

ANNUAL INDEX—1948

The Annual Index 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

AERONAUTICAL RADIO, RADAR

Two-Color Radar7-67

AMPLIFIERS

Amplifier Load Impedance Reduction...Hadfield.....5-33
The Design of Audio Compensation Networks...Savory.....1-24
The Design of Audio Compensation Networks, Part II...Savory...2-27
The Design of Audio Compensation Networks, Part III...Savory...4-34
How High is High Fidelity?...Camras.....7-26
Method for Determining Receiver Noise Figure...Allen.....1-38
Noise Neutralizing Detector Circuit...Hings, Garstang.....1-40
Reducing Stray Input Pickup...Richman.....7-32
Voltage Amplification Formulas...Peake.....2-48

ANTENNAS

Antenna Design for Low-Angle FM Propagation...Fiet.....2-30
FM Ring Antenna Design...Kees.....7-66
Unusual Seven-Tower Directional Broadcasting Array.....1-27
Wideband Antenna Design.....8-44

BROADCAST STATIONS

Eliminating Spurious Radiations from BC Transmitters...Andrew...2-22
FM Station WWHG.....1-49
KOMO Station with the "New Look".....6-37
Salute to WPIX.....7-33
Sound Measurements in BC Studios...Jack.....6-38
Talk-Back System...Kelley.....8-37
Unusual Seven-Tower Directional Broadcasting Array.....1-27
WFAS Engineering an FM-AM Station...Osborn.....8-30

CABLES, TRANSMISSION LINES, WAVEGUIDES, CAVITIES

Cavity Type Filters for Interference...Noble.....1-35
Eliminating Spurious Radiations from BC Transmitters...Andrew...2-22
Impedance Matching Half-Wave Transformer...Dinger, Paine...5-41
Theory and Application of Microwaves...Bronwell.....7-110

COMMUNICATION SYSTEMS

Bridged Circuits Facilitate Police Radio.....7-28
Central Television Distribution System Engineering.....1-46
How High is High Fidelity?...Camras.....7-26
How Rigid is the Hartley Law?...1-52
Mobile Communications Grows.....4-57
Mobile FM Equipment Design for Railroads, Part I...Curry...11-56
Mobile FM Equipment Design for Railroads, Part II...Curry...12-40
New Telecommunications Equipment on Parade.....5-30
Radio Attenuation.....8-45
Talk-Back System...Kelley.....8-37
Theory and Application of Microwaves...Bronwell.....7-110
Ultra- and Extreme-Short Wave Reception...Strutt.....4-55
World's Largest Airport Under Radio Control...Hertzberg.....9-48

CHARTS, NOMOGRAPHS, DIRECTORIES

Directory of Television Receiver Manufacturers.....3-58
Graphical Aid for Selectivity Calculations...Maiden.....1-54
Performance Characteristics of FM Detector Systems...Loughlin...1-30
Pulse Rise Time Response Chart...Baracket.....2-38
TV Timetable for 1948.....Insert

CIRCUITS, NETWORKS AND FILTERS

Amplifier Load Impedance Reduction...Hadfield.....5-33
Analyzing Electromagnetic Field Problems...Spangenberg, Walters, Schott.....8-22
Cavity Type Filters for Interference...Noble.....1-35
Cause & Cure of Spurious TV Receiver Oscillations...Cavanaugh...5-36
Circuit Design for Gas-Discharge Regulator Tubes...Hoyle.....2-46
The Design of Audio Compensation Networks, Part I...Savory...1-24
The Design of Audio Compensation Networks, Part II...Savory...2-27
The Design of Audio Compensation Networks, Part III...Savory...4-34
Dynamic Impedance Circuit...Yu.....8-28
Formulas for Image Rejection Calculations...Vladimir.....10-26
Reducing Stray Input Pickup...Richman.....7-32
Series Mode Crystal Circuits...Goldberg, Crosby.....5-24
Voltage Amplification Formulas...Peake.....2-48

COMPONENTS

Component Parts Standardization.....9-36
Graphical Analysis of Speakers and Microphones...Sanial.....2-42
Oil-Filled Miniature Tuning Capacitors...Wald.....10-43
Pneumatic Heat Detector...Zahl, Golay.....5-44
Speaker Production Technics.....9-40
Transistor May Replace Vacuum Tube.....8-18

CONVENTIONS AND MEETINGS

Chicago IRE Conference Report.....12-49
Engineers Reveal New Developments at IRE.....5-28
Engineers Reveal TV Developments...Batcher.....6-44

FCC Hears TV Reallocation Views...Francis.....10-46
FMA Convention.....9-59
IRE Convention and Radio Engineering Show.....3-50
Microwave Losses in Gases.....12-70
National Conference Urges Bigger Research Program.....1-50
Report on TV Hearing...Francis.....8-33
TV Pool at National Conventions...Gerstin.....6-22
Twentieth Fall Meeting of IRE at Rochester.....12-43
URSI-IRE Review Radio Developments.....7-31

DETECTION AND RECTIFIERS, DISCRIMINATORS

Noise Neutralizing Detector Circuit...Hings, Garstang.....1-40
Performance Characteristics of FM Detector Systems...Loughlin...1-30

FREQUENCY ALLOCATIONS

Will Clear Channel Broadcast Plan be Changed?...Francis.....2-34

INSTRUMENT AND MEASUREMENTS, TEST METHODS

Cathode Ray Oscilloscope Specification.....12-46
Crystal Calibrator for HF and VHF...Gordon.....9-50
FM Monitor Design Speeds Output...Travis.....9-56
Frequency and Modulation Monitor for TV and FM...Cady...2-44
Impedance Matching Half-Wave Transformer...Dinger, Paine...5-41
Lab Testing TV Receivers...Bailey.....4-36
Method for Determining Receiver Noise Figure...Allen.....1-38
New Circuit Design for WOW Tester...Nicholson...6-26
New Measuring Circuit for Conductance Meter...McCool...6-30
Noise Neutralizing Detector Circuit...Hings, Garstang...1-40
Resonance Indicator for Passive Circuits...3-39
RF Spectrum Analyzer...Sulzer...7-30
Sound Measurements in BC Studios...Jack...6-38
Television Engineering & Manufacturing at Philco...11-61
Variable Frequency Standard Signal Generator...Stokes...9-44

MATERIALS, PROPERTIES OF

Insulator Amplifies Current 500 Times.....3-72
Operating Characteristics of Film Resistors...Marsten, Pugh...3-46
Temperature Coefficient Effects for RF Coil Finishes, Part II...Soucy...1-42

GENERAL

Changes in Radio Reception During Sunspot Period, '45-47...12-29
Signal Corps Procurement...Hertzberg...10-24
Television Engineering & Manufacturing at Philco...11-61
To Put U. S. Radio Factories on 25% Military Production Basis...11-52
Where to Sell to Uncle Sam...6-32

MODULATION

New Modulator Principle for FM...10-39

NUCLEAR

The Science and Engineering of Nuclear Power...Goodman...7-110

OSCILLATORS

Crystal Calibrator for HF and VHF...Gordon...9-50
Rieke Diagrams for Oscillator Design...Schwartz...6-33
Series Mode Crystal Circuits...Goldberg, Crosby...5-24

OSCILLOGRAPHS

Monitoring 'Scope for Television Production Lines...DeCola...2-40

RECEIVERS

Cause & Cure of Spurious TV Receiver Oscillations...Cavanaugh...5-36
Conveyor and Test Systems Speed TV Set Assembly...3-36
Lab Testing TV Receivers...Bailey...4-36
Low Cost FM-AM Receiver Circuit...Gustafson, Rønnick...10-36
Low Cost FM-AM Receiver Design...Frankhart...4-40
TV Receiver Specifications...Insert
What's Ahead in TV Receiver Engineering...Murray...3-26

RECORDING AND TRANSCRIBING

How High is High Fidelity?...Camras...7-26
New Circuit Design for WOW Tester...Nicholson...6-26
Performance Features New Magnetic Tape Recorder...Ranger...10-40
Recorder, Equipment and Turntable Specifications...8-41
Test Characteristics of Recording Wire...Carter, Koontz...5-38

STATISTICS

How Much Pay is an Engineer Worth?...4-24
How Much Pay is an Engineer Worth?...Richmond...5-22
Profit-Sharing Pay Plan for Engineers...12-26

STATISTICS (Continued)

TV in UHF (475-890 MC)....Francis.....11-54
 U. S. Radio Statistics, 1948.....1-29
 What They Say About Engineer Pay.....6-24
 What They Say About Engineer Pay and Job Ratings.....8-38
 World Market for Radio and Communication Equipment....Gerstin..9-34

TELEVISION

Big Picture Practices.....3-30
 British Developing Projection TV.....1-28
 Conveyor and Test Systems Speed TV Set Assembly.....3-36
 DC Restoration Methods in Television Receivers....Deutsch.....8-34
 Flying Spot Designed for Television Studio Scanning.....6-42
 How WABD Handles Remotes....Freeman.....3-42
 Indirect Microwave Relay System....Wakeman.....9-42
 New Design for Medium Definition TV Camera System...Sherman..9-52
 New Projection Package for Television....van Lieshout...4-30
 New Viewing Tube for Color TV....Bronwell.....3-40
 RCA Studio Image Orthicon.....3-71
 RF Input Circuits for TV Receivers....Norton.....10-28
 Salute to WPIX.....7-33
 Stratovision Meets First Test.....8-47
 Taxi Television.....8-21
 Television Engineering & Manufacturing at Philco.....11-61
 TV Circuits Cause Interference.....9-39
 TV in UHF (475-890 MC)....Francis.....11-54
 TV Pool at National Conventions....Gerstin.....6-22
 TV Receiver and Parts Assembly Technics.....10-32
 TV Station Cost Study.....9-58
 WCAU-TV Mobile Television.....9-58
 What's Ahead in TV Receiver Engineering....Murray.....3-26

TRANSMITTERS

Engineering a 50 KW FM Transmitter....Starnier.....4-42
 Engineering Standards for TV Transmitters, Export Sets.....3-74
 TV Station Cost Study.....9-58
 Two-Way TV Relay....Forster.....4-46
 500 Watt TV Transmitter....Gaskill.....11-58

TUBES

CRT Plant Geared for Mass Output.....3-28
 Electron Tube Production Center.....12-34
 Flying Spot Designed for Television Studio Scanning.....6-42
 Ignitrons in Broadcast Service....Zuvers.....4-27
 Mechanization Steps-Up CR Tube Production.....8-26
 New Design for Medium Definition TV Camera System...Sherman..9-52
 New Viewing Tube for Color TV....Bronwell.....3-40
 RCA Studio Image Orthicon.....3-71
 Tangential Electron Emission.....1-45

WAVE PROPAGATION

Will Clear Channel Broadcast Plan be Changed?....Francis.....2-34

PRODUCTION METHODS

Conveyor and Test Systems Speed TV Set Assembly.....3-36
 CRT Plant Geared for Mass Output.....3-28
 Lab Testing TV Receivers....Bailey.....4-36
 Mechanization Steps-Up CR Tube Production.....8-26
 Speaker Production Technics.....9-40
 Television Engineering & Manufacturing at Philco.....11-61
 TV Receiver and Parts Assembly Technics.....10-32

AUTHOR INDEX—1948

ALLEN, MORRIS

Method for Determining Receiver Noise Figure.....1-38

ANDREWS, DR. VICTOR J.

Eliminating Spurious Radiations from BC Transmitters.....2-22

BAILEY, WILLIAM F.

Lab Testing TV Receivers.....4-36

BARACKET, A. J.

Pulse Rise Time Response Chart.....2-38

BATCHER, RALPH R.

Engineers Reveal TV Developments.....6-44

Chicago IRE Conference Report.....12-49

BRONWELL, ARTHUR B.

New Viewing Tube for Color TV.....3-40

CADY, C. A.

Frequency and Modulation Monitor for TV and FM.....2-44

CAMARAS, MARVIN

How High is High Fidelity?.....7-26

CARTER, GAIL S.

Test Characteristics of Recording Wire.....5-38

CAVANAUGH, R. T.

Cause and Cure of Spurious TV Receiver Oscillations.....5-36

CROSBY, EDWARD L. JR.

Series Mode Crystal Circuits.....5-24

CURRY, A. A.

Mobile FM Equipment Design for Railroads Part I.....11-56

Mobile FM Equipment Design for Railroads Part II.....12-40

De COLA, R.

Monitoring 'Scope for Television Production Lines.....2-40

DEUTSCH, SID

DC Restoration Methods in Television Receivers.....8-34

DINGER, H. E.

Impedance Matching Half-Wave Transformer.....5-41

FIET, O. O.

Antenna Design for Low-Angle FM Propagation.....2-30

FORSTER, W. H.

Two-Way TV Relay.....4-46

FRANCIS, ALBERT

Will Clear Channel Broadcast Plan Be Changed?.....2-34

Report on TV Hearing.....8-33

FCC Hears TV Reallocation Views.....10-46

TV in UHF (475-890 MC).....11-54

FRANKHART, WILLIAM F.

Low Cost FM-AM Receiver Design.....4-40

FREEMAN, OTIS

How WABD Handles Remotes.....3-42

GARSTANG, WILLIAM W.

Noise Neutralizing Detector Circuit.....1-40

GASKILL, M. L.

500 Watt TV Transmitter.....11-58

GERSTIN, STANLEY

TV Pool at National Conventions.....6-22

World Market for Radio and Communication Equipment.....9-34

GOLAY, M. J. E.

Pneumatic Heat Detector.....5-44

GOLDBERG, HAROLD

Series Mode Crystal Circuits.....5-24

GORDON, JAMES F.

Crystal Calibrator for HF and VHF.....9-50

GUSTAFSON, G. E.

Low Cost FM-AM Receiver Circuit.....10-36

HADFIELD, B. M.

Amplifier Load Impedance Reduction.....5-33

HANSEN,

Simplified TV Receiver Channel Switching Mechanism.....12-36

HERTZBERG, ROBERT

World's Largest Airport Under Radio Control.....9-48

Signal Corps Procurement.....10-24

HILLS, E. G.

Broadband Television Array.....12-30

HINGS, D. L.

Noise Neutralizing Detector Circuit.....1-40

HOYLE, WILFRED G.

Circuit Design for Gas-Discharge Regulator Tubes.....2-46

JACK, WILLIAM

Sound Measurements in BC Studios.....6-38

KEES, HARVEY

FM Ring Antenna Design.....7-66

KELLEY, ADELBERT

Talk-Back System.....8-37

KOONTZ, RICHARD

Test Characteristics of Recording Wire.....5-38

LOUHLIN, B. D.

Performance Characteristics of FM Detector Systems.....1-30

MacCAULEY, R. I.

Cathode Ray Oscillograph Specifications.....12-46

McCOOL, W. A.

New Measuring Circuit for Conductance Meter.....6-30

MAIDEN, ROBERT M.

Graphical Aid for Selectivity Calculations.....1-54

MARSTEN, JESSE

Operating Characteristics of Film Resistors.....3-46

MURRAY, DR. ALBERT F.

What's Ahead in TV Receiver Engineering?.....3-26

NICHOLS, E. G.

Cathode Ray Oscillograph Specifications.....12-46

NICOLSON, M. G.

New Circuit Design for WOW Tester.....6-26

NOBLE, DANIEL E.

Cavity Type Filters for Interference.....1-35

NORTON, FRANK R.

RF Input Circuits for TV Receivers.....10-28

OSBAHR, BERNARD F.

WFAS—Engineering an FM-AM Station.....8-30

PAINE, H. G.

Impedance Matching Half-Wave Transformers.....5-41

PEAKE, HAROLD J.

Voltage Amplification Formulas.....2-48

PUGH, JR., ALEXANDER I.

Operating Characteristics of Film Resistors.....3-46

RANGER, COL. RICHARD H.

Performance Features New Magnetic Tape Recorder.....10-40

RENNICK, JOHN L.

Low Cost FM-AM Receiver Circuit.....10-36

RICHMAN, PETER I.

Reducing Stray Input Pickup.....7-32

RICHMOND, DR. HAROLD B.

How Much Pay is an Engineer Worth?.....5-22

SANIAL, A. J.

Graphical Analysis of Speakers and Microphones.....2-42

SAVORY, WILLIAM A.

The Design of Audio Compensation Networks, Part I.....1-24

The Design of Audio Compensation Networks, Part II.....2-27

The Design of Audio Compensation Networks, Part III.....4-34

SCHOTT, FREDERICK W.

Analyzing Electromagnetic Field Problems.....8-22

SCHWARTZ, LEONARD S.

Rieke Diagrams for Oscillator Design.....6-33

SHERMAN, JESSE B.

New Design for Medium Definition TV Camera System.....9-52

SOUCY, CHESTER I.

Temperature Coefficient Effects for RF Coil Finishes Part II.....1-42

SPANGENBERG, KARL

Analyzing Electromagnetic Field Problems.....8-22

STARNER, C. J.

Engineering a 50 KW FM Transmitter.....4-42

STETSON, DR. HARIAN T.

Changes in Radio Reception During Sunspot Period '45-47.....12-29

STOKES, RALPH G.

Variable Frequency Standard Signal Generator.....9-44

SULZER PETER G.

RF Spectrum Analyzer.....7-30

TRAVIS, EDWARD F.

FM Monitor Design Speeds Output.....9-56

TUCKER, FRANK L.

Profit-Sharing Pay Plan for Engineers.....12-26

VAN LIESHOUT, L. J. A.

New Projection Package for Television.....4-30

VLADIMIR, I. O.

Formulas for Image Rejection Calculations.....10-26

WAKEMAN, ROBERT R.

Indirect Microwave Relay System.....9-42

WALD, SYDNEY

Oil-Filled Miniature Tuning Capacitors.....10-43

WALTERS, GLENN

Analyzing Electromagnetic Field Problems.....8-22

YU, Y. P.

Dynamic Impedance Circuit.....8-28

ZAHL, HAROLD A.

Pneumatic Heat Detector.....5-44

ZUVERS, HOWARD E.

Ignitrons in Broadcast Service.....4-27