

# Wireless World

RADIO, TELEVISION AND ELECTRONICS

*Managing Editor* : HUGH S. POCOCK, M.I.E.E.

*Editor* : H. F. SMITH

ELECTRONICS PARK LIBRARY

877

## VOLUME 59

JANUARY - DECEMBER 1953

43rd YEAR OF PUBLICATION

(All rights reserved)

*PUBLISHED MONTHLY* (last Monday of preceding month) by ILIFFE & SONS LTD. Price: Two Shillings.  
*Editorial, Publishing and Advertising Offices*: Dorset House, Stamford Street, London, S.E.1. Telephone: Waterloo 3333 (60 lines).  
*Telegrams*: "Ethaworld, Sedist, London." *Annual Subscription*: Home and Overseas, £1 7s. 0d. U.S.A. \$4.50. Canada \$4.00.  
*BRANCH OFFICES*: *Birmingham*: King Edward House, New Street. 2. *Coventry*: 8-10 Corporation Street. *Glasgow*: 26B Renfield Street, C.2.  
*Manchester*: 260, Deansgate, 3.



# GENERAL INDEX

To facilitate reference, the month of issue as well as the page number is given.

The General Index is followed by a Classified Index under the headings of Aerials, Circuitry, Design, Education and Training, Electronics, Manufacturers' Products, Modulation, Organization, Propagation, Radiolocation, Sound Reproduction, Television, Test and Measurement, Transmission, Valves, Authors, Books and Publications, Illustrations and Personalities. References to Authors, Books, Illustrations and Personalities appear only in the Classified Index.

**A.A.** Motor Cycle Radio Road Patrols, 57 Feb.  
**A.C./D.C.** Communications Receiver, Eddy-stone Model 840: Test Report, 348 Aug.  
**A.C.** Generator, Morrison Portable, 387 Aug.  
**A.F.** Coil Winder, by B. V. Northall, 376 Aug.  
**A.G.C.** Vision, 173 Apr.; (*Correspondence*) 211 May  
**A.P.A.E.** Exhibition, 200 May; Review, 301 July; 1954 (*News*) 585 Dec.  
 — Officers Elected (*News*) 269 June  
 Acoustic Response Curves, by E. W. Rogers, 496 Oct.  
**Aerial, A.B.** Metal Products Anti-Interference, 584 Dec.  
 — Queries, by "Cathode Ray," 235 May; (*Correspondence*) 363 Aug.  
**Aerials, Telecraft Loop**, 387 Aug.  
**Airfield Radar Equipment**, Decca, 547 Nov.  
**Airport Ground Communications, G.E.C.**, 583 Dec.  
**Alternative Television Service**—Government Proposals, (*Editorial*) 49 Feb.; (*Correspondence*) 117 Mar.; White Paper (*News*) 585 Dec.  
**Aluminium Aerial Mast, Portable**, 424 Sept.  
**Amateur Bands, Table of**, 16 Jan.  
 — Emergency Services (*Editorial*) 195 May  
 — F.M. (*News*) 119 Mar.  
 — Television Progress, by M. Barlow, 589 Dec.  
 — Transmission (*News*) 413 Sept.  
 — 2-Mcs Band (*News*) 267 June; (*Correspondence*) 316 July  
**American Colour Television**, 524 Nov., 567, 599 Dec.  
**Amplifiers, Push-Pull Transistor**, by J. I. Missen, 467 Oct.  
 — Savage High-Power, 54 Feb.  
**Anarchy into Order: 50th Anniversary of First International Radio Conference**, 355 Aug.  
**Attenuators**, by "Cathode Ray," 131 Mar.  
**Audio Developments, A.P.A.E. and B.S.R.A.**  
 — Exhibitions, 301 July  
 — Signal Generator, Advance, 44 Jan.  
**Aural Anomaly**, An., 239 May; (*Correspondence*) 364 Aug.  
**Aviation Radio, S.B.A.C. Exhibition**, 461 Oct.  
**B.B.C.**  
 Broadcast Transmitter Distortion (*Correspondence*) 167 Apr., 210 May, 271 June, 315 July, 363 Aug., 416 Sept., 466 Oct.; Correction, 466 Oct.  
**Brighton Booster** (*News*) 65 Feb., 169 Apr.; Interference from, (*News*) 320 July; (*Correspondence*) 529 Nov.  
**Coronation Radio** (*News*) 267 June; (*Editorial*) 295 July; Review, 317 July; Article by T. H. Bridgewater, 317 July  
**Crystal Palace Television Station**, 411 Sept., 599 Dec.  
**European Service** (*News*) 171 Apr.  
**Home Service Transmitters** (*News*) 65 Feb.  
**Local Reception Conditions** (*Editorial*) 245 June  
**Low-Power Television Stations** (*News*) 212 May  
**Mobile TV Stations** (*News*) 267 June  
 — Television Transmitters, by E. W. Hayes, 372 Aug.  
**New Bexhill Transmitter** (*News*) 586 Dec.  
 — Welsh M.W. Transmitter (*News*) 368 Aug.  
**Northern Ireland Television Site** (*News*) 119 Mar.  
**Operating Television O.B. Units**, by J. F. Hartwright, 74 Feb.  
**Proposed (Two-Programme) Television Stations, List**, 291 June  
**Statement on Home Recording** (copyright) (*Editorial*) 559 Dec.  
**Television Advisory Committee's Findings**, (*Editorials*) 343 Aug., 391 Sept., 445 Oct.; Summary, 365 Aug.

**B.B.C. (contd.)**  
 Television Boosters (*Editorial*) 101 Mar.; Article, by P. J. Harvey, 148 Apr.  
 — Costs: New Stations and Links (*News*) 169 Apr.  
 — Effects, 494 Oct.  
 — Test Transmissions (*News*) 171 Apr.  
**Temporary Television Stations** (*News*), 23 Jan.  
**Tuning Notes** (*News*) 533 Nov.  
**V.H.F. Broadcasting** (*Editorial*) 195 May; Map, 531 Nov.  
 — Sound Broadcasting Progress (*Editorial*) 505 Nov.  
**Wenloe Service Area Map**, 107 Mar.  
**B.R.E.M.A. Council** (*News*) 171 Apr.  
**Brit. I.R.E.**  
 Awards, 542 Nov.  
 Drawing Circuit Diagrams, Discussion, 228 May  
 Ignition Interference, Paper, 54 Feb.  
 Impact of Information Theory on Television, Paper, 509 Nov.  
 Membership (*News*) 534 Nov.  
 Overlapping Television Channels, Paper, 509 Nov.  
 Standardization of Symbols, Discussion, 228 May.  
**B.S.R.A.**  
 Amateur Constructors' Competition, 330 July.  
 Exhibition, 200 May; Review, 301, 330 July; 1954 (*News*) 585 Dec.  
 Inductance or Capacitance, Paper, 86 Feb.  
 Suppressing Gramophone Surface Noise, Paper, 298 July  
**Band 1 Colour Television**, 599 Dec.  
 — 3 Television Transmitters, Marconi, 592 Dec.  
**Batteries: Improving the Dry Cell**, by R. W. Hallows, 276 June  
 —: Reactivating the Dry Cell, by R. W. Hallows, 344 Aug.; (*Correspondence*) 416 Sept., 465 Oct.  
**Battery Tester, Courtenay**, 501 Oct.  
**Brain Waves by Radio**, 362 Aug.  
**British Amateur Television Club Progress**, by M. Barlow, 589 Dec.  
 — Instrument Industries Exhibition, 379 Aug.  
**Broadcast Licensing Pool** (*News*) 169 Apr.  
 — Transmitter Distortion (*Correspondence*) 167 Apr., 210 May, 271 June, 315 July, 363 Aug., 416 Sept., 466 Oct.; Correction 466 Oct.  
**Broadcasting, Future of**, (*Correspondence*) 16 Jan., 64 Feb.  
 — — — Sound, I.E.E. Discussion, 17 Jan.  
**C.C.I.R. London Meeting** (*News*) 121 Mar.; Note, 396 Sept.; Summary, 532 Nov.  
**C.I.S.P.R. London Meeting** (*News*) 533 Nov., 585 Dec.  
**C.R.T. Insurance**, 605 Dec.  
**Cable Drum, Resound Portable**, 441 Sept.  
**Calibrating V.H.F. Oscillators**, by M. C. Matthews, 141 Mar.  
**Capacitance Checker, Simple**, by T. R. Smith, 93 Feb.  
**Capacitors: R.F. Characteristics** (*Correspondence*) 15 Jan.  
 —, Sulfex Polystyrene, 191 Apr.  
**"CATHODE RAY" ARTICLES:**  
 Attenuators, 131 Mar.  
 Complex Numbers, 79 Feb.  
 Olm's Law, 383 Aug.  
 Radiation? 185 Apr.  
 Resonance Curves, 29 Jan.  
 Skin Effect, 537 Nov.  
 Some Aerial Queries, 235 May  
 Some Coaxial Problems 571 Dec.  
 Radio Waves, 285 June  
 Valves for Microwaves, 417, Sept., 479 Oct.  
 Waves and Aerials, 331 July  
**Cathode-Ray Tube, Storage**, by L. S. Allard, 95 Feb.  
**Cathodic Protection** (*Correspondence*) 211 May  
 "Cellular" Circuits, by Michael Lorant, 493 Oct.

Ceramic, Plessey "Caslole," 191 Apr.  
**Circuit Diagrams, Drawing**, Brit. I.R.E. Discussion, 228 May  
 —, Functional, by C. E. Williams, 19 Jan.  
 —, "Reading," 21 Jan.; (*Correspondence*) 118 Mar.  
**Civil Aviation Communications Centre**, 227 May  
**Clock, Radio-Controlled**, (*Editorial*) 101 Mar.; (*Correspondence*) 167 Apr.; Article, 136 Mar.  
**Coaxial Problems**, Some, by "Cathode Ray," 571 Dec.  
**Coil (A.F.) Winder**, by B. V. Northall, 376 Aug.  
**Coil Winder, Multi-Layer R.F.**, by B. V. Northall, 179 Apr.  
 — Winding Charts, by Lorin Knight, 22 Jan.  
**Coils, Osamor Miniature**, 15 Jan.  
**Cold-Cathode Tubes, I.E.E. Discussion**, 18 Jan.  
**Colour Code, Resistance** (*Correspondence*) 168 May  
 — Television for Britain, British Association Paper, 523 Nov.  
 —, N.T.S.C., 524 Nov., 567, 599 Dec.  
 —, Pye Demonstration, 329 July  
**Commonwealth Telecommunications** (*Editorial*) 505 Nov.  
**Communications Receiver, A.C. D.C. Eddy-stone Model 840: Test Report**, 348 Aug.  
**Competitive Television: White Paper Cmd 9005** (*News*) 585 Dec.  
**Complex Numbers**, by "Cathode Ray," 79 Feb.  
**Components and Techniques**—R.E.C.M.F. and Physical Society's Exhibitions, 246 June  
 — for Transistors, by G. W. A. Dummer, 196 May  
**Computers, Plug-In Units for Electronic**, by Michael Lorant, 433 Sept.  
**Converter for 200 kc/s**, by C. B. Raithby, 487 Oct.  
 — Television Standards, 273 June  
**Copyright Committee's (1951) Report** (*Editorials*) 1 Jan., 101 Mar.; (*Correspondence*) 117 Mar.; B.B.C. Statement (*Editorial*) 559 Dec.  
**Coronation Television Arrangements** (*Editorial*) 295 July; Review, 317 July; Article, by T. H. Bridgewater, 317 July  
**Crystal Palace Television Station**, 411 Sept., 599 Dec.  
**Crystal Pickups, Collaro**, 241 May  
**D.C. Restoration in Television**, by W. T. Cocking, 102 Mar.; Correction, 214 May; (*Correspondence*) 530 Nov.  
**Decca Navigator, French Chain**, 566 Dec.  
**Designing a Tape Recorder**, by J. M. Carter, 108 Mar., 164 Apr., 229 May; Correction (*News*) 269 June; (*Correspondence*) 272 June  
**Directional Reception** (*Correspondence*) 63 Feb.  
**Distortion, Broadcast Transmitter** (*Correspondence*) 167 Apr., 210 May, 271 June, 315 July, 363 Aug., 416 Sept., 466 Oct.; Correction, 466 Oct.  
 —, Diagnosis of, by E. R. Wigan, 261 June  
 —, Meter, Simple, by V. J. Tyler, 431 Sept.; (*Correspondence*) 582 Dec.  
**Drill, Mullard Ultrasonic**, 528 Nov.  
**Dry Batteries, Price Reduced** (*News*) 171 Apr.  
**Dry Cell, Improving the**, by R. W. Hallows, 276 June  
 — Reactivating the, by R. W. Hallows, 344 Aug.; (*Correspondence*) 416 Sept., 465 Oct.  
**Drying Loudspeaker Cones**, 362 Aug.  
 — out Transformers (*Correspondence*) 15 Jan., 64 Feb.  
**E.B.U., I.F. Inquiry** (*Correspondence*) 15 Jan.  
 — Monte Carlo Meeting (*News*) 533 Nov.  
 — Receiving Station (*News*) 412 Sept.; Article, by J. Treeby Dickinson, 422 Sept.  
**E.H.T. Unit, Ringing Choke**, by D. M. Melluish, 603 Dec.  
**E.M.I. Further Education Scheme** (*News*) 121 Mar.

**EDITORIALS:**

Alternative Television Service, 49 Feb.; (*Correspondence*) 117 Mar.  
 B.B.C. (Sound Broadcasting) Progress, 505 Nov.  
 Compulsory Suppression, 1 Jan.  
 Domestic Radio 1953, 445 Oct.  
 Electronic Confusion, 295 July  
 Emergency Service, 195 May  
 Ethics of Home Recording, 101 Mar.; (*Correspondence*) 117 Mar.  
 Exhibitions, 245 June  
 Flawless Performance (Coronation), 295 July  
 Frequency Allocation Secrecy, 445 Sept.  
 Geared to Greenwich, 101 Mar.; (*Correspondence*) 167 Apr.  
 Home Recording and the Law, 559 Dec.  
 Local (Reception) Conditions, 245 June  
 Looking Ahead in Television, 147 Apr.  
 New-Style Patronage, 195 May  
 Non-Broadcast Television, 49 Feb.  
 Orderly Development of Television, 343 Aug.; (*Correspondence*) 465 Oct.  
 Radio on Parade, 391 Sept.  
 Recording of Broadcasts, 1 Jan.; (*Correspondence*) 117 Mar.  
 Speeding up the Telegrams, 505 Nov.  
 Television Boosters, 101 Mar.  
 Television Conversion, 245 June  
 Television Interference Suppression, 445 Sept.  
 Two Bites at a Cherry (F.A.C. Findings and Band 3), 391 Sept.  
 Unjust Tax, 147 Apr.  
 V.H.F. in Suspense, 195 May  
 Ekco Electronics Ltd. formed (*News*) 411 Sept.  
 — Student Apprenticeships (*News*) 121 Mar.  
 Electric Audio Reproducers Ltd. formed (*News*) 414 Sept.  
 Electro-Acoustics Congress (*News*) 23 Jan.; Summary, 352 Aug.  
 Electroencephalograms by Radio, 362 Aug.  
 Electronic Confusion (*Editorial*) 295 July  
 — Film-Making, by T. C. Macnamara, 153 Apr.  
 — Switch, by K. R. Sturley, 11 Jan.  
 "Electronics," Official Ruling? (*News*) 472 Oct.  
 Electrostatic Storage Tube, E.M.I., 570 Dec.  
 Environment of High-Quality Reproduction, by P. H. Brittain, 2 Jan.  
 Exhibition Organization (*Editorial*) 245 June

**EXHIBITIONS:**

Association of Public Address Engineers, 1953, 200 May; Review 301 July; 1954 (*News*) 585 Dec.; B.S.R.A., 1953, 200 May; Review 301, 339 July; 1954 (*News*) 585 Dec.; British Instrument Industries Exhibition (*News*) 268 June; Review 379 Aug.; British Plastics (*News*) 67 Feb.; 268 June, Review 305 July; Engineering, Marine and Welding 413 Sept.; French Components (*News*) 121 Mar.; German Communication and Transport (*News*) 268 June; German Radio Show (*News*) 26 Jan., 269 June; Impressions by J. E. Cope, 471 Oct.; Glass Industries (*News*) 67 Feb.; Institution of Electronics (*News*) 171 Apr., 320 July; Electronics in Medicine, 407 Sept.; National Radio Show 1953 (*News*) 119 Mar., 367 Aug.; Preliminary List of Exhibitors 266 June; (*Editorials*) 391 Sept., 445 Oct.; Guide 397 Sept.; Review 446 Oct.; 1954 (*News*) 587 Dec.; Navigation Today (*News*) 267 June; Patent Office Centenary (*News*) 67 Feb.; Physical Society (*News*) 65 Feb., 119 Mar.; Survey, 246 June; R.E.C.M.F. (*News*) 65 Feb.; List of Exhibitors; 190 Apr.; Survey 246 June; Swedish Show (*News*) 412 Sept.; R.S.G.B. Sixth Report, 6 Jan.; Seventh (*News*) 413 Sept., 533 Nov.; Preview 577 Dec.; S.B.A.C. (*News*) 25 Jan., 461 Oct.; Swiss Radio Show Report, by G. H. Russell, 521 Nov.; Television Society, 1953 (*News*) 23 Jan.; Report, 142 Mar.; 1954 (*News*) 533 Nov.

Exhibitions and Catalogues (*Correspondence*) 465 Oct.  
 Extension Hearing Aid, Multitone, 314 July

**F.M. FEEDER** Unit, Further Notes on, by S. W. Amos and G. G. Johnstone, 89 Feb., 128 Sept.

Film-Making, Electronic, by T. C. Macnamara, 153 Apr.  
 Filter for Pickups on L.P. Records, by G. H. Russell, 299 July  
 Flywheel Synchronization, by B. T. Gilling, 137 Mar., 495 Oct.; (*Correspondence*) 168 Apr., 272 June  
 Friction-Driven Loudspeaker, 27 Jan.  
 Fugitive from Pandemonium, by John D. Burke, 58 Feb.  
 Function of the Valve (*Correspondence*) 364 Aug.  
 Functional Circuit Diagrams, by C. E. Williams, 19 Jan.  
 Fusebox, Belling-Lee Neon-Indicating, 441 Sept.  
 Fuses for Meter Protection, by F. R. W. Stratford, 90 Feb.  
 Future of Hearing Aids, by A. Poliakoff, 182 Apr.  
 — — — Broadcasting (*Correspondence*) 16 Jan., 64 Feb.  
 — — — Sound Broadcasting, I.E.E. Discussion, 17 Jan.

**G.E.C.** Graduate and Vacation Apprenticeships (*News*) 121 Mar.  
 German Radio Jubilee, 347 Aug.  
 — — — Show (*News*) 269 June; Impressions, by J. E. Cope, 471 Oct.  
 Germanium Rectifiers, Point-Contact, by R. T. Lovelock, 511 Nov., 600 Dec.  
 Ground Reflections, Suppression of, by Michael Lorant, 87 Feb.

**HEARING AID**, Bonechord Miniature, 241 May  
 — — — Extension, Multitone, 314 July  
 — — — Radio Unit, Acousticon, 172 Apr.  
 — — — Transistor Amplifier, Multitone, 270 June  
 Hearing Aids, Break-through in, 118 Mar.  
 — — — Future of, by A. Poliakoff, 182 Apr.  
 Height of the Ionosphere, Royal Society Conversation, 338 July  
 High Pulse-Ratio Radar, Decca, 552 Nov.  
 High-Quality Reproduction, Environment of, by P. H. Brittain, 2 Jan.  
 Home Recording and the Copyright Law (*Editorials*) 1 Jan., 101 Mar., 559 Dec.  
 Honours, Coronation, (*News*) 320 July  
 — — — New Year, *News* 66 Feb.  
 Humidity Control, Sanders Electronics, 339 July

**I.A.E.S.T.E.** Student Exchange (*News*) 585 Dec.

**I.E.E.:**

- Applications of Communication Theory," Symposium, 424 Sept.
- Association for Technicians, (*News*) 320 July
- "Cold-Cathode Tubes," Discussion, 18 Jan.
- Commonwealth Telecommunications (*Editorial*) 505 Nov.
- Council Elected (*News*) 368 Aug.
- "Future of Sound Broadcasting," Discussion, 17 Jan.
- "How to Plan a Radio Project," Discussion, 73 Feb.
- "Ignition Interference with Television Reception," Paper, 189 Apr.
- "Insulating Materials," Symposium (*News*) 67 Feb.; Summary, 199 May
- Premium Awards, 541 Nov.
- President's Inaugural Address (*Editorial*) 505 Nov.
- Radio Section Committee Elected (*News*) 368 Aug.
- "Radio Telemetering," Paper, 14 Jan.
- "Tape versus Disc," Discussion, 583 Dec.
- Television Convention Papers, 33 Jan.

**I.F. Inquiry** by E.B.U. (*Correspondence*) 15 Jan.  
 Identifying Receiver Controls (*Correspondence*) 581 Dec.  
 Ignition Interference in U.S.A. (*Editorial*) 445 Oct.; (*Correspondence*) 465 Oct., 529 Nov., 581 Dec.  
 — — — Brit. I.R.E. Paper, 54 Feb.  
 — — — I.E.E. Paper, 189 Apr.  
 Impedance Bridge, E.M.I. "In-situ," 96 Feb.  
 Improving the Dry Cell, by R. W. Hallows, 276 June  
 — — — F.M. Feeder Unit, by S. W. Amos and G. G. Johnstone, 428 Sept.  
 Inexpensive Megohmmeter, by H. E. Styles, 484 Oct.  
 — — — Pickups on Long-Playing Records, by G. H. Russell, 299 July  
 Indian Radio, 152 Apr.  
 Inductance or Capacitance? B.S.R.A. Paper, 86 Feb.

Information Theory and Television, Brit. I.R.E. Paper, 509 Nov.  
 — — — Saving Television Bandwidth, 158 Apr.  
 Institution of Electronics:  
 Electronics in Medicine, 407 Sept.  
 Exhibition (*News*) 171 Apr., 320 July  
 Insulating Materials, I.E.E. Symposium (*News*) 67 Feb.; Summary, 199 May  
 Interference, Analysis of Complaints, 369 Aug.  
 — — — C.I.S.P.R. London Meeting, 533 Nov., 585 Dec.  
 — — — from Brighton Booster Station (*News*) 320 July; (*Correspondence*) 529 Nov.  
 — — — Lamps (*Correspondence*) 211 May, 272 June, 316 July, 364 Aug., 529 Nov.  
 — — — Sweden (*Correspondence*) 415 Sept.  
 — — — Zebra Beacons (*Correspondence*) 168 Apr., 210 May  
 — — — Suppressed Flashers, G.E.C., 501 Oct.  
 — — — Suppression, P.M.G.'s Regulations (*Editorial*) 1 Jan.; Summary, 42 Jan.  
 International Electro-Acoustics Congress (*News*) 23 Jan.; Summary, 352 Aug.  
 — — — Mouniforing, by J. Treby Dickinson, 422 Sept.  
 — — — Radio Conference 50th Anniversary, 355 Aug.  
 — — — Standards, I.E.C., 548 Nov.  
 — — — Technical Questions, C.C.I.R. London Meeting, 532 Nov.  
 — — — Television, Coronation Royal, 274 June  
 Ionosphere, Height of, Royal Society Conversation, 338 July  
 — — — Review; 1952, by T. W. Bennington, 59 Feb.  
 Italian Television (*News*) 65 Feb.

**LAMP** Interference (*Correspondence*) 211 May, 272 June, 316 July, 364 Aug., 529 Nov.

**LETTERS TO THE EDITOR:**

- Allocation of (V.H.F.) Frequencies, R. I. T. Falkner, 465 Oct.
- Alternative Television Service, C. I. Orr-Ewing, 117 Mar.
- Amateur (Frequency) Allocations, H. E. James, 316 July
- Are Symbols Overdone? E. H. W. B., 316 July
- Broadcast Transmitter Distortion, Ian Leslie, 167 Apr., 272 June, 363 Aug., 466 Oct.; A. Yates, 210 May; F. C. McLean, 271 June; A. A. Cottrell, T. S. Marshall, 315 July; H. Barker, 363 Aug.; J. D. Herring, 416 Sept.; Correction, 466 Oct.
- Cathodic Protection, W. Godfrey Waite, 211 May
- Commercial Television: Industry's Attitude, A. Godfrey Imhof, 415 Sept.
- D.C. Restoration in Television, J. E. Nixon, 530 Nov.
- Designing a Tape Recorder, W. D. Cussins, 272 June
- Directional Reception, G. J. Phillips, 63 Feb.; R. A. W. Hill, 64 Feb.
- Ear Training, J. Worton, 364 Aug.
- Exhibitions and Catalogues, S. Pearce, 465 Oct.
- Flywheel Synchronization, K. G. Beauchamp, 168 Apr.; W. J. Crossley, S.L. Fife, 272 June
- Function of the Valve, O. M. Bruce Payne, 364 Aug.
- Future of Broadcasting, L. Streatfield, G. C. Oxley, 16 Jan.; H. S. King, 64 Feb.
- "Geared to Greenwich," R. S. J. Spilsbury, 167 Apr.
- I.F. Inquiry, H. Angles D'Auriac, 15 Jan.
- Identifying Receiver Controls, E. H. W. Banner, 581 Dec.
- Ignition - Interference in U.S.A., Malcolm S. Morse, 465 Oct.; (*Editorial*) 445 Oct.; W. T. Cocking, 529 Nov.; John S. Battison, L. John Wheatley, P. J. Atkins, 581 Dec.
- Input to Output, W. G. Power, 118 Mar.
- Interference from Zebra Beacons, John Baggs, 168 Apr.; J. H. Rawlings, 210 May
- Lamp Interference, K. Robinson, 211 May, 530 Nov.; A. P. Hale, 272 June, 529 Nov.; A. Q. Morton, F. E. Siggers, 316 July; W. B. Mansell, 364 Aug.
- Magnetic Powder Cores, C. H. Broad, 167 Apr.
- Maritime Distress Frequency, W. Blow, 16 Jan.
- Matter of History (Transistors), W. M. Dalton, 315 July

Letters to the Editor (cont'd.)

Meter Overload Protection, T. H. Francis, 529 Nov.; J. de Gruchy, 582 Dec.  
 Meter Shunts, E. G. Dann, 364 Aug.  
 Ohmmeter, The, M. G. Scroggie, 415 Sept.  
 Phase-Angle Ellipse, G. G. Gouriet, 118 Mar.  
 Psycho-Optics in Television, Paul Bellac, L. S. LePage, 118 Mar.  
 R.F. Characteristics of Capacitors, R. Davidson, 15 Jan.  
 Reactivating the Dry Cell, E. Hurrain, 416 Sept.; R. W. Lewis, 465 Oct.; R. W. Hallows, 466 Oct.  
 Recording of Broadcasts, T. E. Allibone, 117 Mar.  
 Re-defining Electronics, R. A. Fairthorne, Henry Morgan, 415 Sept.  
 Resistor Colour Code, M. G. Scroggie, 168 Apr.  
 Signal Tracing, C. H. Broad, 15 Jan.; J. S. Holiday, 118 Mar.  
 Simple Distortion Meter, G. H. Askew and R. Matchell, 582 Dec.  
 Some Aerial Queries, Albert Weiss, 363 Aug.; "Cathode Ray," 364 Aug.  
 Stereoscopic Television, R. A. Fairthorne, 364 Aug.; George E. Weaver, 415 Sept.  
 Technical Qualifications, J. S. A., 363 Aug.; K. R. Starley, "Personnel Manager," 416 Sept.; M. L. Barton, Terence L. Squires, 466 Oct.; P. B. Hayes, 529 Nov.; "Grade IV Student," 582 Dec.  
 Television Interference, R. B. Forge, 529 Nov.  
 Television Modulation, F. C. McLean, E. Green, 63 Feb.; E. McP. Leyton and E. A. Nind, 117 Mar.  
 Through Unofficial Channels, R. C. Horsnell, 415 Sept.  
 Transformers in the Tropics, D. R. Saben, 15 Jan.; T. H. Hill, 64 Feb.  
 Two-Band Television Reception, W. T. Cocking, 271 June; R. W. Addie, 315 July; J. W. Dalgleish, 363 Aug.  
 V.H.F. as an Extra, D. R. A. Mellis, 64 Feb.  
 V.H.F. for Voyagers, A. G. Clarke, 211 May  
 Vision A.G.C., Henri T. Pichal, 211 May  
 Wireless Fifty Years ago, Arthur H. Morse, 466 Oct.  
 Licences, 25 Jan., 67 Feb., 121 Mar., 169 Apr., 213 May, 268 June, 322 July, 351, 368 Aug., 413 Sept., 473 Oct., 534 Nov., 586 Dec.  
 Licensing Set Manufacturers (News) 169 Apr.  
 Lifeboat Transmitter, Venner, 339 July  
 Local Reception Conditions (Editorial) 245 June  
 Long-Range Marine Radar, Kelvin-Hughes, 515 Nov.  
 Looking Ahead in Television (Editorial) 147 Apr.  
 Loop Aerial Reception (Correspondence), 63 Feb.  
 Loudspeaker Efficiency, 61 Feb.  
 Loudspeaker, Elac Midget, 97 Feb.  
 — Friction Driven, 27 Jan.  
 — Performance Appreciation: High-Quality Reproduction, by F. G. Brittain, 2 Jan.  
 Loudspeakers, Goodmans Axiom 101 and 102, 44 Jan.  
 — Purchase Tax on, (Editorial) 147 Apr., 375 Aug.  
 MSF Schedules, Rugby Standard-Frequency Transmissions (News) 267 June  
 Magnetic Powder Cores, by D. F. W. Champion and E. G. Wilkins, 83 Feb.; (Correspondence) 167 Apr.  
 — Recorder, Grundig Portable Type 7001L, Test Report, 409 Sept.  
 — Recording Convention (News) 23 Jan.  
 — Tape Recorder, Philips EL3530, 441 Sept.  
 Magnetron Fields, Mapping, by Michael Lorant, 575 Dec.  
 Manganese-Bismuth Permanent Magnets, 184 Apr.  
 Marine Broadcast Receiver, Rees Mace, 584 Dec.  
 — Mimeo, 370 Aug.  
 — Radar, Long-Range, Kelvin-Hughes, 515 Nov.  
 — Range Extension, Decca, 552 Nov.  
 — Radio Careers, Booklet, 128 Mar.

Maritime Distress Frequency (Correspondence) 16 Jan.  
 — Frequency Changes (News) 214 May  
 Medical Electronics, 407 Sept.  
 Megohmmeter, A Valve, by M. G. Scroggie, 516 Nov.  
 — Inexpensive, by H. E. Styles, 484 Oct.  
 Meteorological Station using Radar Sonde, 527 Nov.  
 Meter Overload Protection, by J. de Gruchy, 425 Sept.; (Correspondence) 529 Nov., 582 Dec.  
 — Protection, by F. R. W. Strafford, 90 Feb.  
 — Shunts, 313 July; (Correspondence) 364 Aug.  
 Microammeter, Neon Tube, by H. E. Styles, 549 Nov.  
 Microphones, New High-Grade Condenser, by F. W. O. Bauch, 50 Feb., 111 Mar.  
 —, Lustraphone Lightweight, 339 July  
 Microphony in Superhet Oscillators, Part 2, by H. Stibbe, 35 Jan.  
 Microwave Valves, by "Cathode Ray," 417 Sept., 479 Oct.  
 Mobile Television Transmitters, by E. W. Hayes, 372 Aug.  
 Modernizing the Wireless World Television Receiver, 215 May, 279 June, 306 July; Correction, 598 Dec.  
 Mullard Educational Filmstrips, 366 Aug.  
 Multi-Layer R.F. Coil-Winder, by B. V. Northall, 179 Apr.  
 N.T.S.C. Colour Television, 524 Nov., 567, 599 Dec.  
 Narrow-Beam Radio Telescope, 371 Aug.  
 National Institute for the Blind Talking Books (News) 120 Mar.  
 National Radio Show 1953 (News) 119 Mar., 367 Aug.; Preliminary List of Exhibitors, 266 June; (Editorials) 391 Sept., 445 Oct.; Guide and Preview, 397 Sept.; Review, 446 Oct.; 1954 (News) 587 Dec.  
 Neon Tube Measuring Device, by H. E. Styles, 549 Nov.  
 Netting, by H. B. Dent, 34 Jan.  
 Neumann-Type Microphones, by F. W. O. Bauch, 50, Feb., 111 Mar.  
 New Year Honours (News) 66 Feb.  
 — Zealand V.H.F. Air-to-Ground Communications, 500 Oct.  
 Noise, V.H.F. Radio, by E. G. Hamer, 43 Jan.  
 Non-Broadcast Television (Editorial) 49 Feb.  
 Nylon, British Ropes Moulded, 143 Mar.  
 O.B. Television Units, Operating, by J. F. Hartwright, 74 Feb.  
 OBITUARY: Best, Frank Powell, 213 May; Bowen, H. L., 213 May; Bull, Edward B., 473 Oct.; Diggle, Harry, 473 Oct.; Dixon, H. Leslie, 121 Mar.; Eve, Charles Walter, 268 June; Gibson, W. T., 67 Feb.; Gray, Andrew, 238 May; Hall, Alfred Weedon, 321 July; Hickman, Brigadier John B., 321 July; Jackson, William A., 586 Dec.; Kent, Wilfred P., 25 Jan.; Longstaff, Allen, 534 Nov.; Lyons, Lewis Marcus, 586 Dec.; Maistre, Charles Le, 368 Aug.; Orde, Simon, 368 Aug.; Phillips, Charles Francis, 368 Aug.; Pimkham, Charles, 368 Aug.; Rattee, Stanley G., 368 Aug.; Smith, John Satchell, 171 Apr.; Smith, Louis Cedric, 586 Dec.; Walker, R. C., 473 Oct.; Webb, James H., 171 Apr.  
 Ohmmeter, The, by W. Tusting, 323 July; (Correspondence) 415 Sept.  
 Ohm's Law, by "Cathode Ray," 383 Aug.  
 Operating Television O.B. Units, by J. F. Hartwright, 74 Feb.  
 Oscillator/Filter Unit, by A. O. Morton, 129 Mar.; Correction, 152 Apr.  
 Oscillators, Microphony in Superhet, by H. Stibbe, 35 Jan.  
 Oscilloscope Beam Switch, by K. R. Starley, 11 Jan.  
 Overlapping Television Channels? Brit. I.R.E. Paper, 509 Nov.  
 P.A. Installation at Glasgow Central Station (News) 412 Sept.  
 Packaged Circuits, by Michael Lorant, 433 Sept.  
 Permanent Magnets, Manganese-Bismuth, 184 Apr.  
 Phase-Angle Ellipse (Correspondence) 118 Mar.  
 — Measurements, by F. A. Benson, 157 Apr.  
 — Meter, Southern Instruments K159, 45 Jan.  
 Physical Society—Exhibition (News), 5 Feb., 119 Mar.; Survey, 246 June

Pickup, Ronette Miniweight Crystal, 97 Feb.  
 —, E.M.I. Model 17, 45 Jan.  
 Pickups, Collaro Crystal, 241 May  
 Planning Radio Projects, I.E.E. Discussion, 73 Feb.  
 Plastics Exhibition (News) 67 Feb., 268 June; Review, 305 July  
 Plessey-Amplion Agreement (News) 414 Sept.  
 Pocket Reactance and Resonance Calculator, by V. J. Tyler, 560 Dec.  
 Point Contact Germanium Rectifiers, by R. T. Lovelock, 511 Nov., 600 Dec.  
 Police Transmitter, G.E.C., 421 Sept.  
 Portable P.A., by E. Griffiths, 201 May  
 — Aluminium Mast, 424 Sept.  
 — Magnetic Recorder, Grundig Type 7001L, Test Report, 409 Sept.  
 Post-Office Type Relays, "Surplus," by T. Dawson, 39 Jan.  
 Potentiometer Method of Voltage Measurement, 289 June  
 Precision Two-Speed Drive, Transradio, 578 Dec.  
 Printed Circuits (News) 23 Jan.  
 Psycho-Optics in Television, by C. Burns, 9 Jan.; (Correspondence) 118 Mar.  
 Purchase Tax on Loudspeakers (Editorial) 147 Apr.; Note, 375 Aug.  
 Push-Pull Transistor Amplifiers, by J. I. Missen, 467 Oct.  
 Pye-U.S. Television Agreement (News) 213 May  
 R.C.E.E.A. Council (News) 122 Mar.  
 R.E.C.M.F.:  
 — Council Elected (News) 213 May  
 — Exhibition, 1953 (News) 65 Feb.; List of Exhibitors, 190 Apr.; Survey, 246 June  
 — Swedish Show (News) 412 Sept.  
 R.F. Characteristics of Capacitors (Correspondence) 15 Jan.  
 — Soldering, Redifon, 310 July  
 R.I.C. Technical Writing Awards, 163 Apr.; (Editorial) 195 May; (News) 533 Nov.  
 R.S.G.B.:  
 — Fortieth Anniversary (News) 171 Apr.  
 — Membership (News) 25 Jan.  
 — Officers Elected (News) 67 Feb.  
 — Seventh Amateur Radio Show (News) 413 Sept., 533 Nov.; Preview, 577 Dec.  
 — Sixth Radio Show Report, 6 Jan.  
 — V.H.F. Amateur Band Planning Meeting, 360 Aug.  
 R/T Distress Frequency (News) 169 Apr.  
 R.T.E.B. Servicing Certificate Exams (News) 23 Jan.; New Regulations (News) 472 Oct.; Results (News) 533 Nov.  
 Radar Association, Technical Division (News) 586 Dec.  
 — Detection of Icebergs, Inst. of Navigation Paper, 135 Mar.  
 — Plotter (News) 212 May  
 — Research Establishment Formed (News) 412 Sept.  
 — (Sonde) Wind Measurement, 527 Nov.  
 Radiation? by "Cathode Ray," 185 Apr.  
 Radio-Controlled Clock? (Editorial) 101 Mar.; (Correspondence) 167 Apr.; Article, 136 Mar.  
 Radio in India, 152 Apr.  
 — Interference, Analysis of Complaints, 369 Aug.  
 — Rescue Beacon "Sarah," 381 Aug.  
 — Road Patrols, A.A. Motor-Cycle, 57 Feb.  
 — Societies and Clubs, Additions to List (Nov.) 56 Feb.  
 — Telemetering, I.E.E. Paper, 14 Jan.  
 — Telescope, Narrow-Beam, 371 Aug.  
 — Waves, by "Cathode Ray," 285 June  
 RANDOM RADIATIONS, by "Diallist," 46 Jan., 98 Feb., 144 Mar., 192 Apr., 242 May, 292 June, 340 July, 388 Aug., 442 Sept., 502 Oct., 556 Nov., 606 Dec.  
 Reactance and Resonance Pocket Calculator, by V. J. Tyler, 560 Dec.  
 Reactivating the Dry Cell, by R. W. Hallows, 344 Aug.; (Correspondence) 416 Sept., 465 Oct.  
 Record Player, Philips 424A, 241 May  
 Recording Copyright—Committee's Report (Editorials) 1 Jan., 101 Mar.; (Correspondence) 117 Mar.  
 Rectifiers, Point Contact Germanium, by R. T. Lovelock, 511 Nov., 600 Dec.  
 Redefining "Electronics," by B. E. Nollting, 361 Aug.; (Correspondence) 415 Sept.  
 Reflex Push-Pull Receiver, by G. J. Pope, 553 Nov.  
 Relays, "Surplus," by T. Dawson, 39 Jan.  
 — "Reliable Valves," No More, 270 June  
 Remote Display of Radar Pictures, by R. F. Hansford and G. J. Dixon, 218 May  
 Research on Insulating Materials, I.E.E. Symposium, 199 May

Resistor Colour Code (*Correspondence*) 168 May  
 Resistors, Labgear Vitreous, 555 Nov.  
 Resonance Curves, by "Cathode Ray," 29 Jan.  
 Ringing Choke E.H.T. Unit, by D. M. Melluish, 603 Dec.  
 Royal Tour Radio, *SS Gothic*, 584 Dec.

**S.B.A.C.** Show 1953 (*News*) 25 Jan.  
 Saving Television Bandwidth, 158 Apr.  
 School Broadcasting Equipment, 200 May  
 Screen Size, Subjective; Psycho-Optics in Television, by C. Burns, 9 Jan.; (*Correspondence*) 118 Mar.  
 Sensitive Two-Valve Receiver, by H. E. Styles, 233 May  
 Servicemen's Wages (*News*) 24 Jan., 65 Feb.  
 Servicing Certificate Regulations (*News*) 472 Oct.  
 Shared Television Channels, by F. R. W. Strafford, 114 Mar.  
 Sharpening Thorn Needles, by E. F. Foster, 564 Dec.

**SHORT-WAVE CONDITIONS**, 38 Jan., 54 Feb., 140 Mar., 178 Apr., 228 May, 284 June, 300 July, 347 Aug., 427 Sept., 486 Oct., 510 Nov., 592 Dec.

Short-Wave Receiver, Armstrong BS54, 44 Jan.  
 Signal Lamp, Bulgin Miniature, 143 Mar.  
 — Tracing (*Correspondence*) 15 Jan., 118 Mar.  
 Silicone "Anti-Tracking" Grease, Direct V/V Replacements, 143 Mar.  
 Simple Capacitance Checker, by T. R. Smith, 93 Feb.  
 — Distortion Meter, by V. J. Tyler, 431 Sept.; (*Correspondence*) 582 Dec.  
 Simplified (Slide-Rule) Calculations, by Francis Oakes, 439 Sept.  
 Simultaneous Translation at N.A.T.O., by E. Aisberg, 69 Feb.  
 Single-Sideband Receiver, Mullard GFR552, 486 Oct.  
 Skin Effect, by "Cathode Ray," 537 Nov.  
 Slide-Rule Calculations for Resonant Circuit Constants, by Francis Oakes, 439 Sept.  
 Solder, Multicores High-Temperature, 96 Feb.  
 Sound Recording Congress in Paris (*News*) 473 Oct.  
 "Soundmaster" Tape Recorder for Home Construction, 563 Dec.  
 — "Special Quality" Valves, 270 June  
 Speed of Radio Waves (*News*) 121 Mar.  
 Standard Frequency Transmissions, Schedules (*News*) 267 June  
 — (*Editorial*) 101 Mar.; (*News*) 119 Mar.; Article, Time by Telearchies, 136 Mar.; (*Correspondence*) 167 Apr.  
 Stereoscopic Television, 296 July; (*Correspondence*) 364 Aug.; 415 Sept.  
 — in U.S. (*News*) 367 Aug.  
 Stockholm, V.H.F. Plan, 94 Feb.  
 Storage Cathode-Ray Tube, by L. S. Allard, 95 Feb.  
 Student Exchange, I.A.E.S.T.E. (*News*) 585 Dec.  
 Superhet Oscillators, Microphony in, by H. Stihlé, 35 Jan.  
 Suppressing Gramophone Surface Noise, B.S.R.A. Paper, 298 July  
 Suppression of Ground Reflections, by Michael Lorant, 87 Feb.  
 "Snurpuz" Relays, by T. Dawson, 39 Jan.  
 Swedish Interference (*Correspondence*) 415 Sept.  
 — Record Changer, Luxor Radio, 604 Dec.  
 Swiss Radio Show, by G. H. Russell, 521 Nov.  
 Symbols, Are They Overdone? (*Correspondence*) 316 July  
 Synchronization, Flywheel, by B. T. Gilling, 137 Mar., 495 Oct.; (*Correspondence*) 168 Apr., 272 June  
 Synchronous F.M. System, Police, 77 Feb.  
 Synthetic Radar Trainer, 123 Mar.

**T.R.E.** and R.R.D.E. Amalgamated (*News*) 412 Sept.  
 Tag Mountings, United Insulator, 387 Aug.  
 Talking Books, N.I.B. (*News*) 120 Mar.  
 Tape Deck Trade Mark (*News*) 535 Nov.  
 — Recorder, Designing a, by J. M. Carter, 108 Mar., 164 Apr., 229 May; Correction, (*News*) 269 June; (*Correspondence*) 272 June  
 — for Home Construction, "Soundmaster," 563 Dec.  
 — "Wow" Measurement, by D. W. Thomasson, 579 Dec.  
 — versus Disc, I.E.E. Discussion, 583 Dec.  
 Technical Qualifications (*Correspondence*) 363 Aug., 416 Sept., 466 Oct., 529 Nov., 582 Dec.  
 — Training Establishments—List, 542 Nov.  
 — Writing Awards, 163 Apr.; (*Editorial*) 195 May, (*News*) 533 Nov.  
 Technological University (*News*) 119 Mar.  
 Telefunken's Fiftieth Birthday, 347 Aug.  
 Telemetry, Radio, I.E.E. Paper, 14 Jan.  
 Television Advisory Committee: (*News*) 23 Jan.; Technical Sub-Committee (*News*) 169 Apr.; Summary of Report, 365 Aug.; (*Editorials*) 49 Feb., 147 Apr., 343 Aug., 391 Sept., 445 Oct.; (*Correspondence*) 117 Mar., 415 Sept., 465 Oct.  
 — Aerial, Wolsey, 191 Apr.  
 — Amplifier Unit, Spencer West AC8, 555 Nov.  
 — Aerials of the Future, by F. R. W. Strafford, 506 Nov.; Correction, 580 Dec.  
 — Booster for Brighton (*News*) 65 Feb., 169 Apr.  
 — Stations, by P. J. Harvey, 148 Apr.  
 — Boosters (*Editorial*) 101 Mar., Converter, by C. A. Marshall, 223 May  
 — Costs: New Stations and Links (*News*), 169 Apr.  
 — Modulation (*Correspondence*) 63 Feb., 117 Mar.  
 — Society:  
 Council Elections (*News*) 322 July  
 Experimental T.V. on U.H.F., 366 Aug.  
 Exhibition, 1953 (*News*) 23 Jan.; Report, 142 Mar.; 1954 (*News*) 533 Nov.  
 — Standards Converter, 273 June  
 — Stations, List of Proposed, 291 June  
 — Sync Separator, by D. Clements, 55 Feb.  
 Temperature Controller, Mullard, 97 Feb.  
 Thorn Needle Sharpener, by E. F. Foster, 564 Dec.  
 Time by Telearchies, 136 Mar.  
 Transformer, Partridge P3064 Push-Pull, 555 Nov.  
 Transformers, Advance Automatic Boost, 584 Dec.  
 — in the Tropics (*Correspondence*) 15 Jan., 64 Feb.  
 Transistor Amplifier for Hearing Aids, Multitone, 270 June  
 — Amplifiers, Push-Pull, by J. I. Missen, 467 Oct.  
 — Circuits and Applications, 369 Aug.  
 — Coupling Transformer, John Bell & Croyden, 358 Aug.  
 — Radio-Telephone Transmitter, 576 Dec.  
 — Transmitter, 239 May  
 Transistors, by Thomas Roddam, 70 Feb., 125 Mar., 175 Apr., 205 May, 256 June, 311 July, 359 Aug., 435 Sept., 475 Oct., 543 Nov., 568 Dec.; (*Correspondence*) 315 July  
 —, Components for, by G. W. A. Dummer, 196 May  
 —, New R.C.A. 2N32—2N35, 360 Aug.

Translation Distribution at N.A.T.O., by E. Aisberg, 69 Feb.  
 Transmitter Distortion, Broadcast (*Correspondence*) 167 Apr., 210 May, 271 June, 315 July, 393 Aug., 416 Sept., 466 Oct.; Correction, 466 Oct.  
 — Receiver, Two-Band, by G. P. Anderson, 593 Dec.  
 Transmitting Licences, Morse Test (*News*) 585 Dec.  
 Trends in Electro-Acoustics, Netherlands International Congress, 352 Aug.  
 Two-Band Television Reception (*Editorial*) 245 June; (*Correspondence*) 271 June, 315 July, 363 Aug.  
 — Transmitter Receiver, by G. P. Anderson, 593 Dec.  
 — Valve Receiver, Sensitive, by H. E. Styles, 233 May

**UNBIASED**, by "Free Grid," 48 Jan., 100 Feb., 146 Mar., 194 Apr., 244 May, 294 June, 342 July, 390 Aug., 444 Sept., 504 Oct., 558 Nov., 608 Dec.

**V.H.F.** Air-to-Ground Communications, New Zealand, 500 Oct.  
 — Amateur Band Planning, R.S.G.B. Meeting, 360 Aug.  
 — as an "Extra" (*Correspondence*) 64 Feb.  
 — Broadcasting (*Editorial*) 195 May  
 — Station Map, 531 Nov.  
 —, Stockholm Plan, 94 Feb.  
 — Extension to Telephone System, 583 Dec.  
 — Oscillators, Calibrating, by M. C. Matthews, 141 Mar.  
 — Radio Noise, by E. G. Hamer, 43 Jan.  
 — Ship-to-Shore Communications (*Correspondence*) 211 May  
 — Wide-Band Panoramic Receiver, G.E.C., by J. B. Lovell Foot, 392 Sept.  
 Valve Matching using Resistors, by H. V. Harley, 488 Oct.  
 — Megohmmeter, by M. G. Scroggie, 516 Nov.  
 Valveholder, McMurdo E.H.T., 501 Oct.  
 Valves for Microwaves, by "Cathode Ray," 417 Sept., 479 Oct.  
 Vision A.C.E., 173 Apr.; (*Correspondence*) 211 May  
 Voltmeter Loading, 289 June; Article, by R. A. Wiersma, 499 Oct.  
 — Neon Tube, by H. E. Styles, 549 Nov.  
 — Pye Sealamp, 44 Jan.  
 Volume Control, Morganite Television, 501 Oct.

**WAVES** and Aerials, by "Cathode Ray," 331 July  
 Wenvoe Service Area Map, 107 Mar.  
 Wide-Band Long-Wave Aerial, 386 Aug.  
 — V.H.F. Panoramic Receiver, G.E.C., by J. B. Lovell Foot, 392 Sept.  
 Wire Stripper, New, 598 Dec.  
 Wired Broadcasting in Sweden (*News*) 320 July  
 Wireless Fifty Years Ago, by Maurice Child, 356 Aug.; (*Correspondence*) 466 Oct.  
 Wireless World Television Receiver, Modernizing the, 215 May, 279 June, 306 July; Correction, 598 Dec.  
 WORLD OF WIRELESS, 23 Jan., 65 Feb., 119 Mar., 169 Apr., 212 May, 267 June, 320 July, 367 Aug., 412 Sept., 472 Oct., 533 Nov., 585 Dec.  
 "Wow" and "Flutter" Measurement, BS, 1988:1953, 440 Sept.  
 — Measurement, by D. W. Thomasson, 579 Dec.  
 Wright & Weaire—Tape Deck Trade Mark, (*News*) 535 Nov.

## CLASSIFIED INDEX

(All entries except Authors, Books and Publications, illustrations and Personalities also appear in the General Index.)

### AERIALS

Aerial Queries, by "Cathode Ray," 235 May; (*Correspondence*) 363 Aug.  
 Aviation Radio, S.B.A.C. Exhibition, 461 Oct.  
 Coaxial Problems, Some, by "Cathode Ray," 571 Dec.  
 Directional Reception (*Correspondence*) 63 Feb.  
 Narrow-Beam Radio Telescope, 371 Aug.  
 Portable Aluminium Mast, 424 Sept.  
 Shared Television Channels, by F. R. W. Strafford, 114 Mar.  
 Skin Effect, by "Cathode Ray," 537 Nov.

Television Aerials of the Future, by F. R. W. Strafford, 506 Nov.; Correction, 580 Dec.  
 Waves and Aerials, by "Cathode Ray," 331 July  
 Wide-Band Long-Wave Aerial, 386 Aug.

### CIRCUITRY

Attenuators, by "Cathode Ray," 131 Mar.  
 Circuit Diagrams, "Reading," 21 Jan.; (*Correspondence*) 118 Mar.  
 Complex Numbers, by "Cathode Ray," 79 Feb.

Drawing Circuit Diagrams, Brit. I.R.E. Discussion, 228 May.  
 Electronic Switch, by K. R. Sturley, 11 Jan.  
 Functional Circuit Diagrams, by C. E. Williams, 19 Jan.  
 Inductance or Capacitance? B.S.R.A. Lecture, 86 Feb.  
 Packaged Circuit, by Michael Lorant, 433 Sept.  
 Printed Circuits, (*News*) 23 Jan.  
 Push-Pull Transistor Amplifiers, by J. I. Missen, 467 Oct.  
 Resonance Curves, by "Cathode Ray," 29 Jan.

Symbols. Are They Overdone? (*Correspondence*) 316 July  
Transistor Circuit and Applications, 369 Aug.  
Valve Matching Using Resistors, by H. V. Harley, 488 Oct.

### DESIGN

A.F. Coil Winder, by B. V. Northall, 376 Aug.  
Coil Winding Data, by Lorin Knight, 22 Jan.  
Converter for 200 kc/s, by C. B. Railthby, 487 Oct.  
Designing a Tape Recorder, by J. M. Carter: 108 Mar., 164 Apr., 229 May; Correction, (*News*) 269 June; (*Correspondence*) 272 June  
Distortion Meter, Simple, by V. J. Tyler, 431 Sept.; (*Correspondence*) 582 Dec.  
Electronic Switch, by K. R. Sturley, 11 Jan.  
F. M. Feeder Unit, Further Notes on, by S. W. Amos and G. G. Johnstone, 89 Feb., 428 Sept.  
Flywheel Synchronisation, by B. T. Gilling, 137 Mar.; 495 Oct.; (*Correspondence*) 168 Apr., 272 June  
Megohmmeter, Inexpensive, by H. E. Styles, 484 Oct.  
Multi-Layer R.F. Coil-Winder, by B. V. Northall, 179 Apr.  
Neon Tube Measuring Device, by H. E. Styles, 549 Nov.  
Oscillator/Filter Unit, by A. Q. Morton, 129 Mar.; Correction, 152 Apr.  
Pockel Reactance and Resonance Calculator, by V. J. Tyler, 560 Dec.  
Portable P.A., by E. Griffiths, 201 May  
Push-Pull Transistor Amplifiers, by J. L. Missen, 467 Oct.  
Reflex Push-Pull Receiver, by G. J. Pope, 353 Nov.  
Ringing-Choke E.H.T. Unit, by D. M. Mel-lish, 603 Dec.  
Sharpening Thorn Needles, by E. F. Foster, 564 Dec.  
Simple Capacitance Checker, by T. R. Smith, 93 Feb.  
"Surplus" Relays, by T. Dawson, 39 Jan.  
Television Converter, by C. A. Marshall, 223 May  
— Sync Separator, by D. Clements, 55 Feb.  
Two-Band Transmitter Receiver, by G. P. Anderson, 593 Dec.  
Two-Valve Receiver, by H. E. Styles, 233 May  
Valve Megohmmeter, by M. G. Scroggie, 516 Nov.  
*Wireless World* Television Receiver, Modernizing the, 215 May, 279 June, 306 July; Correction, 598 Dec.

### EDUCATION AND TRAINING

E.M.I. Further Education Scheme (*News*) 121 Mar.  
Ekco Student Apprenticeships (*News*) 121 Mar.  
G.E.C. Graduate and Vacation Apprenticeships (*News*) 121 Mar.  
Marine Radio Careers—Booklet, 128 Mar.  
Mullard Educational Filmstrips, 366 Aug.  
Technical Qualifications (*Correspondence*) 363 Aug., 416 Sept., 466 Oct., 529 Nov., 582 Dec.  
Technical Training Establishments—List, 542 Nov.

### ELECTRONICS

Brain Waves by Radio, 362 Aug.  
Cathodic Protection (*Correspondence*) 211 May  
"Cellular" Circuits, by Michael Lorant, 493 Oct.  
Electronic Confusion (*Editorial*) 295 July  
— Organ, B.S.R.A. Competition, 330 July  
"Electronics," Official Ruling? (*News*) 472 Oct.  
Film Making, Electronic, by T. C. Macnamara, 153 Apr.  
Institution of Electronics Exhibition (*News*) 320 July  
Medical Electronics, 407 Sept.  
R.F. Soldering, Redifon, 310 July  
Re-Defining "Electronics," by B. E. Nolling, 361 Aug.; (*Correspondence*) 415 Sept.  
Storage Cathode-Ray Tube, by L. S. Allard, 95 Feb.  
Transistor Circuits and Applications, 369 Aug.  
Ultrasonic Drill, Mullard, 528 Nov.

### MANUFACTURERS' PRODUCTS

A.B. Metal Products Anti-Interference Aerial, 584 Dec.

Acousticon Hearing-Aid Radio Unit, 172 Apr.  
Advance Audio Signal Generator, 14 Jan.  
— S2A Automatic Boost Transformer, 584 Dec.  
Armstrong B851 Short-Wave Receiver, 44 Jan.  
Bell & Croyden, Transistor Coupling Transformer, 358 Aug.  
Belling-Lee Neon Indicating Fusebox, 441 Sept.  
Bonchard Miniature Hearing Aid, 241 May  
British Ropes Moulded Nylon, 143 Mar.  
Bulzin Miniature Signal Lamp, 143 Mar.  
Collaro Studio Crystal Pickups, 241 May  
Courtenay Battery Tester, 501 Oct.  
Decca Radar Plotter (*News*) 212 May  
Direct T.V. Replacements Anti-Tracking Grease, 143 Mar.  
E.M.I. Electrostatic Storage Tube, 570 Dec.  
— "In-Situ" Impedance Bridge, 96 Feb.  
— Model 17 Pickup, 45 Jan.  
Eddystone Model 840 A.C./D.C. Communications Receiver, Test Report, 348 Aug.  
Elac Midget Loudspeaker, 97 Feb.  
G.E.C. Hearing-Aid Transistor Amplifier, 270 June  
— Interference-Suppressed Flashers, 501 Oct.  
— Magnetic Powder Cores, by D. F. W. Champion and E. G. Wilkins, 83 Feb.; (*Correspondence*) 167 Apr.  
— Police Transmitter, 421 Sept.  
— Wide-Band V.H.F. Panoramic Receiver, by J. B. Lovell Foot, 392 Sept.  
G.N.T. Loudspeaker, 27 Jan.  
Goodmans Axiom 101 and 102 Loudspeakers, 44 Jan.  
Grundig Type 700L, Portable Magnetic Recorder, Test Report, 409 Sept.  
Labgear Vitrous Resistors, 555 Nov.  
Lastraphone Lightweight Microphones, 339 July  
Luxor Radio Record Changer, 604 Dec.  
McMurdy E.H.T. Valveholder, 501 Oct.  
Marconi International Marine Broadcast Receiver, 370 Aug.  
Morganite Television Volume Control, 501 Oct.  
Morrison Portable A.C. Generator, 387 Aug.  
Mullard 4FR552 Single-sideband Receiver, 186 Oct.  
— Laboratory Temperature Controller, 97 Feb.  
— Ultrasonic Drill, 528 Nov.  
Multicore High-Temperature Solder, 96 Feb.  
Multitone Hearing Aid Extension, 314 July  
— Hearing-Aid Transistor Amplifier, 270 June  
Osmon Miniature Coils, 45 Jan.  
Partridge P3064 Push-Pull Output Transformer, 555 Nov.  
Philips EL3530 Portable Magnetic Tape Recorder, 441 Sept.  
— 424A Record Player, 241 May  
Plessey Caslole Ceramic, 191 Apr.  
Pye GW.97 Sealamp Electrostatic Voltmeter, 44 Jan.  
R.C.A. New Transistors, 2N32-2N35, 360 Aug.  
Redifon R.F. Soldering, 310 July  
Rees Mace RMI Cabin Broadcast Set, 584 Dec.  
Reosound Portable Cable Drum, 441 Sept.  
Ronette "Miniweight" Crystal Pickup, 97 Feb.  
Sanders Electronic Humidity Control, 339 July  
Savage Mark II High-Power Amplifier, 54 Feb.  
Southern Instruments K 159 Phase Meter, 45 Jan.  
Spencer West AC8 Television Aerial, 555 Nov.  
Suffex Polystyrene Capacitors, 191 Apr.  
Telecraft Loop Aerials, 387 Aug.  
Transradio Precision Two-Speed Drive, 578 Dec.  
Ultra Radio Rescue Beacon, 381 Aug.  
United Insulator Tag Mountings, 387 Aug.  
Venner Lifeboat Transmitter, 339 July  
Wolsey Television Aerial Developments, 191 Apr.

### MODULATION

F.M. Synchronous System, Police, 77 Feb.  
Radio Telemetry, I.E.E. Paper, 14 Jan.  
Television Modulation (*Correspondence*) 63 Feb., 117 Mar.  
Transistor Radio-Telephone Transmitter, 576 Dec.

### ORGANIZATION

A.P.A.E. Officers Elected (*News*) 269 June  
Alternative Television Service—Government Proposals (*Editorial*) 49 Feb.; (*Correspondence*) 117 Mar.

Amateur Bands, Table of, 16 Jan.  
— Emergency Services (*Editorial*) 195 May  
— F.M. (*News*) 119 Mar.  
— 2-Mc/s Band (*News*) 267 June; (*Correspondence*) 316 July  
B.B.C. Home Service Transmitters (*News*) 65 Feb.  
— Low-Power Television Stations (*News*) 212 May  
— Proposed (Two-Programme) Television Stations, List, 291 June  
— Statement on Home Recording Copyright (*Editorial*) 559 Dec.  
— Tuning Notes (*News*) 533 Nov.  
B.R.E.M.A. Council (*News*) 171 Apr.  
Brit. I.R.E. Awards, 542 Nov.  
— Membership (*News*) 534 Nov.  
Batteries, Price Reduced of Dry (*News*) 171 Apr.  
C.C.I.R. London Meeting (*News*) 121 Mar.; 396 Sept.; Summary 532 Nov.  
C.I.S.P.R. London Meeting (*News*) 533 Nov., 585 Dec.  
C.R.T. Insurance, 605 Dec.  
Civil Aviation Communications Centre, 227 May  
Commonwealth Telecommunications (*Editorial*) 505 Nov.  
Competitive Television: White Paper (*News*) 585 Dec.  
Dry Batteries, price reduced (*News*) 171 Apr.  
E.B.U. Monte Carlo Meeting (*News*) 533 Nov.  
— Receiving Station, by J. Treeby Dickinson, 422 Sept.; (*News*) 412 Sept.  
Ekco Electronics Ltd., formed (*News*) 414 Sept.  
Electric Audio Reproducers Ltd., formed (*News*) 414 Sept.  
Exhibition Organization (*Editorial*) 245 June  
Exhibitions and Catalogue (*Correspondence*) 465 Oct.  
Future of Broadcasting (*Correspondence*) 16 Jan., 64 Feb.  
— of Sound Broadcasting, I.E.E. Discussion, 17 Jan.  
G.P.O. Analysis of Complaints of Radio Interference, 369 Aug.  
German Radio Jubilee, 347 Aug.  
— Radio Show (*News*) 269 June; Impressions by J. E. Cope, 471 Oct.  
I.A.E.S.T.E. Student Exchange (*News*) 585 Dec.  
I.E.E. Association for Technicians (*News*) 320 July  
— Council Elected (*News*) 368 Aug.  
— Premium Awards, 541 Nov.  
— Radio Section Committee Elected (*News*) 368 Aug.  
I.F. Inquiry by E.B.U. (*Correspondence*) 15 Jan.  
Identifying Receiver Controls (*Correspondence*) 581 Dec.  
Interference from Sweden (*Correspondence*) 415 Sept.  
— from Zebra Beacons (*Correspondence*) 168 Apr., 210 May  
Interference Suppression, P.M.G. Regulations (*Editorial*) 1 Jan., Summary, 42 Jan.  
International Radio Conference 50th Anniversary, 355 Aug.  
— Standards, I.E.C., 548 Nov.  
Italian Television (*News*) 65 Feb.  
Lamp Interference (*Correspondence*) 211 May, 272 June, 316 July, 354 Aug., 529 Nov.  
Licensing Set Manufacturers (*News*) 169 Apr.  
Looking Ahead in Television (*Editorial*) 147 Apr.  
Loudspeaker Tax (*Editorial*) 147 Apr.; Note, 375 Aug.  
MSF Schedules, Rugby Standard Frequency Transmissions (*News*) 267 June  
Maritime Distress Frequency (*Correspondence*) 16 Jan.  
— Frequency Changes (*News*) 214 May  
National Radio Show 1953 (*News*) 119 Mar., 367 Aug.; Preliminary list of Exhibitors, 266 June; (*Editorials*) 391 Sept., 445 Oct.; Guide and Preview 397 Sept.; Review 446 Oct.; 1954 Exhibition (*News*) 587 Dec.  
Non-broadcast Television (*Editorial*) 49 Feb.  
Planning Radio Projects, I.E.E. Discussion, 73 Feb.  
Plessey-Amplion Agreement (*News*) 414 Sept.  
Purchase Tax on Loudspeakers (*Editorial*) 147 Apr.; Note, 375 Aug.  
Pye-U.S. Television Agreement (*News*) 213 May  
R.C.B.E.A. Council (*News*) 122 Mar.  
R.E.C.M.F. Council Elected (*News*) 213 May  
R.I.C. Technical Writing Awards 163 Apr.; (*Editorial*) 195 May; (*News*) 533 Nov.  
R.S.G.B. Officers Elected (*News*) 67 Feb.  
Membership (*News*) 25 Jan.

R.T.E.B. Servicing Certificate Exams (*News*) 23 Jan., New Regulations (*News*) 472 Oct., Results (*News*) 533 Nov.  
 R/T Distress Frequency (*News*) 169 Apr.  
 Radio in India, 152 Apr.  
 — Road Patrols, A.A. Motor-Cycle, 57 Feb.  
 — Societies and Clubs, Additions to 1952 List, 56 Feb.  
 Rational Planning of Radio Channels, 335 July  
 Recording Copyright—Committee's Report (*Editorials*) 1 Jan., 101 Mar.; (*Correspondence*) 117 Mar.; B.B.C. Statement (*Editorial*) 559 Dec.  
 Resistor Colour Code (*Correspondence*) 168 Apr.  
 School Broadcasting Equipment, 200 May  
 Servicemen's Wages (*News*) 21 Jan., 65 Feb.  
 Standard Frequency Transmissions (*Editorial*) 101 Mar.; (*Correspondence*) 167 Apr.; (*News*) 119 Mar.; Article—Time by Telechronics, 136 Mar.; Schedules (*News*) 267 June  
 Stockholm V.H.F. Plan, 91 Feb.  
 T.R.E. and R.R.D.E. Amalgamated (*News*) 412 Sept.  
 Tape-Deck Trade Mark (*News*) 535 Nov.  
 Technical Qualifications (*Correspondence*) 363 Aug., 416 Sept., 466 Oct., 529 Nov., 582 Dec.  
 — Writing Awards, R.I.C., 163 Apr.; (*Editorial*) 195 May, (*News*) 533 Nov.  
 Technological University (*News*) 119 Mar.  
 Television Advisory Committee (*News*) 23 Jan., 169 Apr.; Report, 365 Aug.  
 — Costs: New Stations and Links (*News*) 169 Apr.  
 — Society Council Elections (*News*) 322 July  
 — Stations, List of Proposed, 291 June  
 Transmitting Licences, Morse Test (*News*) 585 Dec.  
 Two-Band Television Reception (*Editorial*) 245 June; (*Correspondence*) 271 June, 315 July, 363 Aug.  
 V.H.F. Amateur Band Planning, R.S.G.B. Meeting, 360 Aug.  
 — as an "Extra" (*Correspondence*) 64 Feb.  
 — Broadcasting (*Editorial*) 195 May; Map of proposed B.B.C. stations, 531 Nov.  
 — Ship-to-Shore Communications (*Correspondence*) 211 May  
 — Sound Broadcasting, B.B.C. Plans, (*Editorial*) 505 Nov.  
 Wenvoe Service Area Map, 107 Mar.  
 Wireless Fifty Years Ago, by Maurice Child, 356 Aug.; (*Correspondence*) 466 Oct.

#### PROPAGATION

Height of the Ionosphere, Royal Society Conversazione, 338 July  
 Ionosphere Review—1952, by T. W. Bennington, 59 Feb.  
 Radiation? by "Cathode Ray," 185 Apr.  
 Radio Waves, by "Cathode Ray," 285 June  
 SHORT-WAVE CONDITIONS, 38 Jan., 54 Feb., 149 Mar., 178 Apr., 228 May, 284 June, 300 July, 347 Aug., 427 Sept., 486 Oct., 510 Nov., 592 Dec.  
 Suppression of Ground Reflections, by Michael Lorant, 87 Feb.  
 Waves and Aerials, by "Cathode Ray," 331 July

#### RADIOLOCATION

Airfield Radar Equipment, Decca, 547 Nov.  
 Aviation Radio, S.B.A.C. Exhibition, 461 Oct.  
 Decca Navigator French Chain, 566 Dec.  
 — Radar Plotter (*News*) 212 May  
 High Pulse-Ratio Radar, Decca, 552 Nov.  
 Long-Range Marine Radar, Kelvin Hughes, 515 Nov.  
 Narrow-Beam Radio Telescope, 371 Aug.  
 Radar Detection of Icebergs, Institution of Navigation Paper, 135 Mar.  
 — (Sonde) Wind Measurement, 527 Nov.  
 Radio Rescue Beacon "Sarah," 381 Aug.  
 Remote Display of Radar Pictures, by R. F. Hansford and G. J. Dixon, 218 May  
 Synthetic Radar Trainer, 123 Mar.

#### SOUND REPRODUCTION

Acoustic Response Curves, by E. W. Rogers, 496 Oct.  
 Audio Developments, A.P.A.E. and B.S.R.A. Exhibitions, 301 July  
 Aural Anomaly, 239 May; (*Correspondence*) 364 Aug.  
 Designing a Tape Recorder, by J. M. Carter, 108 Mar., 164 Apr., 229 May; (*Correspondence*) 272 June; Correction (*News*) 269 June  
 Distortion, Diagnosis of, by E. R. Wigan, 261 June  
 — Meter, Simple, by V. J. Tyler, 431 Sept.; (*Correspondence*) 582 Dec.

Drying Loudspeaker Cones, 362 Aug.  
 Electro-Acoustics Congress (*News*) 23 Jan.  
 Electronic Organ, B.S.R.A. Competition, 330 July  
 Environment of High-quality Reproduction, by F. H. Brittain, 2 Jan.  
 Future of Hearing Aids, by A. Poliakoif, 182 Apr.  
 Hearing Aids, Break-through in, 118 Mar.  
 Home Recording and the Copyright Law (*Editorials*) 1 Jan., 101 Mar., 559 Dec.; (*Correspondence*) 117 Mar.  
 Inexpensive Pickups on Long-Playing Records, by G. H. Russell, 299 July  
 Loudspeaker Efficiency, 51 Feb.  
 —, Friction Driven, 27 Jan.  
 Magnetic Recording Convention (*News*) 23 Jan.  
 Microphones, New High-Grade Condenser, by F. W. O. Bauch, 50 Feb., 111 Mar.  
 Portable Magnetic Recorder, Grundig Type 7001, Test Report, 409 Sept.  
 — P.A., by E. Griffiths, 201 May  
 Recording Copyright—Committee's Report (*Editorials*) 1 Jan.; 101 Mar.; (*Correspondence*) 117 Mar.; B.B.C. Statement (*Editorial*) 559 Dec.  
 Sharpening Thorn Needles, by E. F. Foster, 564 Dec.  
 Simultaneous Translation at N.A.T.O. by E. Aisberg, 69 Feb.  
 Sound Recording Congress in Paris. (*News*) 473 Oct.  
 Suppressing Gramophone Surface Noise B.S.R.A. Paper, 298 July  
 Tape Recorder for Home Construction, "Soundmaster," 563 Dec.  
 — Versus Disc, I.E.E. Discussion, 583 Dec.  
 Trends in Electro-Acoustics, Netherlands International Congress, 352 Aug.  
 "Wow" and "Flutter" Measurement, BS1988:1953, 440 Sept.  
 — Measurement, by D. W. Thomasson, 579 Dec.

#### TELEVISION

Alternative Television Service—Government Proposals, (*Editorials*) 49 Feb., 343 Aug., 391 Sept., 445 Oct.; (*Correspondence*) 117 Mar., 391 Sept., 465 Oct.  
 Amateur Television Progress, by M. Barlow, 589 Dec.  
 — Television Transmission (*News*) 413 Sept.  
 American Impressions of British Television, by John D. Burke, 58 Feb.  
 B.B.C. Low-power Television Stations (*News*) 212 May  
 — Television Effects, 494 Oct.  
 — Temporary Television Stations (*News*) 23 Jan.  
 — Test Transmissions (*News*) 171 Apr.  
 Band 1 Colour Television, 599 Dec.  
 Band 3 Television Transmitters, 592 Dec.  
 "Booster" Station, Television, by P. J. Harvey, 148 Apr.  
 Boosters (*Editorial*) 101 Mar.  
 Brighton Booster, (*News*) 65 Feb.; 169 Apr.  
 C.R.T. Insurance, 605 Dec.  
 Colour Television Demonstration, Pyc, 329 July  
 — Television for Britain, British Association Paper, 523 Nov.  
 — Television, N.T.S.C., 524 Nov., 567, 599 Dec.  
 Competitive Television—White Paper (*News*) 585 Dec.  
 Converter, Television, by C. A. Marshall, 223 May  
 —, Television Standards, 273 June  
 Coronation Day Broadcasts; (*Editorial*) 295 July; Review 317 July; Article by T. H. Bridgewater 317 July  
 Crystal Palace Television Station, 411 Sept., 599 Dec.  
 D.C. Restoration in Television, by W. T. Cocking, 102 Mar.; Correction, 214 May; (*Correspondence*) 530 Nov.  
 Electronic Film-making, by T. C. Macnamara, 153 Apr.  
 Flywheel Synchronization, by B. T. Gilling, 137 Mar., 495 Oct.; (*Correspondence*) 168 Apr., 272 June  
 Future of Sound Broadcasting, I.E.E. Discussion, 17 Jan.  
 I.E.E. Television Convention Papers, 33 Jan.  
 Ignition Interference, Brit. I.R.E. Paper, 54 Feb.  
 — Interference, I.E.E. Paper, 189 Apr.  
 — Interference in U.S.A. (*Editorial*) 445 Oct.; (*Correspondence*) 465 Oct., 529 Nov., 581 Dec.  
 Interference from Brighton Booster Station (*News*) 320 July; (*Correspondence*) 529 Nov.  
 — Suppression, P.M.G. Regulations, (*Editorial*) 1 Jan.

International Television, Coronation Relay, 274 June  
 Italian Television (*News*) 65 Feb.  
 Lamp Interference (*Correspondence*) 211 May, 272 June, 316 July, 364 Aug., 529 Nov.  
 Looking Ahead in Television (*Editorial*) 147 Apr.  
 Mobile TV Stations (*News*) 267 June  
 — Television Transmitters, by E. W. Hayes, 372 Aug.  
 Modulation, Television (*Correspondence*) 63 Feb., 117 Mar.  
 N.T.S.C. Colour Television, 524 Nov., 567, 599 Dec.  
 Non-broadcast Television (*Editorial*), 49 Feb.  
 Operating Television O.B. Units, by J. F. Hartwright, 74 Feb.  
 Overlapping Television Channels, Brit. I.R.E. Paper, 509 Nov.  
 Psycho-optics in Television, by C. Burns, 9 Jan.; (*Correspondence*) 118 Mar.  
 Ringing-choke E.H.T. Unit, by D. M. Melluish, 603 Dec.  
 Saving Television Bandwidth, 158 Apr.  
 Shared Television Channels, by F. R. W. Strafford, 114 Mar.  
 Stereoscopic Television, 296 July; (*Correspondence*) 364 Aug., 415 Sept.  
 — Television in U.S. (*News*) 367 Aug.  
 Sync Separator, by D. Clements, 55 Feb.  
 Technical Sub-committee of Television Advisory Committee (*News*) 169 Apr.  
 Television Advisory Committee (*News*) 23 Jan., 169 Apr.  
 — Advisory Committee's Report (*Editorials*) 343 Aug., 391 Sept., 445 Oct.; Summary, 365 Aug.; (*Correspondence*) 391 Sept., 465 Oct.  
 — Aerials of the Future, by F. R. W. Strafford, 506 Nov.; Correction, 580 Dec.  
 — Costs: New Stations and Links (*News*) 169 Apr.  
 — Society's Experimental Transmitter, 366 Aug.  
 — Stations, List of Proposed, 291 June  
 Two-band Television Reception (*Editorial*) 245 June; (*Correspondence*) 271 June, 315 July, 363 Aug.  
 Vision A.G.C., 173 Apr.; (*Correspondence*) 211 May  
 Wenvoe Service Area, Map, 107 Mar.  
 Wireless World Television Receiver, Modernizing the, 215 May, 279 June, 306 July; Correction, 598 Dec.

#### TEST AND MEASUREMENT

British Instrument Industries Exhibition, 379 Aug.  
 Calibrating V.H.F. Oscillators, by M. C. Matthews, 141 Mar.  
 Dry Cell, Improving the, by R. W. Hallows, 276 June  
 Electronic Switch, by K. R. Sturley, 11 Jan.  
 Loudspeaker Efficiency, 61 Feb.  
 Magnetron Fields, Mapping, by Michael Lorant, 575 Dec.  
 Megohmmeter, Inexpensive, by H. E. Styles, 484 Oct.  
 Meter Overload Protection, by J. de Gruchy, 425 Sept.; (*Correspondence*) 529 Nov., 582 Dec.  
 — Shunts, 313 July; (*Correspondence*) 364 Aug.  
 — Protection, by F. R. W. Strafford, 90 Feb.  
 Microphony in Superhet Oscillators, Part 2, by H. Stibbé, 35 Jan.  
 Neon Tube Measuring Device, by H. E. Styles, 549 Nov.  
 Ohmmeter, The, by W. Tusting, 323 July; (*Correspondence*) 415 Sept.  
 Ohm's Law, by "Cathode Ray," 383 Aug.  
 Phase-angle Ellipse (*Correspondence*) 118 Mar.  
 Phase-angle Measurements, by F. A. Beuson, 157 Apr.  
 Pocket Reactance and Resonance Calculator, by V. J. Tyler, 560 Dec.  
 R.F. Characteristics of Capacitors (*Correspondence*) 15 Jan.  
 Reactivating the Dry Cell, by R. W. Hallows, 344 Aug.; (*Correspondence*) 416 Sept., 465 Oct.  
 Research on Insulating Materials, I.E.E. Symposium, 199 May.  
 Signal Tracing (*Correspondence*) 15 Jan., 118 Mar.  
 Simple Capacitance Checker, by T. R. Smith, 93 Feb.  
 Simplified (Slide-Rule) Calculations, by Francis Oakes, 439 Sept.  
 Transformers in the Tropics (*Correspondence*) 15 Jan., 64 Feb.  
 Valve Megohmmeter, by M. G. Scroggie, 516 Nov.



Voltmeter Loading, 289 June  
— Loading Again, by R. A. Wiersma, 499 Oct.  
"Wow" Measurement, by D. W. Thomasson, 579 Dec.

### TRANSMISSION

Airport Ground Communications, G.E.C., 583 Dec.  
Amateur Television Transmission (*News*) 413 Sept.  
Aviation Radio, S.B.A.C. Exhibition, 461 Oct.  
Band 3 Television Transmitters, 592 Dec.  
Broadcast Transmitter Distortion (*Correspondence*) 167 Apr., 210 May, 271 June, 315 July, 363 Aug., 416 Sept., 466 Oct.; Correction, 466 Oct.  
Coronation Day Broadcasts (*Editorial*) 295 July; Review 317 July; Article by T. H. Bridgewater, 317 July  
Crystal Palace Television Station, 411 Sept., 599 Dec.  
Greenwich, Geared to. (*Editorial*) 101 Mar.; (*Correspondence*) 167 Apr.; Article—Time by Telephones, 136 Mar.  
Local Reception Conditions (*Editorial*) 245 June  
Mobile Television Transmitters, by E. W. Hayes, 372 Aug.  
Netting, by H. B. Dent, 34 Jan.  
New Zealand V.H.F. Air-to-Ground Communications, 500 Oct.  
Police Transmitter, G.E.C., 421 Sept.  
— Telemetering, I.E.E. Paper, 14 Jan.  
Radio Rescue Beacon "Sarah," 381 Aug.  
Skin Effect, by "Cathode Ray," 537 Nov.  
Standard Frequencies from Rugby (*News*) 119 Mar.  
Synchronous F.M. System, Police, 77 Feb.  
Television "Booster" Stations, by P. J. Harvey, 148 Apr.  
— Modulation (*Correspondence*) 63 Feb., 117 Mar.  
Transistor Radio-Telephone Transmitter, 576 Dec.  
— Transmitter, 239 May  
V.H.F. Amateur Band Planning, 360 Aug.  
— Radio Noise, by E. G. Hamer, 43 Jan.  
Wired Broadcasting in Sweden (*News*) 320 July

### VALVES

Gold-Cathode Tubes, I.E.E. Discussion, 18 Jan.  
Components for Transistors, by G. W. A. Dummer, 196 May  
Function of the Valve (*Correspondence*) 364 Aug.  
Magnetron Fields, Mapping, by Michael Loran, 575 Dec.  
— Valves for Microwaves, by "Cathode Ray," 417 Sept.  
Microwave Valves, by "Cathode Ray," 417 Sept., 479 Oct.  
Point Contact Germanium Rectifiers, by R. T. Lovelock, 511 Nov., 600 Dec.  
"Special Quality" Valves, 270 June  
Storage Cathode-Ray Tube, by L. S. Allard, 95 Feb.  
Transistor Circuits and Applications, 369 Aug.  
Transistors, by Thomas Roddum, 70 Feb., 125 Mar., 175 Apr., 205 May, 256 June, 311 July, 359 Aug., 435 Sept., 475 Oct., 543 Nov., 568 Dec.; (*Correspondence*) 315 July  
Valve Matching using Resistors, by H. V. Harley, 488 Oct.

### AUTHORS

ATSBURG, E., 69 Feb.  
Allard, L. S., 95 Feb. (*Biog.* 67 Feb.)  
Amos, S. W. and Johnstone, G. G., 89 Feb., 428 Sept.  
Anderson, G. P., 593 Dec. (*Biog.* 586 Dec.)  
BARLOW, M., 589 Dec.  
Bauch, F. W. O., 50 Feb., 111 Mar. (*Biog.* 66 Feb.)  
Bennington, T. W., 59 Feb.  
Benson, F. A., 157 Apr.  
Bridgewater, T. H., 317 July  
Brittain, F. H., 2 Jan.  
Burke, J. D., 58 Feb.  
Burns, C., 9 Jan. (*Biog.* 25 Jan.)  
CARTER, J. M., 108 Mar., 164 Apr., 229 May (*Biog.* 121 Mar.)  
"Cathode Ray," 29 Jan., 79 Feb., 131 Mar., 185 Apr., 235 May, 285 June, 331 July, 383 Aug., 417 Sept., 479 Oct., 537 Nov., 571 Dec.  
Champion, D. F. W. and Wilkins, E. G., 83 Feb. (*Biog.* 67 Feb.)  
Child, Maurice, 356 Aug.  
Clements, D., 55 Feb.

Cocking, W. T., 102 Mar.  
Cope, J. E., 471 Oct.  
DAWSON, T., 39 Jan.  
Dent, H. B., 34 Jan.  
"Diallist," 46 Jan., 98 Feb., 144 Mar., 192 Apr., 242 May, 292 June, 340 July, 388 Aug., 442 Sept., 502 Oct., 556 Nov., 606 Dec.  
Dickinson, J. Treby, 422 Sept. (*Biog.* 413 Sept.)  
Dixon, G. J., with Hansford, R. F., 218 May. (*Biog.* 213 May)  
Dummer, G. W. A., 196 May (*Biog.* 213 May)  
FOOT, J. B. Lovell, 392 Sept.  
FOSTER, E. F., 564 Dec.  
"Free Grid," 48 Jan., 100 Feb., 146 Mar., 194 Apr., 244 May, 294 June, 342 July, 390 Aug., 444 Sept., 504 Oct., 558 Nov., 608 Dec.  
GILLING, B. T., 137 Mar., 495 Oct.  
Griffiths, E., 201 May (*Biog.* 268 June)  
Gruchy, J. de, 425 Sept. (*Biog.* 413 Sept.)  
HALLOWS, R. W., 276 June, 344 Aug. (*Biog.* 268 June)  
Hamer, E. G., 43 Jan.  
Hansford, R. F., and Dixon, G. J., 218 May (*Biog.* 213 May)  
Harley, H. V., 488 Oct. (*Biog.* 473 Oct.)  
Hartwright, J. F., 74 Feb. (*Biog.* 67 Feb.)  
Harvey, P. J., 148 Apr. (*Biog.* 170 Apr.)  
Hayes, E. W., 372 Aug. (*Biog.* 367 Aug.)  
JOHNSTONE, G. G., with Amos, S. W., 89 Feb., 428 Sept.  
KNIGHT, Lorin, 22 Jan.  
LORANT, Michael, 87 Feb., 433 Sept., 493 Oct., 575 Dec.  
Lovelock, R. T., 511 Nov., 600 Dec.  
MACNAMARA, T. C., 153 Apr. (*Biog.* 170 Apr.)  
Marshall, C. A., 223 May (*Biog.* 213 May)  
Matthews, M. G., 141 Mar.  
Mellish, D. M., 603 Dec.  
Missen, J. I., 467 Oct. (*Biog.* 273 Oct.)  
Morton, A. Q., 129 Mar. (*Biog.* 121 Mar.)  
NOLTINGK, B. E., 361 Aug.  
Northall, B. V., 179 Apr., 376 Aug.  
OAKES, Francis, 439 Sept.  
POLIAKOFF, A., 182 Apr. (*Biog.* 170 Apr.)  
Pope, G. J., 553 Nov.  
RAITHBY, C. B., 487 Oct.  
Roddum, Thomas, 70 Feb., 125 Mar., 175 Apr., 205 May, 256 June, 311 July, 359 Aug., 435 Sept., 475 Oct., 543 Nov., 568 Dec.  
Rogers, E. W., 496 Oct. (*Biog.* 473 Oct.)  
Russell, G. H., 299 July, 521 Nov.  
SCROGGIE, M. G., 516 Nov.  
Smith, T. R., 93 Feb.  
Stibbe, H., 35 Jan.  
Stratford, F. R. W., 90 Feb., 114 Mar., 506 Nov.  
Sturley, K. R., 11 Jan. (*Biog.* 25 Jan.)  
Styles, H. E., 233 May, 484 Oct., 549 Nov. (*Biog.* 213 May)  
THOMASSON, D. W., 579 Dec. (*Biog.* 286 Dec.)  
Tusting, W., 323 July  
Tyler, V. J., 431 Sept., 560 Dec. (*Biog.* 413 Sept.)  
WIERSMA, R. A., 499 Oct.  
Wigan, E. R., 261 June (*Biog.* 268 June)  
Wilkins, E. G., with Champion, D. F. W., 83 Feb. (*Biog.* 67 Feb.)  
Williams, C. E., 19 Jan. (*Biog.* 25 Jan.)

### BOOKS AND PUBLICATIONS

A.R.R.L. 1953 Handbook, 226 May  
Amateur's Guide to Valve Selection, Mullard, 56 Feb.  
Antennentechnik, G. C. Oxley and Alfred Nowak, 305 July  
Atmospheric Electricity, B. F. J. Schonland, 493 Oct.  
BEAMA Catalogue (*News*) 25 Jan.  
British Contribution to Television, I.E.E. Convention Papers, 33 Jan.  
British Plastics Yearbook, 23rd Edn. (*News*) 414 Sept.  
British Standards Yearbook 1953 (*News*) 414 Sept.  
CABMA Register 1953 (*News*) 414 Sept.; 1954 (*News*) 587 Dec.  
Carrier Current on Power Lines, André Chevalier, 602 Dec.  
Communication Theory, I.E.E. Symposium Papers, 424 Sept.  
Copper in Instrumentation, 602 Dec.  
Copyright Committee's Report (1951) (*Editorial*) 1 Jan.

Data and Circuits of Modern Receiving and Amplifying Valves, Book IIIA, N, S. Markus and J. Otte, 60 Feb.  
Dictionnaire Anglais-Français, H. Piraux, 28 Jan.  
Dielectric Aerials, D. G. Kiely, 493 Oct.  
Differential and Integral Calculus, Phillip Franklin, 305 July  
Dipole Moments, R. J. W. Le Fevre, 602 Dec.  
Einführung in die Theorie der Hochfrequenz-Bandfilter, Richard Feldtkeller, 305 July  
Einführung in die Vierpoltheorie der Elektrischen Nachrichtentechnik, Richard Feldtkeller, 493 Oct.  
Electrical Instruments and Measurements, W. Alexander, 28 Jan.  
Electrical Units (M.K.S. System), E. Bradshaw, 140 Mar.  
Electricity in the Home, C. B. Brook, 140 Mar.  
Electricity Tariff Handbook (*News*) 172 Apr.  
Enamelled Round Copper Wire (Oleo-Resinous Enamel) BS1961:1953 (*News*) 269 June  
Filter Design Data for Communication Engineers, J. H. Mole, 28 Jan.  
First Course in Wireless (3rd Edn.), "Decibel," 510 Nov.  
Fundamental Processes of Electrical Contact Phenomena, Radio Research Special Report No. 24, 395 Sept.  
Fundamentals of Electronic Motion, Willis W. Harmon, 510 Nov.  
Fundamentals of Radio Communications, Abraham Sheingold, 28 Jan.  
Fundamentals of Thermometry, J. A. Hall, 305 July  
G.E.C. Transmitting Valve Data, 604 Dec.  
Guide to Broadcasting Stations, 7th Edition (*News*) 472 Oct.  
High Fidelity, 493 Oct.  
High Fidelity Simplified, H. D. Weiler, 60 Feb.  
History of British Army Signals in the Second World War, Maj.-Gen. R. F. H. Salder, 334 July  
Home Mechanic's TV Servicing, W. R. Wellman and J. J. Kadrie, 140 Mar.  
Information Theory and its Engineering Applications, D. A. Bell (*Review*) 310 July  
Interference Suppression—"Code of Practice," B.S.1. (*News*) 171 Apr.  
*Journal of the Audio Engineering Society* (*News*) 171 Apr.  
La Pratique des Magnétophones, P. Hemardinger, 140 Mar.  
Lateral-Cut Gramophone Records and Direct Recordings, BS1928:1953, 204 May  
Leitfaden der Funkortung, W. Stanner, 140 Mar.  
Les Filtrés Electrique, Pierre David, 28 Jan.  
Limits and Tolerances, BS1916, Pt. 1, 1953 (*News*) 322 July  
Living Brain, W. Grey Walter, 270 June  
Loudspeaker Sizes, BS1928:1953, 184 Apr.  
Magnetic Amplifiers, George M. Ettinger, 510 Nov.  
Magnetic Circuit, A. E. de Barr, 305 July  
Measurement of "Wow" and "Flutter," BS1988:1953, 440 Sept.  
Measurements at Centimeter Wavelengths, D. D. King, 140 Mar.  
Measurements of Radio Interference in the Frequency Range 0.15 to 30 Mc/s: A Portable Measuring Set, by S. F. Pearce and D. C. G. Smith, and Mains Isolating Unit, J. Miedzinski and S. F. Pearce, 510 Nov.  
Modulators and Frequency Changers, D. G. Tucker, 270 June  
Permanent Effect of Water on Varnishes Coils, H. R. Heap, 493 Oct.  
Plastics in the Tropics—2, Polythene, Min. of Supply Report, 570 Dec.  
Plastics Progress 1953 (*News*) 587 Dec.  
Practical Electrician's Pocket Book (*News*) 25 Jan.  
Practical Thermometry, J. A. Hall, 305 Jul.  
Principles of Electronics, H. Buckingham and E. M. Price, 493 Oct.  
Principles of Electronics, L. T. Agger, 510 Nov.  
Principles of Radar, J. F. Reintjes and G. T. Coate, 162 Apr.  
R.L.C. Specification 121 for Rotary Wire Wound Resistors, 240 May  
Radio Amateur Handbook in Braille, N.I.B. (*News*) 120 Mar.  
Radio and Radar Technique, A. T. Starr, 140 Mar.  
Radio and TV Hints, Edited by Martin Clifford, 60 Feb.  
Radio and TV Test Instruments, 493 Oct.  
Radio Designer's Handbook, Edited by F. Langford-Smith (*News*) 68 Feb., 270 June

Radio Engineering (2nd Edition), E. K. Sauleman, 270 June  
 Radio Engineers' Servicing Manual, Edited by E. Molloy and W. F. Poole, 28 Jan.  
 Radio Spectrum Conservation, Technical Advisory Committee Report (Review) 335 July  
 Radio Upkeep and Repairs, Alfred T. Witts, 140 Mar.  
 Remote Control by Radio, A. H. Bruinsma, 181 Apr.  
 Rundfunk-Fernseh-Jahrbuch 1953, 204 May  
 Scientific Research in British Universities 1951-2, D.S.I.R. (News) 68 Feb.  
 Selected Problems in the Preparation, Properties and Applications of Materials for Radio Purposes, Radio Research Report No. 25, 188 Apr.  
 Soft Magnetic Materials used in Industry, A. E. de Barr, 305 July  
 Sound Reproduction (Third Edition), G. A. Briggs, 162 Apr.; (Review) 290 June  
 Storage Tubes, M. Knoll and B. Kazan, 60 Feb.  
 Synthetic Resin-bonded Paper Tubes, BS1951:1953, 171 Apr.  
 TV Manufacturers' Receiver Trouble Cures, Milton S. Snitzer, 162 Apr.  
 — Sweep Alignment Techniques, Art Liebscher, 305 July  
 Television and Education in the United States, Charles A. Siepmann, 162 Apr.  
 — and Radio Repairing, John Markus, 493 Oct.  
 — Annual for 1953, Edited by Kenneth Bailey, 28 Jan.  
 Télévision Dépannage, A. V. J. Martin, 270 June  
 Television Engineering, S. W. Amos and D. C. Birkinshaw, J. L. Bliss, 494 Oct.  
 — Engineers' Servicing Manual, Edited by E. Molloy and W. F. Poole, 28 Jan.  
 — Oscilloscope, W. Tusting (News) 171 Apr.  
 — Picture Faults, John Cura and Leonard Stanley, 270 June  
 — Receiver Design—1. I.F. Stages, A. G. W. Uijens (Review) 290 June  
 Temperature and Humidity Gradients in the First 100 m. over S.E. England, A. C. Best, E. Knighting, R. H. Pedlow and K. Stornomuth  
 Thermionic Vacuum Tubes, W. H. Ablons and Sir Edward Appleton, 28 Jan.  
 Trader Year Book (News) 267 June  
 Traité Pratiques des Antennes, E. Rolin, 510 Nov.  
 Used Radio and Television Set Values (News) 322 July  
 Wireless Instructions for Civil Defence (News) 121 Mar.  
 World Radio Handbook for Listeners, Edited by Lund Johansen, 140 Mar.

#### ILLUSTRATIONS

Amateur Television Station at Institution of Electronics Exhibition, 396 Sept.  
 Ashbridge, Sir Noel, Portrait Painting, 269 June  
 B.B.C. Telephoto Lens, 375 Aug.  
 B.E.A. Creed Teleprinting Equipment, 121 Mar.  
 Banner, J., and Transmitting Equipment, 67 Feb.  
 Barton, F. S., 321 July  
 Bauch, F. W. O., 67 Feb.

Browne, R. P., 66 Feb.  
 Brunker, A. J., 413 Sept.  
 C.C.I.R. Banquet, 535 Nov.  
 Campbell, G. B., 66 Feb.  
 Canning, P. D., 212 May  
 Cinema-Television Large-Screen TV at Earls Court, 473 Oct.  
 Cooper, Leslie, 66 Feb.  
 Coronation Naval Review on Radar Screen, 319 July  
 E.H.U. Receiving Station, 587 Dec.  
 Fairfield, C. L. G., 268 June  
 Field-Marshal Viscount Montgomery at Radio Show, 472 Oct.  
 Freeman, Horace, 586 Dec.  
 German Mobile Radio-Telephone, 412 Sept.  
 Glencairn Television Mast, 267 June  
 Gray, Andrew, 238 May  
 H.R.H. Duke of Edinburgh at R.I.C. Dinner, 24 Jan.  
 Hammett, M. G., 534 Nov.  
 Jackson, Professor Willis, 120 Mar.  
 Knott, G., 367 Aug.  
 Landman, A., 24 Jan.  
 Macadie, H. S., receiving Avo Presentation, 120 Mar.  
 McDonald, George J., 321 July  
 McLean, F. C., 321 July  
 Map—International Television for Coronation, 274 June  
 Map Showing Estimated Coverage of Planned B.B.C. Television Stations, 365 Aug.  
 Marconi Radio Installation on "Gothic," 584 Dec.  
 Melbourne Technical College, 605 Dec.  
 Netherlands Electro-Acoustics Congress, 352 Aug.  
 Penkman, W. A., 368 Aug.  
 Rankin, R. C., 120 Mar.  
 Rhodesian Radio Works, 588 Dec.  
 Roberts, W. A., 212 May  
 Round, Capt. H. J., receiving Armstrong Medal, 65 Feb.  
 Scala Theatre Large-Screen Television, 119 Mar.  
 Sharp, L. W. D., 170 Apr.  
 Sturley, Dr. K. R., 25 Jan.  
 Telefunken Television Relay Station, 320 July  
 Telford, Robert, 170 Apr.  
 Trier, P. E., 367 Aug.  
 V.H.F. Broadcasting Map—Proposed Stations, 531 Nov.  
 Wenvoe Service Area Map, 107 Mar.  
 Whaling Buoy, Venner's, 171 Apr.

#### PERSONALITIES

Adams, Brig. J. B., 120 Mar.; Aldersley, N. H., 321 July; Alexanderson, Dr. E. F. W., 66 Feb.; Allen, W. G., 321 July; Allibone, Dr. Thomas E., 120 Mar.; Andrewes, H., 321 July; Angwin, Sir Stanley, 121 Mar.  
 Bainbridge-Bell, L. H., 321 July, 473 Oct.; Bareford, C. P., 24 Jan.; Barton, F. S., 321 July; Bastin, R. S., 321 July; Bates, C. R., 413 Sept.; Beard, John, 413 Sept.; Bennett, A. E., 321 July; Bennett, H. T., 66 Feb.; Bishop, Harold, 367 Aug.; Booker, Prof. H. G., 24 Jan.; Bowden, Dr. B. V., 472 Oct.; Brett, J. P., 212 May; Brice, D. C., 66 Feb.; Browne, R. P., 66 Feb.; Brunker, A. J., 413 Sept.; Bullard, Dr. E. C., 321 July

Campbell, G. B., 66 Feb.; Canning, P. D., 212 May; Carter, R. H. A., 66 Feb.; Cattanes, Edward, 66 Feb.; Clegg, G. T., 212 May; Coates, A. G., 66 Feb.; Conway, T. David, 24 Jan.; Cooper, Leslie, 66 Feb., 170 Apr.; Cotton, F. T., 473 Oct.  
 Dannatt, Dr. C., 120 Mar.; Davies, William, 170 Apr.; Dimmock, F. M., 413 Sept.; Drewe, E. C., 413 Sept.; Duddington, C., 212 May; Dyson, A. A., 66 Feb.  
 Erickson, S., 586 Dec.  
 Fairfield, C. L. G., 268 June; Farman, A. H., 66 Feb.; Faulkner, H. L., 24 Jan.; Freeman, Horace, 586 Dec.  
 Gernsback, Hngo, 367 Aug.; Gilbert, R. J., 24 Jan.; Goldup, P. E., 170 Apr.; Greenwood, E. B., 170 Apr.; Grimsted, W. H., 321 July; Grinter, F. W. J., 413 Sept.  
 Hammett, M. G., 534 Nov.; Hargreaves, T. F., 367 Aug.; Hartley, H. A., 534 Nov.; Haslegrave, H. L., 170 Apr.; Higginson, K., 321 July; Howe, A. B., 413 Sept.; Humphreys, T. D., 413 Sept.  
 Jackson, Prof. Willis, 120 Mar., 212 May; Johnson, J. R. C., 367 Aug.  
 Knott, G., 367 Aug.  
 Lakin, R. T., 321 July; Lamont, H. R. L., 268 June; Landman, Alexander, 24 Jan.; Lawson, A. E., 413 Sept.; Linnell, R. H., 321 July; Lucas, G. S. C., 367 Aug.  
 McDonald, George J., 321 July; McLean, F. C., 321 July; McMullan, Dennis, 534 Nov.; Miller, W. E., 413 Sept., 473 Oct.; Moppett, Brig. E. J. H., 25 Jan.; Morgan, E., 268 June, 321 July  
 Nicolls, B. E., 66 Feb.  
 Paul, Capt. R. T., 66 Feb.; Pawley, E. L. E., 321 July; Penkman, W. A., 368 Aug.; Piggott, W. R., 321 July; Pol, Dr. Balth van der, 24 Jan.  
 Railing, Sir Harry, 121 Mar.; Randall, W. F., 212 May; Rankin, Richard, R. C., 120 Mar., 213 May; Ratcliffe, J. A., 24 Jan.; Richards, W. J., 413 Sept.; Richardson, W. D., 534 Nov.; Roberts, W. A., 212 May; Robinson, Cdr. (L) C. V., 585 Dec.; Rosen, Dr. A., 586 Dec.; Round, Capt. H. J., 65 Feb.; Rubin, Wallace, 534 Nov.  
 Sampson, Wilfred, 268 June; Scarr, W. A., 321 July; Sharp, L. W. D., 170 Apr.; Shears, Maj. Rowland, 66 Feb.; Smale, J. A., 66 Feb., 367 Aug.; Spillan, E. E., 321 July; Stanford-Tuck, Wing Cdr. R., 268 June  
 Telford, Robert, 170 Apr.; Trier, P. E., 367 Aug.  
 Veevers, J. Foster, 268 June  
 Walker, H., 534 Nov.; Wassell, H. J. H., 321 July; Webster, Sidney, 120 Mar.; West, W., 321 July; White, C. G., 170 Apr.; Whitehead, Dr. S., 585 Dec.; Williams, Prof. F. C., 534 Nov.; Williams, J. H., 213 May; Wilson, H. D., 120 Mar.; Wilson, R. H., 24 Jan.; Wort, S., 66 Feb.; Wykes, J. P., 170 Apr.  
 Zworykin, Dr. Vladimir K., 170 Apr.