

## Contributors to this Issue

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J. L. CLARKE, B.Sc. in Electrical Engineering, University of London, 1909. Bell Telephone Company of Canada, 1910-; Transmission Engineer, 1924-.

JOHN W. CLARK, A.B., University of Montana, 1935; M.S., University of Illinois, 1937; Ph.D., 1939. Dr. Clark joined the Technical Staff of the Bell Telephone Laboratories in 1939, where his principal interest has been in the development of vacuum tubes for use at ultra-high frequencies.

WILLIAM H. C. HIGGINS, Purdue University, B.S. 1929; E.E. 1934. Development and Research Department, American Telephone and Telegraph Company, 1929-34; Bell Telephone Laboratories, 1934-. During his employment with the A. T. & T. Company Mr. Higgins was engaged in carrier telephone and program transmission studies. Since his transfer to Bell Telephone Laboratories he had been concerned with radio and radar development.

KENNETH S. JOHNSON, A.B., Harvard University, 1907; Harvard Graduate School of Applied Science, 1907-09. Transmission and Protection Department, American Telephone and Telegraph Company, 1909-13; Engineering Department, Western Electric Company, 1913-25; Bell Telephone Laboratories, 1925-. Formerly as Transmission Research Engineer and now as Transmission Standards Engineer, Mr. Johnson has long been engaged in work closely connected with all types of transmission network problems. He is the author of the book "Transmission Circuits for Telephonic Communication."

JOHN LEUTRITZ, B.S. in Chemistry, Bowdoin College, 1929; A. M. in Botany, Columbia University, 1934; Ph.D., Columbia University, 1945. U. S. Navy, Medical Corps, 1921-25. Bell Telephone Laboratories, 1929-. Mr. Leutritz' interest has been along biological lines, primarily in respect

to wood preservation. During the war period he was active in the protection of electrical equipments against moisture and fungi attack when used in the tropics.

WILLIAM W. MUMFORD, B.A., Willamette University, 1930. Bell Telephone Laboratories, 1930-. Mr. Mumford has been engaged in work that is chiefly concerned with ultra-short-wave and microwave radio communication.

A. L. SAMUEL, A.B., College of Emporia (Kansas), 1923; S.B. and S.M. in Electrical Engineering, Massachusetts Institute of Technology, 1926. Additional graduate work at M. I. T. and at Columbia University. Instructor in Electrical Engineering, M. I. T., 1926-28. Mr. Samuel joined the Technical Staff of the Bell Telephone Laboratories in 1928, where he has been engaged in electronic research and development. Since 1931, his principal interest has been in the development of vacuum tubes for use at ultra-high frequencies.

WILLIAM C. TINUS, B.S. in Electrical Engineering, Texas A. & M. College, 1928. Bell Telephone Laboratories, 1928-. For ten years Mr. Tinus was engaged in the development of radio communication apparatus, principally for mobile use. In 1938 he organized and directed the first radar development work in the Laboratories. As Radio Development Engineer he is now responsible for a number of radar and related electronic development projects for the Army and Navy.