald W. MacGlashan	11-108
Instrumentation for Radio Interference Measurements	Fred Haber & Ralph M. Showers	3-110
Radiosonde FM Receiver/Converter	Abraham Zeder	2-127
Inexpensive Remote Pickup Transmitters		9-200
Recent Advances in Ferromagnetics	W. J. Polydoroff	9-102
Latin American Communications Planning	Dr. Walter J. Duchinsky	9-214
Switching Drawings Show Logic	Hillel Pitlik	7-103
Problems of Space Communications: II—Sensitivity of Nonlinear Receivers	C. T. McCoy	9-118

COMPONENTS—CHASSIS ELEMENTS

Connector Design Considerations	R. J. Buchan	7-91
Controlling with Magnetic Cores	Michael Cooperman	2-116
Coupled Coaxial Filters	Glyn Bontick	8-108
Design Fundamentals of Analog Computer Components	R. M. Howe	4-78
Designing a Lightweight Vibration Transducer	Part I—Thomas D. Smith & Harry R. Spence	1-100
Designing a Lightweight Vibration Transducer	Part II—Thomas D. Smith & Harry R. Spence	2-120
Designing 2-Millimeter Wave Components	Lester I. Bertan	2-90
Design Notes for Strip Transmission Line Tuners	G. T. Orefice	3-104
Design Trends in Low-K Substrate Modules	Charles C. Rayburn	3-92
Details for a Transistorized FM Wireless Mike	Samuel J. Lanzalotti	2-200
Determining Optimum Burn-In for Capacitors	Lawrence D. Hines	9-105
Electronic Hardware: Tube and Transistor Sockets	Part 2—V. S. Gittens	3-117
Electronic Hardware: Sub-Panel Mounting Miniature Tube Laminated Sockets	V. S. Gittens	6-236
Electron Tubes and Semiconductors—What's Ahead?	Jerome Kraus	1-214
High Power Microwave Component Testing	Arthur C. Metzger & Leon Field	11-100
High Power TWT's with Wide Bandwidths	Allan W. Scott	11-112
Measurement of VSWR in Coaxial Systems	Leonard O. Sweet & Robert A. Lebowitz	11-214
One Solution to Servomechanism Hunting	Herbert Adise	1-92
Power Loss vs. Frequency in D-C to D-C Converters	Ralph Greenberg	3-96
Reliability of Precision Potentiometers	Herbert Adise	3-106
Silicon Rectifier Design Techniques	Dr. Robert Lynch	3-98
High-Energy Radiation Fields—Specific Material Applications		6-101
Designing with Teflon	Jack Kipnes	9-116
How Radiation Affects Material	Dr. Robert S. Shane	4-90
A Survey of Thin-Film Technology	John Watkins	10-102
Looking Ahead		1-124
1961 NEDA Battery Index		6-241
Connectors and Galvanic Corrosion	John Arnold	12-112
Potentiometers—Terms & Data	John Arnold	6-35
Recent Advances in Ferromagnetics	W. J. Polydoroff	9-102
Selecting Printed Circuit Boards		6-54
A Survey of Thin-Film Technology	John Watkins	9-92
The Electrically Variable Inductor	J. L. Kiser	6-144
The Tunnel Diode as a Pulse Generator	Paul Mauch	2-106
Understanding Silicon Photocells	Werner Luft	2-102
Applying Dot Components to Electronic Packaging	J. R. Goodykoontz & R. C. Frank	10-88

COMPUTERS

Basic RCTL Circuits	William D. Roehr	5-101
Design Fundamentals of Analog Computer Components	R. M. Howe	4-78
Languages Simplify Computer Science		6-474
Missile Computer Has "Self-Checking" Capability	Howard R. Nonken	7-100
National Electronics Conference		10-204
Noise Properties of Beam Switching Tubes	Gerald F. Ross	7-96
Programming for Dielectric Constant	Bertram C. Gray	8-106

Suppressing Single Interference Frequency	Dr. Theodore A. Bickert	5-104
Using Insertion Parameters for Filter Design	Helms J. Kammin	2-95

CONVENTIONS

1961 Coming Events Calendar		1-108
National Electronics Conference		10-204
NEREM '61—Microwave Clearing House		11-228
The IRE International Convention		3-124
1961 Western Electronic Show and Convention		8-120

CUES FOR BROADCASTERS

A Gates FM 5-B Modification	Norman E. Woods	1-204
An Inexpensive Remote	Glenn Thomas	11-223
Antenna Meter Protective Switch	Charles T. Smith	7-170
A Spring for Presto Turntables	E. Farber	4-204
A Video Tape Cuing Unit	Stan Davidson	5-160
Bulletin Alarm System	Donald M. Wheatley	2-204
Control Room Telephone Relay	Lawrence L. Prado, Jr.	4-204
Cues for Broadcasters—1950-1961		6-449
Dynamic Frequency Monitor Test	Elmo Darrach	10-192
Gates Interlocks	Donald M. Wheatley	3-273
I. O. Elapsed Time Meter	Stephen J. Stanley	11-223
Low Priced Echo Chamber	William J. Kiewel	7-170
Modifying the Video Transmission Test Set	Stephen J. Stanley	8-220
Tape Recorder Switching Circuit	Lawrence L. Prado, Jr.	9-206
Teletype Static Eliminator	I. A. Elliott	1-204

EDITORIALS

Anti-Trust		4-1
Component Price Cutting Defeats Reliability	Dr. Harper Q. North	8-89
"Defogging" RFI		5-1
Electronic Industries 1960-61		1-76
Engineers and Doctors		4-1
First Order of Business		2-1
The I. R. E.		3-1
Needed—A Tactical Advantage	Dr. Rex C. Mack	8-91
Microwaves in 1962?		11-1
Our Door is Always Open		7-1
Reliability Disciplines—The Price of Electronic Industry Responsibility	Dr. Leslie W. Ball	8-88
Systems Wanted—Technical Filing		5-1
(Opportunity on the Horizon—Electronic Teaching)		10-1
Use of our Technical Resource in Relation to Our National Security	Owen S. Dolds	8-90
WE NEED—Nuclear Test Facilities & Standards		9-1
What Price Reliability		9-1

GENERAL

Adjusting L and C Values	Gene J. Hegedus	6-461
A Survey of Thin-Film Technology	John Watkins	10-102
A Survey of Thin-Film Technology	John Watkins	9-92
Countermeasures Card File System	Chester W. Young	9-120
Audio-Visual Learning—It's More Than Hear-Say!	William A. Harker	8-103
Deriving the Tunnel Diode Curve	Ferdinand H. Mitchell, Jr.	10-96
Budgeting Manpower	H. E. Matuszewski	5-176
Latin American Communications Planning	Dr. Walter J. Duchinsky	9-214
1961 Coming Events Calendar		1-108
What Price RELIABILITY?	John E. Hickey, Jr.	9-142
Coming Events for 1961-1962		6-15
Component Price Cutting Defeats Reliability	Dr. Harper Q. North	8-89
The Materials and Shapes of Vacuum Tube Heaters	W. A. Hassel	12-116
Controlling with Magnetic Cores	Michael Cooperman	2-116
Distributing in Industrial Electronic Parts	John E. Hickey	7-174
Handling Light with Fibre Optics	O. M. Sa'ati	12-102
Electronic Ignition Systems Designs	Dr. A. V. J. Martin	7-164
Insulating Against Nuclear Effects	J. C. Kyle & L. E. Baird	12-124
1961 Electronic Industries Directory	Steve C. Gioia	12-222
Cataloging Technical Articles	Edward W. Jones	4-105
Fundamentals of Space Arithmetic		12-151
Electronic Materials, Now and in the Future		6-107
Government Contract Awards		6-101
High-Energy Radiation Fields—Specific Material Applications	Dr. Robert S. Shane	4-90
How Radiation Affects Material	C. V. D. Rousseau	8-228
Investigate Before Hiring		3-126
1961 IRE "Fellows" Look at the Future		6-474
Languages Simplify Computer Science		1-124
Looking Ahead		6-135
Measurement Standards	Richard G. Stranix	6-135
Microwaves—Past, Present, and Future	Dr. Kiyo Tomiyasu	11-90
1961 Military Electronic Procurement Directory		6-115
Multiplying Complex Numbers	Morton A. Lipman	6-455
National Electronics Conference		10-204
Needed—A Tactical Advantage	Dr. Rex C. Mack	8-91
New Electronic Standards		6-51
Potentiometers—Terms & Data	John Arnold	6-35
Recent Advances in Ferromagnetics	W. J. Polydoroff	9-102
1961 Roster of Assoc. Serving the Electronic Industries		6-25
Selecting Printed Circuit Boards	Dr. Norman A. Skow	6-54
1961 Semiconductors Replacement Guide		6-157
The IRE International Convention		3-124

(Continued on page 231)

ANNUAL INDEX OF ARTICLES

The Problem of Splinter Companies	Elton T. Barrett	4-222
Reliability Disciplines—The Price of Electronic	Dr. Leslie W. Ball	8-88
Industry Responsibility	Dr. Leslie W. Ball	8-88
Telephone Cable Measurement Techniques	S. P. Fairchild, Jr.	12-210
The Representative's Role in Electronics	Robert Aen	10-206
S-Plane Aids Filter Design	John J. Jones	2-98
Use of our Technical Resource in Relation to Our National Security	Owen S. Olds	8-90
Using Jacobians for Frequency-Selective Networks	Thomas R. Nisbet & Dr. William W. Hupp	1-86
1961 Western Electronic Show and Convention	Writing—Key to Your Engineering Future	8-120
A. M. Morgan		2-212
Writing—Newest Engineering Skill	Harry Baum	3-278

INSTRUMENTS, MEASUREMENTS, TEST METHODS

Analyzing Impedance with the Slotted Line	Blossy Frederico	3-108
Phase Equalization is Important	Finn Jorgensen	10-98
An Evaluation of Kilomegacycle Oscilloscopes	Donald R. Noel & Charles Susskind	8-92
Build a Simple Delay Line Clock	Ronald M. Sonkin	2-126
Designing for Low Level Inputs	D. B. Schneider	1-81
Design of Automatic Test Equipment	Jerome E. Toffler	1-76
Determining Optimum Burn-In for Capacitors	Lawrence D. Hines	9-105
Dynamic Frequency Monitor Test	Elmo Darrah	10-192
High Power Microwave Component Testing	Arthur C. Metzger & Leon Field	11-100
How to Design Low-Noise Amplifiers	Francis Opp	8-112
Instrumentation for Radio Interference	Measurements	Fred Haber & Ralph M. Showers
Level Gauges in the Liquid Helium-Liquid Oxygen Range	Dr. H. B. Sachse	1-96
Looking Ahead		1-124
Measurement of VSWR in Coaxial Systems	Leonard O. Sweet & Robert A. Lebowitz	11-214
Measuring Standards	Richard G. Stranix	6-135
Measuring Recovery Time of Ultra Fast Diodes	George C. Messenger	4-98
Missile Computer Has "Self-Checking" Capability	Howard R. Nonken	7-100
Modifying the Video Transmission Test Set	Stephen J. Stanley	8-220
Power Loss vs Frequency—In D-C to D-C Converters	Ralph Greenburg	3-96
Power Regulator for BWO Sweep Generators	R. B. Mosley	2-112
Pressure-Measuring Instruments	Thomas J. Russell	6-133
Radar Antenna Test Load	Paul C. Constant, Jr.	11-94
Recording Flow Meter Readings	R. Freed & L. S. Kilvans	5-156
Satellite Flashing Light System	Calvin R. Graf	4-84
1961 Survey of Cathode Ray Oscilloscopes	R. F. Pramann	10-120
Standard Frequency Stations	Paul Mauch	6-439
Thermal Drift in Microwave Power Meters	Thomas A. Moore, Sr.	11-102
The Tunnel Diode as a Pulse Generator	Martin J. Klousis	2-106
UHF Phase Measurement by an AM Process	James D. Williams & Stephen P. Denker	5-110
Using WWV for Calibrating Precision Oscillators		3-238
Fourier Analyzer Uses the Hall Effect		9-108

TEST FACILITY

These huge chambers are exhausted of air and fitted with equipment which permits the test of space and missile components under conditions simulating cold of outer space, solar heat radiation and other hazards. Envirovac test facility made by High Vacuum Equipment Corp., Hingham, Mass., is capable of testing a four-ton satellite.



MICROWAVE

Analyzing Impedance with the Slotted Line	Blossy Frederico	3-108
Designing 2-Millimeter Wave Components	Leater L. Bertan	2-90
Design Notes for Strip Transmission Line Tuners	G. T. Orloff	3-104
Develop Practical Hall Effect Devices	Albert R. Hilbinger, et al	5-88
1962 Directory of Microwave Equipment Mfrs.		11-119
Eliminating Distortion in the TWT	Dr. W. Revis Ayers	11-104
Eliminating Signal Ambiguity	Stanley W. Torode & Dennis L. Freeman	4-101
High Power Microwave Component Testing	Arthur C. Metzger & Leon Field	11-100
Looking Ahead		1-124
Measurement of VSWR in Coaxial Systems	Leonard O. Sweet & Robert A. Lebowitz	11-214
Microwaves in 1962		11-1
Microwaves—Past, Present, and Future	Dr. Kiyu Tomiyasu	11-90
Modern TWT Focusing Methods	C. Louis Cuccia	11-96
NEREM '61—Microwave Clearing House	R. B. Mosley	11-226
Power Regulator for BWO Sweep Generators	R. B. Mosley	2-112
Programming for Dielectric Constant	Bertram C. Gray	8-106
Properties of Ferromagnetic Materials	Irving Reingold & John L. Carter	6-467
Rigid Rectangular Waveguide Tables	C. T. McCoy	4-116
Sensitivity of Linear Receivers	Dr. Richard W. Damon	11-115
Solid State Control of Microwaves	R. F. Pramann	11-139
1962 Summary of Microwave Electron Devices		11-139
Thermal Drift in Microwave Power Meters	R. F. Pramann	11-102
Useful Waveguide Formulas		6-87

PRODUCTION METHODS

Audio-Visual Learning—It's More Than Hear-Say	William A. Harker	8-103
Applying Dot Components to Electronic Packaging	J. R. Goodykoots & R. C. Frank	10-88
Connector Design Considerations	R. J. Buchan	7-91
A Survey of Thin-Film Technology	John Watkins	10-102
Designing a Lightweight Vibration Transducer	Thomas D. Smith & Harry R. Spence	1-100
Designing a Lightweight Vibration Transducer, Part II	Thomas D. Smith & Harry R. Spence	2-120
Design Trends in Low-K Substrate Modules	Charles C. Rayburn	3-92
Designing with Teflon	Jack Klipnes	9-116
Electronic Hardware—Sub-Panel Mounting Miniature Tube Laminated Sockets	V. S. Gittens	6-236
Electronic Hardware—Tube and Transistor Sockets, Part 2	V. S. Gittens	3-117
Improving Reliability Through Packaging	D. F. Christensen & M. E. Nelson	7-106
Determining Waveguide Wavelength	E. R. Hatcher	6-89
Equating "Noise-Temperature" with "Noise Figure"	Donald W. MacGlashan	11-108
Properties of Ferromagnetic Materials	Irving Reingold & John L. Carter	6-467
Radar Antenna Test Load	Thomas J. Russell	11-94
Reconnaissance Satellite Antennas	Robert B. MacAuliff	4-108
Rigid Rectangular Waveguide Tables		6-81
Solid State Pulse Modulators	R. L. Bielele, Jr.	8-98
Useful Waveguide Formulas		6-87

RADIO FREQUENCY INTERFERENCE

Designing REI-Free Communications Systems	I. Mazzotti & M. Enkelson	5-111
Instrumentation for Radio Interference Measurements	Fred Haber & Ralph M. Showers	8-110
Suppressing Single Interference Frequency	Dr. Theodore A. Bickert	5-104

RELIABILITY

Component Price Cutting Defeats Reliability	Dr. Harper Q. North	8-89
Applying Dot Components to Electronic Packaging	J. R. Goodykoots & R. C. Frank	10-88
How Radiation Affects Material	Dr. Robert S. Shane	4-80
What Price RELIABILITY?	John E. Hickey, Jr.	9-142
Improving Reliability Through Packaging	D. F. Christensen & M. E. Nelson	7-106
Reliability Disciplines—The Price of Electronic Industry Responsibility	Dr. Leslie W. Ball	8-88
Reliability of Precision Potentiometers	Herbert Adise	3-106

SEMICONDUCTORS

Analyze Feedback in Transistor Amplifiers	James C. Louney	9-98
Ultramicroanalysis	James S. Pelle	12-109
Analyzing Non-Linear Circuits	Vincent Petrucelli	10-112
Junction Transistor Analysis for Circuitry	Jay Engleman	12-128
A Simple, Inexpensive DC Restorer	Oliver K. Allen	4-200
A Survey of Thin-Film Technology	John Watkins	9-92
Basic RCTL Circuits	William D. Roehr	5-101
Deriving the Tunnel Diode Curve	Ferdinand H. Mitchell, Jr.	10-96
Build a Simple Delay Line Clock	Ronald M. Sonkin	2-126
Fourier Analyzer Uses the Hall Effect	James D. Williams & Stephen P. Denker	9-108
Develop Practical Hall Effect Devices	Albert R. Hilbinger, et al	5-88

Tunnel Diode Noise Nomograph.....	L. E. Dickens	9-110
Designing a Common-Emitter Blocking Oscillator.....	Joseph J. Rolfe	7-110
Designing Solid State Commutators.....	Jerome E. Toffler	5-92
Details for a Transistorized FM Wireless Mike.....	Samuel J. Lanzalotti	2-200
Direct Coupling... and DC Stability.....	Albert N. DeSautels	5-94
Electron Tubes and Semiconductors—What's Ahead?.....	Jerome Kraus	1-214
#59-90° Emitter-Follower Phase Shifter.....	E. G. Fonda	8-118
How to Design Low-Noise Amplifiers.....	Francis Opp	8-112
Interpreting Transistor Noise Performance.....	Louis Calgagno & Richard E. Hobson	10-109
Looking Ahead.....	George C. Messenger	4-99
Measuring Recovery Time of Ultra Fast Diodes.....	George C. Messenger	4-99
Power Loss vs Frequency... In D-C to D-C.....	Ralph Greenburg	3-96
Putting Diode Modulators to Work.....	George W. Ogar	7-86
Rise Time for Medium Power Transistors.....	Kurt F. Kuffer	6-224
Radioonde FM Receiver/Converter.....	Dr. Richard W. Damon	11-115
1961 Semiconductors Replacement Guide.....	Abraham Zeder	2-127
Silicon Rectifier Design-Techniques.....	Dr. Robert Lynch	3-94
Solid Networks.....	J. J. Howe	5-120
Solid-State Control of Microwaves.....	Dr. Richard W. Damon	11-115
Solid State Pulse Modulators.....	R. L. Biesele, Jr.	8-98
The Tunnel Diode as a Pulse Generator.....	Paul Mauch	2-106
Understanding Silicon Photocells.....	Werner Luft	2-102

SPACE AND AIRBORNE VEHICLES

Fundamentals of Space Arithmetic.....	Edward W. Jones	4-105
Level Gauges in the Liquid Helium-Liquid Oxygen Range.....	Dr. H. B. Sachse	1-96
Reconnaissance Satellite Antennas.....	Robert B. MacAskill	4-108
Satellite Flashing Light System.....	R. Freed & L. S. Kilvans	4-94
1-Sensitivity of Linear Receivers.....	C.T. McCoy	4-116

SYSTEMS

Designing for Low Level Inputs.....	D. B. Schneider	1-81
Countermeasures Card File System.....	Chester W. Young	9-120
Design of Automatic Test Equipment.....	Jerome E. Toffler	1-76
Electronic Ignition Systems Designs.....	Dr. A. V. J. Martin	7-164
Phase Equalization is Important.....	Flinn Jorkensen	10-98
FCU Adopts FM-Stereo Standards.....		6-445
One Solution to Servomechanism Hunting.....	Herbert Adise	1-92
Satellite Flashing Light System.....	R. Freed & L. S. Kilvans	4-94

PAGE FROM AN ENGINEER'S NOTEBOOK

#59-90° Emitter-Follower Phase Shifter.....	E. G. Fonda	8-118
#60—Transmission Line Nomograph.....	Allan Lytel	11-117

TUBES

Analyzing Realistic Cathode Follower.....	Raymond E. Lafferty	5-98
An Evaluation of Kilomegacycle Oscilloscopes.....	Donald R. Noel & Charles Suskind	8-92
Electronic Hardware: Tube and Transistor Sockets, Part 2.....	V. S. Gittens	3-117
Electron Tubes and Semiconductors—What's Ahead?.....	Jerome Kraus	1-214
Eliminating Distortion in the TWT.....	Dr. W. Revis Ayers	11-104
High Power TWT's with Wide Bandwidths.....	Allan W. Scott	11-112

I. O. Elapsed Time Meter.....	Stephen J. Stanley	11-222
Modern TWT Focusing Methods.....	C. Louis Cuccia	11-96
New Receiving & Special Purpose Tubes.....		6-51
Noise Properties of Beam Switching Tubes.....	Gerald F. Ross	7-35
1962 Summary of Microwave Electron Devices.....		11-139
Vacuum Tubes.....		6-91

What's New

Alloy Junction, Four Layer Device.....		10-177
Computer Inquiry Features Automatic Voice Replies.....		11-114
Computer Protection.....		3-243
Computer Uses ALGOL-COBOL.....		4-121
Digital Converter.....		4-106
Lincoln Laboratory's FX-1 Computer.....		10-114
X-Ray Crystallography Automated.....		9-136

COMPONENTS

Electro-Optical Potentiometer.....		8-110
Deep Drawn Mylar® Insulators.....		9-115
Gradation Method Fires Components.....		2-115
Production Stations.....		9-126
Illuminated Indicator Switch.....		6-167
New Photo Electric Transducers.....		2-97
Silicon Carbide Transistors.....		2-101

GENERAL

Air Traffic Control System.....		7-90
Shifted Raster Reads Variable Font.....		10-101
Anti-jam Radar.....		5-113
Artificial Quartz.....		3-244
Breadboards Speed Electro-Mechanical Design.....		5-166
Computer Inquiry Features Automatic Voice Repairs.....		11-118
3-D Stereoscopic Display.....		7-105
High-Speed Automatic Monitor System.....		1-90
Moldable Ceramoplastic.....		3-243
New Engineering Cuts Drafting.....		11-110
New Thermoelectric Applications.....		2-110
Optical Maser.....		3-102
Thin-Route Microwave.....		1-95
TV System for Pentaxon.....		1-99
3,000 WPM Printer.....		11-111

MEASURING EQUIPMENT

Digital Voltmeter.....		3-103
Interferometer Spectrometer.....		7-109
Linear Accelerator.....		4-115
U. S. Army's Field X-Ray Unit.....		10-179
X-Ray Crystallography Automated.....		9-136

PRODUCTION

Alloy Junction, Four Layer Device.....		10-177
Production Stations.....		9-136
Die Stamp Circuits.....		7-145
Diode Glass Beading Machine.....		8-111
Electroplated Drills.....		4-122
Polycarbonate Resins.....		4-123
Riveting Subminiature Parts.....		3-249
Telfon® Splices in Exotic Environments.....		8-110

SEMICONDUCTORS

Alloy Junction, Four Layer Device.....		10-177
Cutting Germanium Discs.....		3-242
Electro-Optical Potentiometer.....		8-110
Solar Cell Covers.....		4-107

TELEVISION

Shifted Raster Reads Variable Font.....		10-101
---	--	--------

AUTHOR'S INDEX

Adise, Herbert—One Solution to Servomechanism Hunting.....	1-92
Adise, Herbert—Reliability of Precision Potentiometers.....	3-106
Allen, Oliver K.—A Simple, Inexpensive DC Restorer.....	4-200
Arnold, John—Potentiometers—Terms & Data.....	6-35
Asen, Robert—The Representative's Role in Electronics.....	10-206
Ayers, Dr. W. Revis—Eliminating Distortion in the TWT.....	11-104
Baird, L. E.—Insulating Against Nuclear Effects.....	12-124
Hall, Dr. Leslie W.—Reliability Disciplines—The Price of Electronic Industry Responsibility.....	8-88
Barrack, Carroll M.—Develop Practical Hall Effect Devices.....	5-88
Barrett, Elton T.—The Problem of Splinter Companies.....	4-222
Baum, Harry—Writing—Newest Engineering Skill.....	3-278
Benoit, Jr., Richard C.—Designing a Frequency Division Multiplexer.....	8-210
Bertan, Lester L.—Designing 2-Millimeter Wave Components.....	2-90
Blickert, Dr. Theodore A.—Suppressing Single Interference Frequency.....	5-104
Biesele, Jr., R. L.—Solid State Pulse Modulators.....	8-98
Buntick, Glyn—Coupled Coaxial Filters.....	8-108
Bowe, J. J.—Solid Networks.....	5-120
Buchan, R. J.—Connector Design Considerations.....	7-91
Calgagno, Louis—Interpreting Transistor Noise Performance.....	10-109
Carter, John L.—Properties of Ferromagnetic Materials.....	6-467
Christensen, D. F.—Improving Reliability Through Packaging.....	7-106
Constant, Jr., Paul C.—Recording Flow Meter Readings.....	5-156
Cooperman, Michael—Controlling with Magnetic Cores.....	2-116
Cuccia, C. Louis—Modern TWT Focusing Methods.....	11-96
Damon, Dr. Richard W.—Solid State Control of Microwaves.....	11-115
Darrab, Elmo—Dynamic Frequency Monitor Test.....	10-192
Davidson, Stan—A Video Tape Cuing Unit.....	5-160
DeSautels, Albert N.—Direct Coupling... and DC Stability.....	5-94
Dickens, L. E.—Tunnel Diode Noise Nomograph.....	9-110
Duschinsky, Dr. Walter J.—Latin American Communications Planning.....	9-214
Engelau, M.—Designing RFI-Free Communication Systems.....	5-114
Engleman, Jay—Junction Transistor Analysis for Circuitry.....	12-128
Fairchild, Jr., S. F.—Telephone Cable Measurement Techniques.....	12-210
Farber, E.—A Spring for Presto Turntables.....	4-204
Fallon, Leon—High Power Microwave Component Test-Ins.....	11-100
Fonda, E. G.—#59-90° Emitter-Follower Phase Shifter.....	8-118
Frank, Dr. Martin S.—Connectors and Galvanic Corrosion.....	12-112
Frederica, Blossy—Analyzing Impedance with the Slotted Line.....	3-108
Freed, R.—Satellite Flashing Light Systems.....	4-94

(Continued on page 236)

ANNUAL INDEX OF ARTICLES

AUTHOR'S INDEX (Cont.)

Freeman, Dennis L.—Eliminating Signal Ambiguity	4-101
Giola, Steve C.—Cataloging Technical Articles	12-222
Gittens, V. S.—Electronic Hardware: Tubes & Transistor Sockets, Part 2	3-117
Gittens, V. S.—Electronic Hardware: Sub-Panel Mounting Miniature Tube Laminated Sockets	6-236
Goodykoontz, J. R.—Applying Dot Components to Electronic Packaging	10-88
Graf, Calvin R.—Standard Frequency Stations	6-439
Goncharov, Nick—Developing an Oscillator for 450-470 MC	1-198
Greenburg, Ralph—Power Loss vs Frequency in D-C to D-C Converters	3-96
Guy, Bertram C.—Programming for Dielectric Constant	8-106
Haber, Fred—Instrumentation for Radio Interference Measurements	3-110
Happ, Dr. William W.—Using Jacobians for Frequency-Selective Networks	1-86
Harker, William A.—Audio-Visual Learning—It's More Than Hear-Say!	8-103
Hasert, W. A.—The Materials and Shapes of Vacuum Tube Heaters	12-118
Hatcher, K. R.—Determining Waveguide Wavelength	6-89
Hegedus, Gene J.—Adjusting L and C Values	6-461
Hickey, John A.—Distributing Industrial Electronic Parts	7-174
Hickey, Jr., John E.—What Price RELIABILITY?	9-142
Hilbinger, Albert R.—Develop Practical Hall Effect Devices	5-88
Hines, Lawrence D.—Determining Optimum Burn-in for Capacitors	9-105
Hobson, Richard E.—Interpreting Transistor Noise Performance	10-109
Jones, Edward W.—Fundamentals of Space Arithmetic	4-105
Jones, John J.—S-Plane Aids Filter Design	2-88
Jones, John J.—Using the S-Plane for Filters	10-92
Jorgensen, Finn—Phase Equalization is Important	10-98
Junker, W. E.—A Transmitter Combining Network	9-113
Kammis, Helms J.—Using Insertion Parameters for Filter Design	2-95
Kiewel, William J.—Low Priced Echo Chamber	7-170
Klouna, Martin J.—Using WWV for Calibrating Precision Oscillators	3-238
Kipnes, Jack—Designing with Teflon	9-116
Kirchmairer, Thomas W.—Shunt D.C. Regulated Nomographs	6-230
Kizer, J. L.—The Electrically Variable Inductor	6-144
Kraus, Jerome—Electron Tubes and Semiconductors—What's Ahead?	1-274
Kuffer, Kurt P.—Rise Time for Medium Power Transistors	6-228
Lafferty, Raymond E.—Analyzing Realistic Cathode Follower	5-98
Lannalotti, Samuel J.—Details for a Transistorized FM Wireless Mike	2-200
Lebowitz, Robert A.—Measurement of VSWR in Coaxial Systems	11-214
Lipman, Morton A.—Multiplying Complex Numbers	6-455
Looney, James C.—Analyze Feedback in Transistor Amplifiers	9-98
Luft, Werner—Understanding Silicon Photocells	2-102
Lynch, Dr. Robert—Silicon Rectifier Design Techniques	3-98
Lytel, Allan—360—Transmission Line Nomograph	11-117

NEW TECHNIQUE

L. H. Germer (left) and A. U. MacRae of Bell Telephone Laboratories with apparatus used in a new technique, perfected by Germer, for studying absorption of monolayers of gas on a crystal surface. The low energy diffraction technique is yielding information of great value in studies of surface effects such as catalysis and corrosion.



MacAnhill, Robert B.—Reconnaissance Satellite Antennas	4-108
Macintosh, Donald W.—Equating 'Noise-Temperature' with 'Noise Figure'	11-103
Mack, Dr. Rex C.—Needed—A Tactical Advantage	8-91
Martin, Dr. A. V. J.—Electronic Ignition Systems Designs	7-164
Matusewskii, H. E.—Budgeting Manpower	5-176
Mauch, Paul—The Tunnel Diode as a Pulse Generator	2-106
Massolotti—Designing RFI-Free Communication Systems	5-114
McCoy, C. T.—Problems of Space Communications: II—Sensitivity of Nonlinear Receivers	9-118
McCoy, C. T.—I—Sensitivity of Linear Receivers	8-119
Messenger, George C.—Measuring Recovery Time of Ultra Fast Diodes	4-99
Metzger, Arthur C.—High Power Microwave Component Testing	11-100
Miller, Harold N.—Coil Winding Nomographs	6-63
Mitchell, Jr., Ferdinand H.—Deriving the Tunnel Diode Curve	10-96
Moore, Sr., Thomas A.—UHF Phase Measurement by an AM Process	5-110
Morgan-Voyce, A. M.—Writing—Key to your Engineering Future	2-212
Mosley, R. B.—Power Regulator for BWO Sweep Generators	2-112
Nowakoski, Major Donald B.—Designing a Frequency Division Multiplexer	8-120
Nisbet, Thomas R.—Using Jacobians for Frequency-Selective Networks	1-86
Nonaka, Howard R.—Missile Computer has "Self-Checking" Capability	7-100
North, Dr. Harper Q.—Component Price Cutting Defeats Reliability	8-89
Noel, Donald R.—An Evaluation of Kilomegacycle Oscilloscopes	8-92
O'Connor, John J.—Nomograph for Potentiometer Loading	2-108
Ogar, George W.—Putting Diode Modulators to Work	7-86
Olds, Owen S.—Use of our Technical Resource in Relation to Our National Security	8-90
Opp, Francis—How to Design Low-Noise Amplifiers	8-112
Orelice, G. T.—Design Notes for Strip Transmission-Line Tuners	3-104
Pelle, James S.—Ultramicroanalysis	12-109
Petrucelli, Vincent—Analyzing Non-Linear Circuits	10-112
Pitlik, Hillel—Switching Drawings Show Logic	7-103
Polydoroff, W. J.—Recent Advances in Ferromagnetics	9-102
Prado, Jr., Lawrence L.—Control Room Telephone Relay	4-204
Prado, Jr., Lawrence L.—Tape Recorder Switching Circuit	11-102
Prattman, R. P.—Thermal Drift in Microwave Power Meters	11-102
Rayburn, Charles C.—Design Trends in Low-K Substrate Modules	3-92
Reingold, Irving—Properties of Ferromagnetic Materials	6-467
Roehr, William D.—Basic RTL Circuit	5-101
Rolfe, Joseph J.—Designing a Common-Emitter Blocking Oscillator	7-110
Ross, Gerald F.—Noise Properties of Beam Switching Tubes	7-96
Round, Norman F.—Simplify Your Turntable Operation	10-186
Roussan, C. V. D.—Investigate Before Hiring	8-228
Russell, Thomas J.—Radar Antenna Test Load	11-94
Sachse, Dr. H. B.—Level Gauges in the Liquid Helium-Liquid Oxygen Range	1-96
Seanga, William A.—Develop Practical Hall Effect Devices	5-88
Schneider, D. B.—Designing for Low Level Inputs	1-81
Scott, Allan W.—High Power TWT's with Wide Bandwidths	11-112
Shane, Dr. Robert S.—How Radiation Affects Material	4-90
Showers, Ralph M.—Instrumentation for Radio Interference Measurements	3-110
Skov, Dr. Norman A.—Selecting Printed Circuit Boards	6-54
Smith, Thomas D.—Designing a Lightweight Vibration Transducer, Part I	1-100
Smith, Thomas D.—Designing a Lightweight Vibration Transducer, Part II	2-120
Smith, Charles T.—Antenna Meter Protective Switch	7-150
Sonkin, Ronald M.—Build a Simple Delay Line Clock	2-126
Spence, Harry R.—Designing a Lightweight Vibration Transducer, Part I	1-100
Spence, Harry R.—Designing a Lightweight Vibration Transducer, Part II	2-120
Stanley, Stephen P.—I. O. Elapsed Time Meter	11-223
Stanley, Stephen J.—Modifying the Video Transmission Test Set	8-220
Straix, Richard G.—Measurement Standards	6-135
Sweet, Leonard O.—Measurement of VSWR in Coaxial Systems	11-214
Thomas, Glenn—An Inexpensive Remote	11-223
Tolfer, Jerome E.—Design of Automatic Test Equipment	1-76
Tolfer, Jerome E.—Designing Solid State Commutators	5-92
Tomiyasu, Dr. Kiyo—Microwaves—Past, Present, and Future	11-90
Torode, Stanley W.—Eliminating Signal Ambiguity	4-101
Watkins, John—A Survey of Thin-Film Technology, Part I	9-92
Watkins, John—A Survey of Thin-Film Technology, Part II	10-102
Whitney, Philip—Inexpensive Remote Pickup Transmitters	9-200
Young, Chester W.—Countermeasures Card File System	9-120
Zeder, Abraham—Radioonde FM Receiver/Converter	2-127

ELECTRONIC INDUSTRIES Advertisers—December 1961

This index is published as a convenience. No liability is assumed for errors or omissions.

A		F	
Acme Electric Corp.	208	Federacion Nationale Des Industries Electroniques	50
Aidon Products Co.	177	Film Capacitors, Inc.	190
Allen-Brodley	Insert following page 166	Flute Mfg. Co., Inc., John Force, Wm. A., & Co., Inc.	84-85
Allied Chemical, General Chemical Div.	28	Force, Wm. A., & Co., Inc.	175
Alpha Metals, Inc.	229	Fusite Corp.	77
American Semiconductor Corp.	183, 185, 187	FXR, RF Products and Microwave Div.	36
AMP Incorporated	80	Amphenol-Borg Electronics Corp.	
Arco Electronics Inc.	183		
Arnold Magnetics Corp.	208		
Avco Electronics and Ordnance Division	179		
B		G	
Belden Mfg. Co.	91	General Electric Company	
Bell Telephone Laboratories	92	Defense Electronics Division	192
The Bendis Corp.		Magnetic Materials Section	73
Eclipse-Pioneer Div.	87	Power Tube Department	172, 173
Scintilla Division	67	General Electrodynamics Corp.	16
Semiconductor Division	35	General Radio Co.	93
Bishop & Co., J.	100	Gerlich Products, Inc.	76
Boonton Electronics Corp.	174	Graphic Systems	216
Bourn Inc.	139	Gramer Mfg. Co., Inc.	40
Brady Co., W. H.	220		
Bruno-New York Industries Corp.	191		
Brush Instruments	Insert following page 98		
Bulova Electronics Division	170		
Burroughs Corp.	145		
Bussmann Mfg. Div., McGraw-Edison	98		
C		H	
Centralelec, Electronics Div.		Havir Mfg. Co.	231
Globe-Union, Inc.	Insert following page 16	Hewlett-Packard Co.	38-39
Chamber of Commerce, Columbia, S. C.	227	Hill Electronics, Inc.	90
Cinch Mfg. Co.	133		
Clare & Co., C. P.	42-43		
Cleveland Container	67		
Calco Constantine Eng. Lab. Co.	79		
Columbian Carbon Company	220		
Continental Connectors	181		
Cornell-Dubilier	199		
Corning Electronic Components	13, 196		
Curtis-Wright Corp.	78, 124, 181		
D		I	
Dale Electronics, Inc.	31	Industrial Electronic Engineers, Inc.	175, 186
Delco Radio	176, 177, 202	Ingersoll Products Div. of Borg-Warner Corp.	72
Dichson Electronics Corp.	214	Institute of Radio Engineers	81
Dow Corning	88-89	International Electronic Research Corp.	86
		International Telephone & Telegraph Corp.	216
E		J	
EICO	238	Jennings Radio Mfg. Corp.	34
Eisler Engineering Co., Inc.	180	JFD Electronics Corp.	207
Electrical Industries	75	Johnson Co., E. F.	146, 213
Electro Motive Mfg. Co., Inc., The	182	Jones, Howard B., Div. Cinch Mfg. Co.	231
Electronic Products Corp.	178		
Electronic Wholesalers, Inc.	44		
Engineered Electronics Company	10		
F		K	
Fairchild Camera and Instrument Corp.		Kemet Company	47
Fairchild Controls Corp.	33	Keystone Carbon Co.	25
Fairchild Semiconductor	29	Kulka Electric Corp.	189
G		L	
		Link Div. General Precision, Inc.	226
H		M	
		Magnetic Devices, Inc.	185
		Measur-Matic Electronics Corp.	230
		Microwave Associates, Inc.	95
		Minn. Mining & Mfg. Co.	
		Magnetic Products Div.	145
		Mincom Div.	97
		Motorola Semiconductor	41, 49
I		O	
		Ohmite Mfg. Co.	9
J		P	
		Panoramic Electronics, Inc.	218
		Philco, Lansdale Div. 22, Insert following page 50	
		Plastic Capacitors, Inc.	189
		Pettar & Brumfield	48
		Power Designs	216
		Pranco Inc.	180
K		R	
		Radio Corporation of America	Back Cover
		Radio Frequency Laboratories Inc.	12
		Recycled Tubes, Inc.	20
		Raytheon Co. Industrial Components Div.	19
		Reeves Instrument Corp.	48
		Rockwell Products Corp.	228
		Rohm Mfg. Co.	215
		Rotron Mfg. Co., Inc.	194
L		S	
		Sangamo Electric Co.	Inside front cover
		Sartorius-Tension, Inc.	24
		Sperry Rand Corporation	
		Sperry Electronic Tube Div.	170-171
		Sperry Semiconductor Div.	46
		Sprague Electric Company	8, 15, 32
		Stancor Electronics, Inc.	191
		Stromberg-Carlson	214
		Superior Tube	94
		Sylvania Subs. of General Telephone & Electronics	
		Sylvania Electronic Tubes Div.	
			Insert following page 148
		Semiconductor Div.	37
		Syntonic Instruments, Inc.	187
M		T	
		Tektronix, Inc.	83
		Texas Instruments Incorporated	137
		Toledo Edison Co.	230
		Torrington Mfg. Co.	Insert following page 200
		Transistor Electronics Corp.	180
N		U	
		U. S. Components	238
		United Transformer Corp.	218
O		V	
		Varian Associates	Cover 3
		Varifax Sales Co., Inc.	229
		Victoreen	82
P		W	
		Waveline Inc.	96
		Wachesser Co., Inc.	186
		Waller Electric Corp.	228
		Western Electric, Laureldale	74
		Western Rubber Co.	178
		Westinghouse Electric Corp.	70-71
		Weston Instruments Div.	225