

(January 24, 1933)

RADIO PUBLICATIONS OF THE BUREAU OF STANDARDS.

These publications may be purchased from the Superintendent of Documents, Government Printing Office, Washington, D.C., at the prices stated. Single copies of these publications will be sent free from the Bureau of Standards, so far as available, upon request, to specialists concerned with the subjects treated, to those collaborating with the Bureau in its investigations, to organizations exchanging like courtesies with the Bureau and to designated Government depository libraries. In many cases the stock for free distribution is exhausted.

The Scientific Papers are published separately and also in cloth bound volumes. Scientific Papers Nos. 1 to 329 are included in volumes 1 to 14, which were called "Bulletin of the Bureau of Standards." Volume 15, and later volumes, are called "Scientific Papers of the Bureau of Standards." The bound volumes can be procured only from the Superintendent of Documents, at \$1.50 a volume. References to the "Bulletin of the Bureau of Standards" (abbreviated "Bull."), are given in the following list for each Scientific Paper mentioned, up to No. 329, so that they may be consulted in libraries which have the Bulletin.

Circular 24, "Publications of the Bureau of Standards," 5th edition, 1919, contains a complete list of the publications of the Bureau with a brief abstract of each. A copy of Circular 24 may be secured on the conditions stated above, which apply to all publications of the Bureau; if obtained from the Superintendent of Documents, the price is 25 cents.

Publications of all Government departments which are of radio interest are listed in Price List 64, entitled, "Standards of Weight and Measure," 4th edition, December 1919, issued by the Superintendent of Documents. A copy of Price List 64 may be secured without charge by applying to the Superintendent of Documents, Government Printing Office, Washington, D.C.

For further information about radio publications, address Bureau of Standards, Radio Laboratory, Washington, D.C.

The following abbreviations are used to indicate the several classes of publications:

S = Scientific Paper	T = Technologic Paper
C = Circular	H = Handbook
M = Miscellaneous Publication.	

For example, S189 means Scientific Paper No. 189.

A single asterisk before a title indicates that it is a



publication of the Naval Radio Research Laboratory located at the Bureau of Standards. Two asterisks indicate that the article is not a publication issued by this Bureau, but a publication in an outside periodical by a member of the staff of this Bureau. Articles in the latter class cannot be supplied by this Bureau except in the special cases indicated; they should be consulted in the particular periodicals referred to.

### General

The Principles Underlying Radio Communication. Dec. 10, 1918. Text-book of 355 pages. First edition published as Signal Corps Radio Pamphlet No. 40. (Available at present only from Superintendent of Documents, Washington, D.C., at 55¢ per copy. Revised edition will be issued by Bureau of Standards.)

\*\*Bureau of Standards' Radio Work. J.H.Dellinger. The Federal Employee, 4, p.531, September, and p.590, October, 1919. Reprinted in Radio Amateur News, 1, p.400, Feb., 1920. 6 pages. (Limited supply at Radio Laboratory, Bureau of Standards.)

\*\*Radio Communication. Elementary Explanation of the Principles of Radio Telegraphy and Telephony. J.H.Dellinger. Scientific American Monthly, p.157, Feb., 1921.

### Radio Wave Phenomena

Principles of Radio Transmission and Reception with Antenna and Coil Aerials. J.H.Dellinger. S354. 1919. 61 pages. 10¢.

\*Variation in Direction of Propagation of Long Electromagnetic Waves. A.H.Taylor. (U.S.Naval Aircraft Radio Lab.) S353. 1919. 14 pages. 5¢.

\*Some Quantitative Experiments in Long Distance Radiotelegraphy. L.W.Austin. S159. 1911. (Bull., 7, p.315). 49 pages. 10¢.

\*Quantitative Experiments in Radiotelegraphic Transmission. L.W.Austin. S226. 1914. (Bull., 11, p.69). 18 pages. 5¢.

\*\*Station Performance during the Bureau of Standards - A.R.R.L. QSS Tests of June and July, 1920. S.Kruse. QST, 4, Sept., 1920. 4 pages.

\*\*The B.S.-A.R.R.L. Tests of Short Wave Radio Signal Fading. S.Kruse. QST, 4, Nov. & Dec., 1920. 16 pages.

### Antennas.

\*Antenna Resistance. L.W.Austin. S189. 1912. (Bull., 9, p.65). 8 pages. 5¢.

Faint header text at the top of the page, possibly including a date or reference number.

Second block of faint text, appearing to be a list or set of instructions.

Third block of faint text, possibly a paragraph or a section header.

Fourth block of faint text, continuing the list or instructions.

Fifth block of faint text, possibly a concluding paragraph.

Sixth block of faint text, possibly a signature or footer.

\* Antennas (Cont:)

\*Note on Resistance of Radiotelegraphic Antennas. L.W.Austin.  
S257. 1915. (Bull., 13, p.465). 4 pages. 5¢.

Electrical Oscillations in Antennas and Inductance Coils.  
J.M.Miller. S323. 1918. (Bull., 14, p.677). 20 pages.  
5¢.

\*\*Development of Loop Aerial for Submarine Radio Communication.  
J.A.Willoughby and P.D.Lowell. (Brief note). Physical  
Review, 14, p.193. August, 1919.

\*\*Electric Wave Transmission Formulas for Antenna and Coil  
Aerials. J.H.Dellinger. (Brief note). Physical Review,  
14, p.180, August, 1919.

Effect of Imperfect Dielectrics in the Field of a Radiotelegraphic  
Antenna. J.M.Miller. S269. 1916. (Bull., 13, p.129).  
8 pages. 5¢.

Airplane Antenna Constants. J.M.Cork. S341. 1919. 14 pages.  
5¢.

Electron Tubes.

Excerpts from "Vacuum Tubes, Theory and Use." S.J.Crooker.  
1918. (Abstracts of articles in Italian by G.Vallauri and  
G.Martinez). (Limited supply at Radio Laboratory, Bureau  
of Standards, only). 83 pages.

\*\*A Dynamic Method for Determining the Characteristics of Three-  
Electrode Vacuum Tubes. J.M.Miller. Proceedings of Institute  
of Radio Engineers, 6, p.141; 1918. 8 pages.

Dependence of the Input Impedance of a Three-Electrode Vacuum  
Tube upon the Load in the Plate Circuit. J.M.Miller. S351.  
1919. 18 pages. 5¢.

Determination of the Output Characteristics of Electron Tube  
Generators. L.M.Hull. S355. 1919. 20 pages. 5¢.

\*\*Long-Distance Radio Telephony Now Practicable. J.H.Dellinger.  
Electrical World, 77, p.142; Jan. 15, 1921.

An Electron Tube Transmitter of Completely Modulated Waves.  
L.M.Hull. S381. June 18, 1920. 13 pages.

\*\*The Dependence of the Amplification Constant and Internal  
Plate Circuit Resistance of a Three-Electrode Vacuum Tube  
upon the Structural Dimensions. J.M.Miller. Proc.I.R.E.,  
8, p.64, Feb., 1920. 10 pages.



Electron Tubes (Cont.)

- \*\*Operation of an Electron Tube as an Amplifying Rectifier.  
L.M.Hull. Phys.Rev., 15, p.557; June, 1920. (Brief note).
- \*\*The Load on the Modulator Tube in Radio Telephone Sets.  
E.S.Purinton. Phys. Rev., 15, p.556; June, 1920. (Brief note).

Radio Measurements.

- High-Frequency Ammeters. S206. 1913. J.H.Dellinger. (Bull.,  
10, p.91). 69 pages. 10¢.
- Direct-Reading Instrument for Measuring Logarithmic Decrement  
and Wave Length of Electromagnetic Waves. F.A.Kolster.  
S235. 1914. (Bull., 11, p.421.) 35 pages. 10¢.
- Electric Units and Standards. C60. Sept.25, 1916. 68 pages.  
15¢.
- International System of Electric and Magnetic Units. J.H.Dellinger.  
—S292. 1916. (Bull., 13, p.599). 33 pages. 10¢.
- Fees for Electric, Magnetic and Photometric Testing. C6.  
7th edition, Dec. 30, 1916. 30 pages. 5¢.
- Radio Instruments and Measurements. —C74. March23, 1918. 341  
pages. 60¢.
- \*\*The Measurement of Radio-Frequency Resistance, Phase Difference  
and Decrement. J.H.Dellinger. Proceedings of Institute of  
Radio Engineers, 7, p.27; Feb., 1919. 34 pages.
- \*\*Improvements in Precision Measurements at Radio Frequencies.  
J.H.Dellinger. (Brief note). Physical Review, 14, p.181;  
August, 1919.
- \*\*Applications of the Cathode-Ray Tube in Radio Work. L.E.  
Whittemore and L.M.Hull. (Brief note). Physical Review,  
14, p.266; September, 1919.
- \*The Measurement of Electric Oscillations in the Receiving  
Antenna. L.W.Austin. —S157. 1911. (Bull., 7, p.295).  
5 pages. 5¢.
- \*Some Experiments with Coupled High-Frequency Circuits.  
L.W.Austin. —S158. 1911. (Bull., 7, p.301). 14 pages.  
5¢.
- \*\*Capacitive Coupling in Radio Circuits. L.E.Whittemore.  
Phys. Rev., 15, p.559; June 1920. (Brief note).
- \*\*Permanent-Contact Crystal Detectors. L.S.McDowell.  
Phys. Rev., 15, p.288; April, 1919. (Brief note).



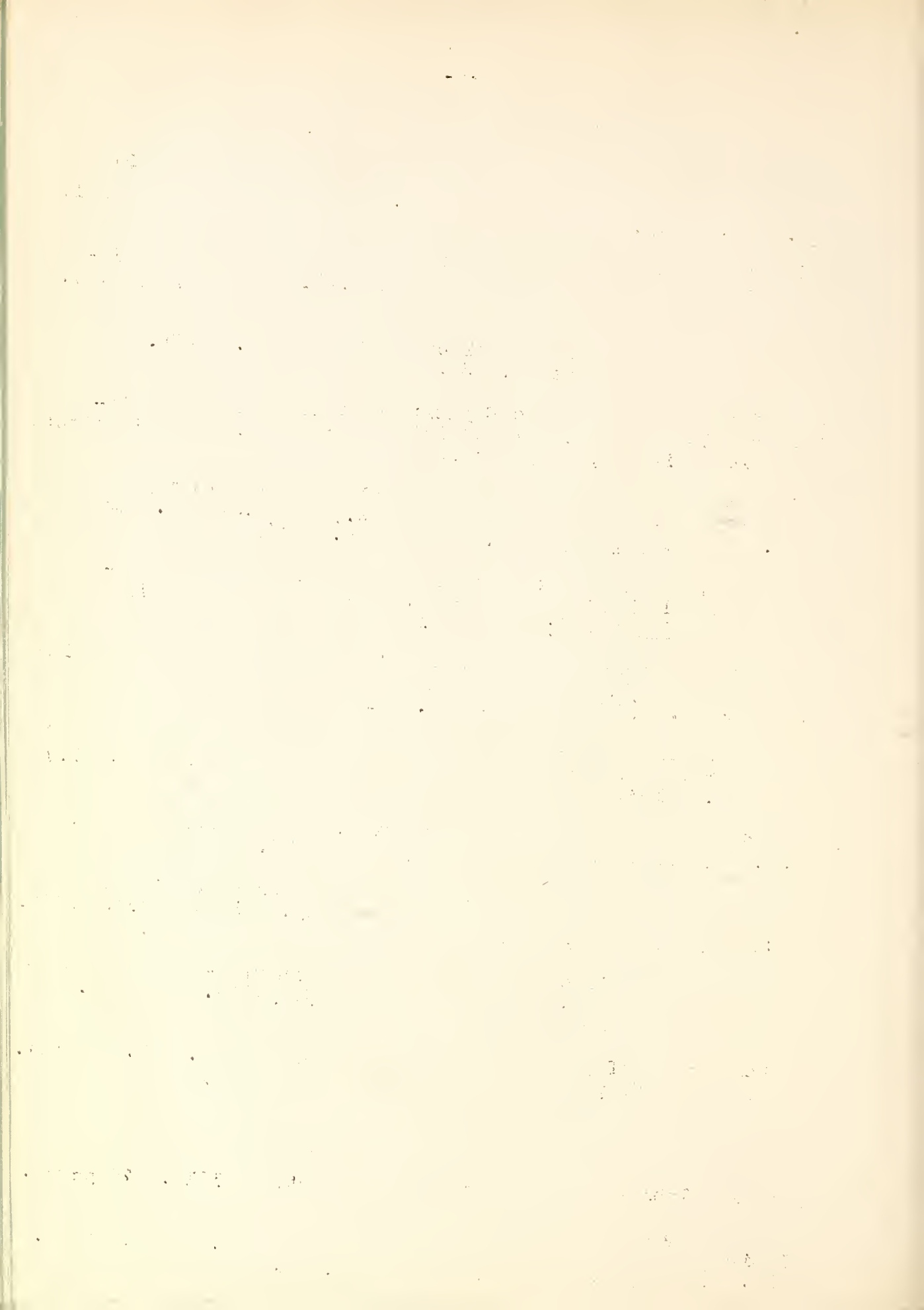


Capacity, Inductance, Resistance.

- The Influence of Frequency on the Resistance and Inductance of Solenoidal Coils. L.Cohen. S76. 1907. (Bull., 4, p.161.) 19 pages. 10¢.
- Formulas and Tables for the Calculation of Mutual and Self Inductance. Rosa and Grover.—S169. 1911. (Bull., 8, p.1.) 237 pages. 15¢.
- The Testing and Properties of Electric Condensers.—S36. June 30, 1907. 28 pages. 5¢.
- \*\*The Effects of Distributed Capacity of Coils Used in Radiotelegraphic Circuits. F.A.Kolster. Proceedings of Institute of Radio Engineers, 1, p.19; 1913.
- Additions to the Formulas for the Calculation of Mutual and Self Inductance. (Supplementing S169.) F.W.Grover. S520. 1918. (Bull., 14, p.537). 34 pages. 10¢.
- \*\*Inductance, Capacity and Resistance of Coils at Radio Frequencies. L.E.Whittemore and G.Breit. (Brief note). Phys. Rev., 14, p.170; August, 1919.
- Measurement of Inductance by Anderson's Method, Using Alternating Currents and a Vibration Galvanometer. Rosa and Grover.—S14. 1905. (Bull., 1, p.291). 15¢.
- The Simultaneous Measurement of the Capacity and Power Factor of Condensers. F.W.Grover.—S64. 1907. (Bull., 3, p.371.) 61 pages. 15¢.
- Mica Condensers as Standards of Capacity. H.L.Curtis.—S137. 1910. (Bull., 6, p.431). 58 pages. 10¢.
- The Capacity and Phase Difference of Paraffined Paper Condensers as Functions of Temperature and Frequency. F.W.Grover.—S166. 1911. (Bull., 7, p.495.) 32 pages.
- \*The Energy Losses in Some Condensers Used in High-Frequency Circuits. L.W.Austin.—S190. (Bull., 9, p.73). 8 pages. Mar. 1, 1912. 5¢.
- \*\*The Inductance of Coils Wound on Polygonal Frames. F.W.Grover. Phys. Rev., 16, p.532; June, 1920. (Brief note).

Properties of Materials.

- Copper Wire Tables. C31. 3d edition. Oct. 1, 1914. 76 pages. 20¢.
- Insulating Properties of Solid Dielectrics. H.L.Curtis.—S234. 1914. (Bull., 11, p.359). 64 pages. 15¢.



Properties of Materials (Cont.)

Electric Wire and Cable Terminology. C37. 2d edition. Jan.1, 1915. 13 pages. 5¢.

\*\*Properties of Insulating Materials of the Phenol Type.  
J.H.Dellinger and J.L.Preston. (Brief note). Physical Review, 14, p.199; August, 1919.

Radic Publications of the Bureau of Standards Now out  
of Print as Separate Papers.

(These articles can be consulted in the copies of the Bureau's papers on file in Government depository libraries throughout the United States).

\*Detector for Small Alternating Currents and Electrical Waves.  
L.W.Austin. —S22. 1905. (Bull., 1, p.435.) 4 pages. 5¢.

The Influence of Frequency upon the Self-Inductance of Coils.  
J.G.Coffin. —S37. 1906. (Bull., 2, p.275.) 23 pages. 10¢.

\*The Production of High-Frequency Oscillations from the Electric Arc. L.W.Austin. —S60. 1907. (Bull., 3, p.325). 16 pages. 5¢.

\*Some Contact Rectifiers of Electric Currents. L.W.Austin.  
—S94. 1908. (Bull., 5, p.133.) 15 pages. 10¢.

\*A Method of Producing Feebly Damped High-Frequency Electrical Oscillations for Laboratory Measurement. L.W.Austin.—S95. 1908. (Bull., 5, p.149.) 4 pages. 5¢.

\*On the Advantages of a High Spark Frequency in Radiotelegraphy.  
L.W.Austin.—S96. 1908. (Bull., 5, p.153.) 5 pages. 5¢.

The Theory of Coupled Circuits. L.Cohen. —S112. 1909.  
(Bull., 5, p.511.) 30 pages. 5¢.

Coupled Circuits in Which the Secondary has Distributed Inductance and Capacity. L.Cohen.—S126. 1909. (Bull., 6, p.247). 8 pages. 5¢.

\*The Comparative Sensitiveness of Some Common Detectors of Electrical Oscillations. L.W.Austin.—S140. 1910. (Bull., 6, p.527.) 16 pages. 5¢.

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