

JHD:ANK
I-6

Letter
Circular
LC 578

U. S. DEPARTMENT OF COMMERCE
NATIONAL BUREAU OF STANDARDS
WASHINGTON

Information Section
National Bureau of Standards
Washington, D. C.

Sources of Radio Information

December 16, 1939.

(Replaces Letter Circular 513)

Revised to Dec. 16, 1939.

SOURCES OF RADIO INFORMATION

Contents

1. Periodicals.
2. Books.
3. U.S. Government radio publications.
4. Publications of the International Bureau of the Telecommunication Union, Berne, Switzerland.
5. Radio laws and regulations.
6. Safety rules.

1. Periodicals.

The following is a partial list of periodicals largely devoted to radio. They are monthly, except where otherwise stated. A number of electrical and general magazines also publish considerable radio information.

A classified list of the articles of radio engineering interest appearing in periodicals is published each month in the Wireless Engineer, a British magazine listed below. A short abstract of each article is given.

Information on Government radio publications is given in Sections 3 and 5 below.

a. American Periodicals.

Bell System Technical Journal. Published by American Telephone and Telegraph Co., 195 Broadway, New York, N.Y. (Technical) (Quarterly).

Communications. Bryan Davis Publishing Co., Inc., 19 E. 47th St., New York, N.Y. (Technical).

- Electrical Communication. International Standard Electric Corp.,
67 Broad Street, New York, N.Y. (Technical).
- Electronics. McGraw-Hill Publishing Co., Inc., 330 W. 42nd St.,
New York, N.Y. (Technical).
- General Radio Experimenter. Published by General Radio Co.,
30 State Street, Cambridge, Mass. (Trade, technical).
- Philips Technical Review, Philips Technical Products, Inc.,
419 Fourth Ave., New York, N.Y. (Technical).
- Proceedings of the Institute of Radio Engineers, 330 West 42nd St.,
New York, N.Y. (Technical).
- QST. Published by American Radio Relay League, West Hartford, Conn.
(Technical).
- Radio. 1300 Kenwood Road, Santa Barbara, Calif. (Technical).
- Radio-Craft. Radecraft Publications, Inc., 99 Hudson St., New York,
N.Y. (Semi-technical).
- Radio News and All-Wave Radio, 381 Eighth Ave., New York, N.Y.
(Semi-technical).
- Radio Retailing. Published by McGraw-Hill Publishing Co., Inc.,
330 W. 42nd St., New York, N.Y. (Trade).
- Radio Technical Digest. 1300 Kenwood Rd., Santa Barbara, Calif.
(Technical).
- Radio and Television. Popular Book Corp., 99 Hudson St., New York,
N.Y. (Semi-technical).
- Radio Today. Caldwell-Clements Inc., 480 Lexington Ave., New York,
N.Y. (Trade).
- RCA Review. RCA Institutes Technical Press, 75 Varick St.,
New York, N.Y. (Technical).
- RMA Engineer. Engineering Division, Radio Manufacturers Association
1317 National Press Bldg., Washington, D.C. (Technical).

b. Foreign Periodicals.

- Alta Frequenza. Associazione Elettrotecnica Italiana, Milano
(2/2), Via San Paulo, N10. (Technical - in Italian).
- Bulletin de la Société Française Radio-Electrique. 55 Rue Greffulhe
Levallois-Perret (Seine). (Technical - in French).

Elektrische Nachrichten-Technik. Published by Weidmannschen Buchhandlung, Berlin S.W.68, Germany. (Technical - in German).

Hochfrequenztechnik und Elektroakustik (also called Jahrbuch der Drahtlosen Telegraphie und Telephonie). Published by M. Krayn, Genthiner Strasse 39, Berlin W10, Germany. (Technical - in German).

Institution of Electrical Engineers, Proc. Wireless Section (British); Chemical Pub. Co. of N.Y., Inc., 148 Lafayette St., New York, N.Y. (Technical).

Marconi Review. Marconi's Wireless Telegraph Co., Ltd., Electra House, Victoria Embankment, London, England. (Technical).

L'Onde Electrique. Published by E. Chiron, 40 rue de Seine, Paris, France. (Technical - in French).

Television and Short-Wave World. Bernard Jones Publications Ltd., Chansitor House, Chancery Lane, London, W.C.2, England. (Semi-technical).

Wireless Engineer. Published by Iliffe & Sons, Ltd., Dorset House, Stamford St., London, S.E.1, England. (Technical).

Wireless World. Published by Iliffe & Sons, Ltd., Dorset House, Stamford St., London, S.E. 1, England. (Semi-technical).

2. Books.

This list comprises only a few of the many books published on the various phases of radio. Under each subject the books are in chronological order. As a matter of convenience, the prices of some of these books are given, but this information may not be up to date.

The sources of Government publications on radio are described in Sections 3 and 5 below.

a. Radio Principles.

Signaling through space without wires. Sir Oliver Lodge. 1894. Electrician Publishing Co., London, England.

Electric waves. H. Hertz. 1900. English translation by D. E. Jones, MacMillan & Co., 60 - 5th Avenue, New York, N.Y.

Principles of wireless telegraphy. G. W. Pierce. 1910. McGraw-Hill Book Co., Inc., 330 West 42nd St., New York, N.Y.

- Wireless Telegraphy. J. Zenneck. Translation by A. E. Seelig. 1915. 1st ed. McGraw-Hill Book Co., 330 W. 42nd St., New York, N. Y.
- Principles underlying radio communication. 2nd edition. 1922. Signal Corps Radio Communication Pamphlet No. 40. Obtainable from the Superintendent of Documents, Government Printing Office, Washington, D.C. \$1.00.
- Radio telephony for amateurs. S. Ballantine. 1922. David McKay Co., Philadelphia, Pa.
- The radio manual. O. E. Dunlap, Jr. 1924. Houghton-Mifflin Co., Cambridge, Mass.
- Practical radio. Moyer & Wostrel. 1926. McGraw-Hill Book Co., Inc. 330 W. 42nd St., New York, N.Y.
- Fundamentals of radio. J. L. Thomas. 1927. D. Van Nostrand Co., 250 Fourth Ave., New York, N.Y. \$1.50.
- Robison's manual of radio telegraphy and telephony. 1927. United States Naval Institute, Annapolis, Md. \$4.00.
- Propagation of wireless waves. P. Pedersen. 1927. Vimmelskiftet, Copenhagen, Denmark.
- Radio engineering principles. Lauer & Brown. 2nd edition. 1927. McGraw-Hill Book Co., Inc., 330 W. 42nd St., New York, N.Y. \$3.50.
- Principles of modern radio receiving. L. G. Hector. 1927. Burton Publishing Co., Bigelow Bldg., Buffalo, N.Y.
- The outline of radio. J.V.L.Hogan. 1928. Little, Brown & Co., Boston, Mass.
- Wireless principles and practice. L. S. Palmer. 1928. Longmans, Green & Co., New York, N.Y.
- I.C.S. Handbook for radio operators. 1929. International Correspondence Schools, Scranton, Pa.
- Elements of radio communication. J. H. Morecroft. 1929. John Wiley & Sons, Inc., 440 Fourth Ave., New York, N.Y. \$3.00.
- Radiotelephony and telephony. Duncan and Drew. 1929. John Wiley & Sons, Inc., 440 Fourth Ave., New York, N.Y. \$7.50.
- Foundations of radio. R. L. Duncan. 1931. John Wiley & Sons, Inc., 440 Fourth Ave., New York, N. Y. \$2.50.

- High-frequency alternating currents. K. McIlwain and J.G. Brainerd. 1931. John Wiley & Sons, Inc., 440 Fourth Ave., New York, N.Y. \$6.00.
- Experimental radio engineering. J. H. Morecroft. 1931. John Wiley & Sons, Inc., 440 Fourth Ave., New York, N.Y. \$3.50.
- The radio handbook. J.A. Moyer and J.F. Wostrel. 1931. John Wiley & Sons, Inc., 440 Fourth Ave., New York, N.Y. \$3.50.
- Radio elementary principles. E. E. Burns. 1932. D. Van Nostrand Co., New York, N.Y. \$2.00.
- Elementary principles of wireless telegraphy. R. D. Bangay. Revised by O. F. Brown. 1933. Iliffe & Sons, Ltd., Dorset House, Stamford St., London, S.E.1, England. Price 10s.6d.
- Principles of radio communication. J. H. Morecroft. 1934. 3d edition. John Wiley & Sons, Inc., 440 Fourth Ave., New York, N.Y. \$7.50.
- Radio engineering handbook. K. Henney. 2d edition. 1935. McGraw-Hill Book Co., Inc., 330 W. 42nd St., New York, N.Y. \$5.00.
- The book of practical radio. John Scott-Taggart. 1935. Wireless and Television Review, Cobbs Court, Broadway, London, E.C.4, England.
- Practical radio communication. A. R. Nilson and J. L. Horning. 1935. McGraw-Hill Book Co., 330 W. 42nd St., New York, N.Y. \$5.00.
- Phenomena in high-frequency systems. A. Hund. 1935. McGraw-Hill Book Co., 330 W. 42nd St., New York, N.Y. \$6.00.
- The fundamentals of radio. R. R. Ramsey. 2nd edition. 1935. Bloomington, Ind. \$3.50.
- Principles of radio engineering. R. S. Glasgow. 1936. McGraw-Hill Book Co., 330 W. 42nd St., New York, N.Y. \$4.00.
- Foundations of wireless. A.L.M. Sowerby. 1936. Iliffe & Sons Ltd., London, S.E.1, England. 4s.6d.
- Wireless telegraphy -- Notes for students. 1936. Pitman Publishing Corp., 2 W. 45th St., New York, N.Y. \$2.25.
- Communication and electronics (Electrical Engineer's Handbook). H. Pender and K. McIlwaine. 1936. John Wiley & Sons, 440 Fourth Ave., New York, N.Y. \$5.00.

- Radio physics course. A. A. Gherardi. 2nd edition. 1936. Radio Technical Publishing Co., 45 Astor Place, New York, N.Y. \$4.00.
- Communication engineering. W. L. Everett. 2nd edition. 1937. McGraw-Hill Book Co., Inc., 330 West 42nd St., New York, N.Y. \$5.00.
- Radio engineering. F. E. Terman. 2nd edition. 1937. McGraw-Hill Book Co., Inc., 330 W. 42nd St., New York, N.Y. \$5.50.
- Modern radio communication. J. H. Reyner. 2 volumes. 1938. Pitman Publishing Co., New York City.
- Experimental radio. 4th ed. 1938. R. R. Ramsey. Bloomington, Ind. \$2.75.
- Principles of radio. Keith Henney. 3d edition. 1938. John Wiley & Sons, Inc., 440 Fourth Ave., New York, N.Y. \$3.50.
- The radio manual. G. E. Sterling. 1938. 2nd edition. D. Van Nostrand Co., 250 Fourth Ave., New York, N.Y. \$5.00.

b. High Frequencies (Short Waves)

- Les ondes électriques courtes (short electric waves). R. Mesny. 1927. Les Presses Universitaires de France. 40 Boulevard Saint Michel, Paris, France.
- Short waves. C. R. Leutz and R. B. Gable. 1930. C. R. Leutz Inc., Altoona, Pa. \$3.00.
- Below 10 meters. 1932. National Co., Malden, Mass. 50¢.
- The manual of short wave radio. 2 volumes. 1932. National Co., Malden, Mass. 50¢ each pamphlet.
- Hochfrequenztechnik in der Luftfahrt (High-frequency technique in aircraft). H. Fassbender. 1932. J. Springer, Unter den Linden, Berlin NW7, Germany. 68 R.M.
- How to build and operate short wave receivers. 1933. Published by Short Wave Craft, 96-98 Park Place, New York, N.Y. 50¢.
- The radio amateur's handbook. A. F. Collins and G. C. B. Rowe. 7th edition. 1933. Thomas Y. Crowell Co., 393 - 4th Ave., New York, N.Y.
- Short wave radio handbook. C. E. Denton. Radio and Technical Publishing Co., 45 Astor Place, New York, N.Y. 1934. \$1.00.

- Kruse's radiophone guide. 2d edition. 1934. R.S.Kruse. Published by R. S. Kruse, Guilford, Conn. 50¢.
- Physik und Technik der Ultrakurzen Wellen. H.E.Hollmann. 1st Band-Erzeugung ultrakurzwelliger Schwingungen. (Physics and Engineering Development of Ultra-short Waves - Vol.1 - Generation of ultra-short wave oscillations). J.Springer. 1936. 36 R.M.
- Short wave wireless communication. A. W. Lädner and C. R. Stoner. 1937. 3d edition. John Wiley & Sons; Inc., 440 Fourth Ave., New York, N.Y. \$4.50.
- Radio telephony handbook. 1938. Radio, 1300 Kenwood Rd., Santa Barbara, Calif. 75¢.
- "Radio" noise reduction handbook. 1938. Radio, 1300 Kenwood Rd., Santa Barbara, Calif. 35¢.
- "Radio" ultra-high-frequency handbook. 1938. Radio, 1300 Kenwood Rd., Santa Barbara, Calif. 50¢.
- How to become a radio amateur. 1938. American Radio Relay League, W. Hartford, Conn. 25¢.
- The radio amateur's license manual. 1938. American Radio Relay League, W.Hartford, Conn. 25¢.
- Building an amateur radiotelephone. 1938. American Radio Relay League, W.Hartford, Conn. 25¢.
- Radio amateur course. 1938. Short Wave & Television, 99 Hudson St., New York City. 50¢.
- Short wave coil data book. 1938. Radio Publications, 97 Hudson St., New York City. 25¢.
- Short wave radio. J. H. Reyner. 1938. Pitman Publishing Co., New York City.
- The medical applications of the short wave current. W. Bierman and M. M. Schwarzschild. 1938. William Wood & Co., Inc., Baltimore, Md.
- Short-wave diathermy. Tibor de Cholnoky. 1938. Columbia University Press, New York City. \$4.00.
- The radio amateur's handbook. 1940. American Radio Relay League, W. Hartford, Conn. \$1.00.

- "Radio" handbook. 1940. Radio, 1300 Kenwood Rd., Santa Barbara, Calif. \$1.50.
- Radio antenna handbook. 1940. Radio, 1300 Kenwood Rd., Santa Barbara, Calif. 75¢.
- Radio amateur newcomer's handbook. 1940. Radio, 1300 Kenwood Rd. Santa Barbara, Calif. 35¢.
- The ARRL antenna handbook. 1940. American Radio Relay League, W. Hartford, Conn. 50¢.

c. Radio Measurements.

- Prepared radio measurements with self-computing charts. Ralph Batcher. 1921. Wireless Press, Inc., 326 Broadway, New York, N.Y.
- Radio-frequency measurements. E.B.Moullin. 2d edition. 1931. J.B.Lippincott, 227 South 6th St., Philadelphia, Pa. \$12.50.
- High-frequency measurements. A. Hund. 1933. McGraw-Hill Book Co., Inc., 330 W. 42nd Street, New York, N.Y. \$5.00.
- Inductance authority (inductance charts). E.M.Shiepe. 1933. H. Bernard, 135 Liberty St., New York, N.Y. \$2.00.
- Handbook of technical instruction for wireless telegraphists. H. M. Dowsett. 5th edition. 1934. Iliffe & Sons, Ltd., Dorset House, Stamford St., London, S.E.1, England.
- Radio receiver measurements. R. M. Bernard. 1934. Iliffe & Sons Ltd., Dorset House, Stamford St., London, S.E.1, England.
- The measurement of inductance, capacity and frequency. A. Campbell and E.C.Childs. 1935. McMillan & Co.,Ltd., London, England. 30 s. net.
- Measurements in radio engineering. F.E.Terman. 1935. McGraw-Hill Book Co., 330 W. 42nd St., New York, N.Y. \$4.00.
- Engineering handbook of the National Association of Broadcasters. J. C. McNary. 1936. Published by National Association of Broadcasters, National Press Bldg., Washington, D.C., \$10.00.
- Alternating-current measurements at audio and radio frequencies. D. Owen. Methuen & Co., Ltd., London, England. 1937.
- Testing radio sets. 3d edition. 1937. Sherwood Press, 552 Edgewater Branch, Cleveland, Ohio. \$4.50.

- Radio instruments and measurements. N.B.S. Circular 74. 1937. reprint of book issued in 1924. Obtainable from Superintendent of Documents, Government Printing Office, Washington, D.C., 60 cents per copy.
- 1938; 4 pamphlets: Standards on "Electronics", "Transmitters and Antennas", "Radio Receivers", and "Electroacoustics". Institute of Radio Engineers, 330 W. 42nd St., New York, N.Y.
- Radio data charts. R. T. Beatty. 1938. Iliffe & Sons, Ltd., Dorset House, Stamford St., London, S.E. 1, England.
- Radio-frequency electrical measurements. H. A. Brown. 2d edition. 1938. McGraw-Hill Book Co., Inc., 330 W. 42nd St., New York, N.Y. \$4.00.

d. Vacuum Tubes.

- The thermionic vacuum tube and its application. H.J. Van der Bijl. 1920. McGraw-Hill Book Co., Inc., 330 W. 42nd St., New York, N.Y. \$5.00.
- Thermionic tubes in radio telegraphy and telephony. John Scott-Taggart. 1921. Wireless Press, Ltd., London, England. Also 326 Broadway, New York, N.Y.
- Elementary textbook on wireless vacuum tubes. John Scott-Taggart. 1922. Wireless Press, Ltd., London, England. Also 326 Broadway, New York, N.Y.
- Theory of thermionic vacuum tube circuits. L. J. Peters. 1927. McGraw-Hill Book Co., Inc., 330 W. 42nd St., New York, N.Y.
- Electron tubes and their application. J.H. Morecroft. 1933. John Wiley & Sons, Inc., 440 Fourth Ave., New York, N.Y. \$4.50.
- Theory of thermionic vacuum tubes. E.L. Chaffee. 1933. McGraw-Hill Book Co., 330 W. 42nd St., New York, N.Y. \$6.00.
- Electronics. R.G. Hudson. 1933. John Wiley & Sons, Inc., 440 Fourth Ave., New York, N.Y. \$2.00.
- The cathode-ray oscillograph in radio research. R.A. Watson-Watt, J.F. Herd, L.H. Bainbridge-Bell. 1933. Published by H.M. Stationery Office, London, England. Obtainable from British Library of Information, 270 Madison Ave., New York, N.Y.
- Electron tubes in industry. K. Henney. 1934. McGraw-Hill Book Co., Inc., 330 W. 42nd St., New York, N.Y. \$5.00.

Electrons at work. C. R. Underhill. 1934. McGraw-Hill Book Co., Inc., 330 W. 42nd St., New York, N.Y. \$3.00.

The physics of electron tubes. L. R. Koller. 1934. McGraw-Hill Book Co., Inc., 330 W. 42nd St., New York, N.Y. \$3.00.

Thermionic emission. A.L.Reimann. 1934. John Wiley & Sons Inc., 440 Fourth Ave., New York, N.Y. \$5.50.

Industrial electronics. F.H.Gulliksen & E.H.Vedder. 1935. John Wiley & Sons, Inc., 440 Fourth Ave., New York, N.Y. \$3.50.

The cathode-ray tube at work. J.F.Rider. 1935. J.F.Rider, 404 Fourth Ave., New York City. \$2.50.

Electronics and electron tubes. E.D.McArthur. 1936. John Wiley & Sons, 440 Fourth Ave., New York, N.Y. \$2.50.

Radio receiving and television tubes. J.A.Moyer and J.F.Wostrel. 1936. 3d edition. McGraw-Hill Book Co., 330 W. 42nd St., New York, N.Y. \$4.00.

Fundamentals of engineering electrons. W. Dow. 1937. John Wiley & Sons, 440 Fourth Ave., New York, N.Y. \$5.00.

Fundamentals of vacuum tubes. A. V. Eastman. 1937. McGraw-Hill Book Co., 330 W. 42nd St., New York, N.Y. \$4.00.

Theory and applications of electron tubes. H.J.Reich. 1938. McGraw-Hill Book Co., 330 W. 42nd St., New York, N.Y. \$5.00.

Fundamental electronics and vacuum tubes. A.L.Albert. 1st ed. MacMillan Co., New York City. 1938. \$4.50.

The low-voltage cathode-ray tube and its applications. G.Parr. Chapman & Hall, Ltd., London, England. 1938. Obtainable from A.B.DuMont Labs., Inc., Upper Montclair, N.J. \$4.00.

Theory and design of valve oscillators. H.A.Thomas. 1939. Chapman & Hall, Ltd., London, England.

e. Photoelectric Phenomena.

Photocells and their applications. Zworykin and Wilson. 1932. 2d edition. John Wiley & Sons, Inc., 440 Fourth Ave., New York, N.Y. \$2.50.

Photoelectric phenomena. A.L.Hughes and L.A.DuBridge. 1933. McGraw-Hill Book Co., Inc., 330 W. 42d St., New York, N.Y. \$5.00.

Photoelectric cells; their properties, use and applications.
N.R.Campbell and Dorothy Ritchie. Sir I. Pitman & Sons,
Ltd., New York, N.Y. 3d edition. 1934. \$3.75.

Photoelectric cell applications. R.C.Walker and T.M.C.Lance.
3d edition. 1938. Pitman Publishing Corp., 2 West 45th St.,
New York, N.Y. \$4.00.

f. Television.

Television. H. H. Sheldon and E.N.Grisewood. 1929. D. Van
Nostrand Co., New York, N.Y. \$2.75.

Television -- Its methods and uses. E.H.Felix. 1932. McGraw-
Hill Book Co., Inc., 330 W. 42nd St., New York, N.Y. \$2.50.

First principles of television. A. Dinsdale. 1932. John Wiley
& Sons, Inc., 440 Fourth Ave., New York, N.Y. \$3.50.

The outlook for television. O.E.Dunlap. 1932. Harper & Bros.,
15 E. 26th St., New York, N.Y. \$4.00.

Television - Today and tomorrow. S.A.Moseley and H.J.Barton-
Chapple. 1934. Sir Isaac Pitman & Sons, Ltd., London, England.

Television, theory and practice. J.H.Reyner. 1934. Chapman
and Hall, London, England. 12s.6d.

Television (Collected addresses and papers on the future of the
new art and its recent technical developments), vol.1, July
1936; vol.II, 1937. RCA Institute's Technical Press,
75 Varick St., New York City.

Television with cathode-rays (loose-leaf). A.H.Halloran. 1936.
Radio Ltd., 1300 Kenwood Rd., Santa Barbara, Calif. \$2.75.

Television optics - An introduction. L.M.Myers. Pitman Publishing
Corp., New York City. 1937. \$8.50.

Television technical terms and definitions. E.J.G.Lewis. 1937.
Pitman Publishing Corp., 2 W. 45th St., New York, N.Y. \$1.75.

Television engineering. J.C.Wilson. Pitman Publishing Corp.,
2 W. 45th St., New York, N.Y. 1937. \$10.00.

Television - A struggle for power. F.C.Waldorf and J.Borkin.
1938. William Morrow & Co., New York City.

Television cyclopedia. A.T.Witte. D. Van Nostrand Co., Inc.,
New York City. 1938. \$2.25.

Electron optics in television. I. Maloff and D. W. Epstein.
1938. McGraw-Hill Book Co., 330 W. 42nd St., New York, N.Y.
\$3.50.

Practical television by RCA. 1939. (Pamphlet). Obtainable from
RCA Manufacturing Co., Inc., Camden, N.J., 25 cents per copy.

g. Servicing Radio Equipment.

Practical testing systems. J. F. Rider. 1930. Radio Treatise
Co., Inc., 404 Fourth Ave., New York, N.Y. \$1.00.

Radio servicing course. A.A.Gherardi and B.M.Freed. 1930.
Radio Technical Pub. Co., 45 Astor Place, New York, N.Y. \$1.50.

Practical radio repairing hints. J.F.Rider. 1931. Radio Treatise
Co., Inc., 404 Fourth Ave., New York, N.Y.

Servicing receivers by means of resistance measurements. J.F.Rider.
1932. J.F.Rider, 404 Fourth Ave., New York, N.Y.

Specialized auto radio manual. Vol.1. J.F.Rider. 1933. J.F.
Rider, 404 Fourth Ave., New York, N.Y. \$3.50.

Servicing superheterodynes. J.F.Rider. Revised edition 1934.
J.F.Rider, 404 Fourth Ave., New York, N.Y.

Practical radio construction and repairing - Radio receiving tubes -
Practical radio - All three of these books by Moyer and Wostrel.
1934. Published by McGraw-Hill Book Co., Inc., 330 W. 42nd St.,
New York, N.Y. Price for three, \$7.50.

Official radio service manual. 1931, \$4.50; 1932, \$5.00; 1933,
\$5.00; 1934, \$3.50; 1935, \$7.00; 1936, \$7.00; 1937, \$10.00.
Radcraft Publications, Inc., 99 Hudson St., New York City.

Auto-radio service manual and supplement. 1936. \$2.50. Rad-
craft Publications Inc., 99 Hudson St., New York City.

Wireless servicing manual. W. T. Cocking. 3d edition. 1937.
Iliffe & Sons Ltd., London, S.E.1, England. 5s. net.

Radio field service data (loose-leaf). A.A.Ghirardi. 1937.
Radio & Technical Publishing Co., New York, N.Y. \$2.50.

Principles and practice of radio servicing. H.J.Hicks. 1938.
McGraw-Hill Book Co., New York, N.Y. \$3.00.

Modern radio servicing. A. A. Ghirardi. 1938. Radio and Tech-
nical Publishing Co., 45 Astor Place, New York City. \$4.00.

Radio troubleshooting. A. A. Ghirardi. 1938. Radio & Technical Publishing Co., 45 Astor Place, New York City. \$3.00.

Servicing by signal tracing. J. F. Rider. 1939. J. F. Rider, 404 Fourth Ave., New York, N.Y. \$2.00.

Perpetual trouble shooter's manual. J. F. Rider. 10 volumes. 1939. J. F. Rider, 404 Fourth Ave., New York, N.Y. Vols. 1 to 6, \$7.50 each; vols. 7 to 10, \$10.00 each.

h. Miscellaneous.

Radio traffic manual and operating regulations. 1929. Duncan & Drew. John Wiley & Sons, Inc., 440 Fourth Ave., New York, N.Y. \$2.00.

Quartz resonators and oscillators. P. Vigoureux. 1931. Obtainable from British Library of Information, 270 Madison Ave., New York, N.Y.

How to pass U.S. Government radio license examinations. 1932 revised. John Wiley & Sons Inc., 440 Fourth Ave., New York, N.Y. \$2.00.

Electric circuits and wave filters. A. T. Starr. 1935. Pitman Publishing Corp., 2 W. 45th St., New York, N.Y. \$6.00.

Making a living in radio. Zeh Bouck. 1935. McGraw-Hill Book Co., 330 W. 42nd St., New York, N.Y. \$2.00.

Telecommunications. J. M. Herring & G. C. Gross. 1st ed. 1936. McGraw-Hill Book Co., 330 W. 42nd St., New York City.

Two hundred meters and down. C. B. DeSoto. 1936. ARRL, W. Hartford, Conn. \$1.00.

Radio operating questions and answers. 6th ed. 1937. Nilson & Horning. McGraw-Hill Book Co., Inc., 330 W. 42nd St., New York, N.Y. \$2.50.

Radio interference and its suppression. J. H. Reyner. 1937. Sherwood Press., Box 552, Edgewater Branch, Cleveland, Ohio. \$4.00.

Handbook of broadcasting. W. Abbott. 1937. McGraw-Hill Book Co., 330 W. 42nd St., New York City. \$3.50.

Automatic frequency control systems. J. F. Rider. 1937. J. F. Rider, 404 Fourth Ave., New York, N.Y.

Useful radio tables. J. F. Rider. J. F. Rider, 404 Fourth Ave., New York, N.Y.

Dictionary of radio terminology in the English, German, French, and Russian languages. A. S. Litvinenko. Edited by Prof. V. I. Bashenoff, Moscow, USSR. 1937. Obtainable from Collett's Foreign Dept., 31 Gerrard St., London, W.1, England.

Electrolytic capacitors. P. McK. Delley. 1938. Cornell-Dubilier Elec. Corp., South Plainfield, N.J. \$3.00.

Piezoelektrizität des Quarzes (Piezoelectricity of quartz). A. Schiebe. 1938. Theodor Steinkopff, Dresden, Germany.

History of radio to 1926. G. L. Archer. 1st ed. American Historical Society, New York, N.Y. 1938.

Wireless direction finding and directional reception. 3rd ed. 1938. R. Keen. Iliffe & Sons Ltd., Dorset House, Stamford St., London, S.E.1, England.

Aeronautic radio. M. F. Eddy. 1st ed. 1938. Ronald Press, New York, N.Y. \$4.50.

Electrical condensers. P. R. Coursey. 1939. 2nd ed. Chapman & Hall Ltd., London, England.

Big business and radio. G. L. Archer. 1st ed. American Historical Society, New York, N. Y. 1939.

Aircraft radio and electrical equipment. H. K. Morgan. 1939. Pitman Publishing Corp., 2 W. 45th St., New York City. \$4.50.

Applied acoustics. H. F. Olson and F. Massa. 2nd ed. 1939. P. Blakiston's Son & Co., Inc., 1012 Walnut St., Philadelphia, Pa. \$5.00.

New radio and electronic dictionary. 1939. Radio Publications, Inc., 99 Hudson St., New York City. \$2.50.

1939-1940 amplifier handbook and public address guide. Radcraft Publications Inc., 99 Hudson St., New York, N.Y. 25¢.

3. U. S. Government Radio Publications.

Papers on radio subjects are issued by the National Bureau of Standards. Some of these are published by the Government Printing Office and some in various periodicals. Most of them are of interest primarily to the radio engineer or scientist. A list of the current radio publications can be secured by addressing a request to the National Bureau of Standards, Washington, D.C. News of the Bureau's radio work, and announcements of new publications, are given in "Technical News Bulletin", a monthly publication which may be obtained by mail in the U. S. for 50 cents per year from the Superintendent of Documents, Government Printing Office,

Washington, D.C. The notices of new publications state the prices at which each may be purchased from the Superintendent of Documents. The publications of the National Bureau of Standards cover many subjects, including, besides radio, electricity, light, sound, heat, chemistry, metallurgy, engineering materials, standards of weight and measure, and many other scientific and technical subjects.

The laws and regulations governing radio are given in publications listed in Section 5 below:

4. Publications of International Bureau of the Telecommunication Union, Berne, Switzerland.

The following world-wide lists of radio transmitting stations are available from the International Bureau, at the prices stated:

List of frequencies, and supplements. (23 Swiss francs, including postage).

List of coast stations and ship stations. (5.30 Swiss francs, including postage).

List of aircraft and aeronautical stations. (3.60 Swiss francs, including postage.)

List of broadcasting stations, and supplements. (4.50 Swiss francs, including postage).

List of stations performing special services, and supplements. (5.75 Swiss francs, including postage).

List of call letters of fixed, land, and mobile stations, and supplements. (10 Swiss francs, including postage).

List of fixed stations. (8.00 Swiss francs, including postage).

Remittance should be made by international money order to the International Bureau of the Telecommunication Union, Berne, Switzerland.

5. Radio Laws and Regulations

Publications.- Radio is regulated internationally by the International Telecommunications Convention and the General Radio Regulations. The Convention is published in a book, "International Radiotelegraph Conference, Madrid, 1932" (State Department Publication S40, Conference Series 15), price 30 cents; and in a book, "Telecommunication" (State Department Treaty Series No. 867), price 20 cents: both obtainable from Superintendent of Documents,

Government Printing Office, Washington, D.C. The General Radio Regulations are published in a book, "International Telecommunications Conferences, Cairo 1938" (State Department Publication 1286, Conference Series 39), obtainable for 45 cents from Superintendent of Documents, Government Printing Office, Washington, D.C.

International actions on radio, not having the force of law but used as a guide in national regulations and practice, are the Opinions of the International Radio Consulting Committee. Those in force are given in two publications: "International Radio Consulting Committee, Lisbon 1934, Report of the Delegation of the U.S.A." (State Department Publication 827, Conference Series 21), price 50 cents; and "International Radio Consulting Committee, Bucharest 1937, Report of the Delegation of the U.S.A." (State Department Publication 1352, Conference Series 41), price 35 cents: both obtainable from Superintendent of Documents, Government Printing Office, Washington, D.C.

The radio laws of the United States are given in "The Communications Act of 1934 with amendments and indexes thereto, to May 20, 1937", price 10 cents; and "Radio laws of the United States, compiled by Elmer A. Lewis, 1939," price 10 cents: both obtainable from Superintendent of Documents, Government Printing Office, Washington, D.C.

The regulations issued by the Federal Communications Commission are published in the Federal Register, a daily publication obtainable from the Superintendent of Documents, Government Printing Office, at \$10 a year. These regulations are to be issued, as of October 15, 1939, in a series of 26 pamphlets called "Federal Communications Commission Rules and Regulations," to be obtainable from the Superintendent of Documents, Government Printing Office, at 5 and 10 cents each.

Safety Regulations.-- All ordinary precautions required for the safe operation of any electrical equipment should be observed in every radio station; for example, all high-voltage wiring should be carefully insulated and kept as far as possible from other wiring and so placed as to minimize the possibility that persons may come in contact with it, and suitable danger tags should be displayed.

Insurance companies and city governments make certain requirements regarding electrical installations in buildings, radio antennas, etc. The usual requirements are summarized in a small book, the National Electrical Code, which may be secured for five cents from the National Board of Fire Underwriters, 85 John Street, New York, N.Y. Article 810 of this Code gives the requirements for radio equipment.

Licenses Required.— The law provides that in order to operate any radio transmitting station, both a station license and an operator license must be secured. The law provides severe penalties for the operation of a transmitting station without proper licenses.

A station used only for receiving does not require a station license.. Operators of stations used only for receiving do not require operators' licenses, but must maintain secrecy in regard to messages heard, other than broadcast messages.

Information and the necessary application blanks for transmitting station and operator licenses are obtainable from the Federal Communications Commission, Washington, D.C., or the field office of the Commission in the district in which the applicant resides.

Radio District No. 1- (Includes: Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island and Vermont). Address: Inspector in Charge, Federal Communications Commission, Customhouse, 7th Floor, Boston, Mass.

Radio District No. 2.- (Includes: The Counties of Albany, Bronx, Columbia, Delaware, Dutchess, Greene, Kings, Nassau, Orange, New York, Putnam, Queens, Rensselaer, Richmond, Rockland, Schenectady, Suffolk, Sullivan, Ulster, and Westchester of the State of New York, and the Counties of Bergen, Essex, Hudson, Hunterdon, Mercer, Middlesex, Monmouth, Morris, Passaic, Somerset, Sussex, Union and Warren of the State of New Jersey). Address: Inspector in Charge, Federal Communications Commission, 1024-1026-1030 Federal Bldg., 641 Washington St., New York, N.Y.

Radio District No. 3. (Includes: Adams, Berks, Bucks, Carbon, Chester, Cumberland, Dauphin, Delaware, Lancaster, Lebanon, Lehigh, Monroe, Montgomery, Northampton, Perry, Philadelphia, Schuylkill, and York of the State of Pennsylvania, and the Counties of Atlantic, Burlington, Camden, Cape May, Cumberland, Gloucester, Ocean, and Salem of the State of New Jersey; and the County of Newcastle, State of Delaware). Address: Inspector in Charge, Federal Communications Commission, Room 1200, New U. S. Customhouse, 2nd and Chestnut Sts., Philadelphia, Pa.

Radio District No. 4- (Includes: The State of Maryland, the District of Columbia, and the Counties of Arlington, Clark, Fairfax, Fauquier, Frederick, Loudoun, Page, Prince William, Rappahannock, Shenandoah, and Warren of the State of Virginia, and the Counties of Kent and Sussex, of the State of Delaware). Address: Inspector in Charge, Federal Communications Commission, Fort McHenry, Baltimore, Md.

Radio District No. 5- (Includes: The State of Virginia, except the Counties of Arlington, Clark, Fairfax, Fauquier, Frederick, Loudoun, Page, Prince William, Rappahannock, Shenandoah, and Warren; and the State of North Carolina except the Counties of Ashe, Avery, Buncombe, Burke, Caldwell, Cherokee, Clay, Cleveland, Graham, Haywood, Henderson, Jackson, McDowell, Macon, Madison, Mitchell, Polk, Rutherford, Swain, Transylvania, Watauga and Yancy). Address: Inspector in Charge, Federal Communications Commission, Room 402, New Post Office Building, Norfolk, Va.

Radio District No. 6- (Includes: The States of Alabama, Georgia, South Carolina, Tennessee, and the Counties of Ashe, Avery, Buncombe, Burke, Caldwell, Cherokee, Clay, Cleveland, Graham, Haywood, Henderson, Jackson, McDowell, Macon, Madison, Mitchell, Polk, Rutherford, Swain, Transylvania, Watauga and Yancy of the State of North Carolina). Address: Inspector in Charge, Federal Communications Commission, 411 Federal Annex, Atlanta, Ga.

Sub-Office.- Address: Radio Inspector, Federal Communications Commission, 208 Postoffice Bldg., Savannah, Ga.

Radio District No.7- (Includes: The State of Florida). Address: Inspector in Charge, Federal Communications Commission, Post Office Box 150, Miami, Fla.

Sub-Office.- Address: Radio Inspector, Federal Communications Commission, 201 Stovalls Professional Bldg., Tampa, Fla.

Radio District No.8- (Includes: The States of Arkansas, Louisiana, Mississippi, and the City of Texarkana only of Texas). Address: Inspector in Charge, Federal Communications Commission, 326 Customhouse, New Orleans, La.

Radio District No.9- (Includes: The Counties of Aransas, Brazoria, Brooks, Calhoun, Cameron, Chambers, Fort Bend, Galveston, Goliad, Harris, Hidalgo, Jackson, Jefferson, Jim Wells, Kenedy, Kleberg, Matagorda, Nueces, Refugio, San Patricio, Victoria, Wharton, and Willacy of the State of Texas). Address: Inspector in Charge, Federal Communications Commission, 404 Federal Building, Galveston, Texas.

Radio District No. 10- (Includes: The State of Texas; except the Counties of Aransas, Brazoria, Brooks, Calhoun, Cameron, Chambers, Fort Bend, Galveston, Goliad, Harris, Hidalgo, Jackson, Jefferson, Jim Wells, Kenedy, Kleberg, Matagorda, Nueces, Refugio, San Patricio, Victoria, Wharton, and Yancy, and the City of Texarkana, and the States of New Mexico and Oklahoma). Address: Inspector in Charge, Federal Communications Commission, 302 U. S. Terminal Annex Bldg., Dallas, Texas.

Radio District No. 11- Includes: the States of Nevada, Arizona, and the Counties of Imperial, Kern, Los Angeles, Inyo, Orange, Riverside, San Bernardino, San Diego, San Luis Obispo, Santa Barbara, and Ventura (of the State of California). Address: Inspector in Charge, Federal Communications Commission, 1105 Rives-Strong Bldg., Los Angeles, Calif.

Sub-Office.- Address: Radio Inspector, Federal Communications Commission, Room 503, New California Building, San Diego, Calif.

Radio District No. 12- (Includes: the State of California, except the Counties of Imperial, Kern, Los Angeles, Inyo, Orange, Riverside, San Bernardino, San Diego, San Luis Obispo, Santa Barbara, and Ventura; the State of Nevada, except the County of Clark; and Guam, Midway, and American Samoa). Address: Inspector in Charge, Federal Communications Commission, 328 Customhouse, San Francisco, Calif.

Radio District No. 13- (Includes: The State of Oregon and the State of Idaho, except the Counties of Benewah, Bonner, Boundary, Clearwater, Idaho, Kootenai, Latah, Lewis, Nez Perce, and Shoshone). Address: Inspector in Charge, Federal Communications Commission, 207 New U.S. Courthouse, Portland, Oregon.

Radio District No. 14- (Includes: Alaska; the State of Washington, the Counties of Benewah, Bonner, Boundary, Clearwater, Idaho, Kootenai, Latah, Lewis, Nez Perce, and Shoshone of the State of Idaho, and the Counties of Beaverhead, Broadwater, Cascade, Deerlodge, Flathead, Gallatin, Glacier, Granite, Jefferson, Lake, Lewis and Clark, Lincoln, Madison, Meagher, Mineral, Missoula, Ponders, Powell, Ravalli, Sanders, Silver Bow, Teton, and Toole of the State of Montana). Address: Inspector in Charge, Federal Communications Commission, 808 Federal Office Bldg., Seattle, Wash.

Sub-Office.- Address: Radio Inspector, Federal Communications Commission, P.O. Box 2719, Juneau, Alaska.

Radio District No. 15- (Includes: the States of Colorado, Utah, Wyoming, and Montana, except the Counties of Beaverhead, Broadwater, Cascade, Deerlodge, Flathead, Gallatin, Glacier, Granite, Jefferson, Lake, Lewis and Clark, Lincoln, Madison, Meagher, Mineral, Missoula, Ponders, Powell, Ravalli, Sanders, Silver Bow, Teton, and Toole). Address: Inspector in Charge, Federal Communications Commission, 504 Customhouse, Denver, Colo.

Radio District No. 160 (Includes: the States of North Dakota, South Dakota, Minnesota, and the Counties of Alger, Baraga, Chippewa, Delta, Dickinson, Gogebic, Houghton, Iron Keeweenaw, Luce, Mackinac, Marquette, Menominee, Ontonagon, and Schoolcraft of the State of Michigan, and the State of Wisconsin, except the Counties of Columbia, Crawford, Dane, Dodge, Grant, Green, Iowa, Jefferson, Kenosha, Lafayette, Milwaukee, Ozaukee, Racine, Richland, Rock,

Sauk, Walworth, Washington, and Waukesha). Address: Inspector in Charge, Federal Communications Commission, 927 Main Post Office Bldg., St. Paul, Minn.

Radio District No. 17- (Includes: the States of Nebraska, Kansas, Missouri, and Iowa, except the Counties of Allamakee, Buchanan, Cedar, Clayton, Clinton, Delaware, Des Moines, Dubuque, Fayette, Henry, Jackson, Johnson, Jones, Lee, Linn, Louisa, Muscatine, Scott, Washington, and Winneshiek). Address: Inspector in Charge, Federal Communications Commission, 609 Pickwick Bldg., 903 McGee St., Kansas City, Mo.

Radio District No. 18- (Includes: the States of Indiana, Illinois, and the Counties of Allamakee, Buchanan, Cedar, Clayton, Clinton, Delaware, Des Moines, Dubuque, Fayette, Henry, Jackson, Johnson, Jones, Lee, Linn, Louisa, Muscatine, Scott, Washington, and Winneshiek of the State of Iowa; and the Counties of Columbia, Crawford, Dane, Dodge, Grant, Green, Iowa, Jefferson, Kenosha, Lafayette, Milwaukee, Ozaukee, Racine, Richland, Rock, Sauk, Walworth, Washington and Waukesha of the State of Wisconsin). Address: Inspector in Charge, Federal Communications Commission, 246 U. S. Courthouse Bldg., Chicago, Ill.

Radio District No. 19- (Includes: the State of Michigan, except the Counties of Alger, Baraga, Chippewa, Delta, Dickinson, Gogebic, Houghton, Iron, Keeweenaw, Luce, Mackinac, Marquette, Menominee, Ontonagon and Schoolcraft; the States of Ohio, Kentucky, and West Virginia). Address: Inspector in Charge, Federal Communications Commission, 1025 New Federal Bldg., Detroit, Mich.

Sub-Office.- Address: Radio Inspector, Federal Communications Commission, 541 Old Post Office Bldg., Public Square, Cleveland, Ohio.

Radio District No. 20- (Includes: the State of New York, except the Counties of Albany, Bronx, Columbia, Delaware, Dutchess, Greene, Kings, Nassau, New York, Orange, Putnam, Queens, Rensselaer, Richmond, Rockland, Schenectady, Suffolk, Sullivan, Ulster, and Westchester; the State of Pennsylvania, except Adams, Berks, Bucks, Carbon, Chester, Cumberland, Dauphin, Delaware, Lancaster, Lebanon, Lehigh, Monroe, Montgomery, Northampton, Perry, Philadelphia, Schuylkill, and York). Address: Inspector in Charge, Federal Communications Commission, 514 Federal Bldg., Buffalo, N.Y.

Radio District No. 21- (Includes Territory of Hawaii). Address: Inspector in Charge, Federal Communications Commission, Aloha Tower, Honolulu, T.H.

Radio District No. 22- (Includes: The Island of Puerto Rico and the Virgin Islands). Address: Inspector in Charge, Federal Communications Commission, 303 Ochoa Bldg., San Juan, P.R.

The Commission also has the two following field offices:
 Inspector in Charge, Federal Communications Commission, Central Frequency Monitoring Station, P. O. Box 788, Grand Island, Neb.;
 Inspector in Charge, Federal Communications Commission, Naval Training Station, Radio Station Bldg., Great Lakes, Ill.

Examination for radio operators' licenses are held in the district offices listed above and in addition at:

Washington, D.C.	San Antonio, Tex.	Pittsburgh, Pa.
Schenectady, N.Y.	Oklahoma City, Okla.	Cleveland, Ohio
Winston-Salem, N.C.	Des Moines, Iowa.	Cincinnati, Ohio
Nashville, Tenn.	St. Louis, Mo.	Columbus, Ohio.

Department of Commerce,
 Washington, D.C.

