## Contributors to this Issue

- C. B. AIKEN, B.S., Tulane University, 1923; M.S. in Electrical Communication Engineering, Harvard University, 1924; M.A. in Physics, 1925; Ph.D., 1933. Geophysical research and exploration with Mason, Slichter and Hay, Madison, Wisconsin, 1926–28. Bell Telephone Laboratories, 1928–. Dr. Aiken has been engaged in work on aircraft communication equipment, broadcast receiver design, centralized radio systems and common frequency broadcasting.
- A. W. CLEMENT, B.S. in Electrical Engineering, University of Washington, 1925; M.A., Columbia University, 1929. Bell Telephone Laboratories, Apparatus Development Department, 1925—. Mr. Clement has been engaged in the development of various types of transmission networks, such as electric wave filters and equalizers.
- KARL K. DARROW, B.S., University of Chicago, 1911; University of Paris, 1911–12; University of Berlin, 1912; Ph.D., University of Chicago, 1917. Western Electric Company, 1917–25; Bell Telephone Laboratories, 1925–. Dr. Darrow has been engaged largely in writing on various fields of physics and the allied sciences.
- I. E. Fair, B.S., in Electrical Engineering, Iowa State College, 1929. Bell Telephone Laboratories, Radio Research Department, 1929—. Mr. Fair has been engaged in experimentation on piezo-electric crystals for frequency control.
- Frank Gray, B.S., Purdue, 1911; Ph.D., University of Wisconsin, 1916. Western Electric Company, Engineering Department, 1919–25. Bell Telephone Laboratories, 1925–. Dr. Gray has been engaged in work on electro-optical systems.
- H. S. Hamilton, B.S. in Electrical Engineering, Tufts College, 1916. American Telephone and Telegraph Company, Engineering Department, 1916–18; Department of Development and Research, 1918–34. Bell Telephone Laboratories, 1934–. Mr. Hamilton has been engaged exclusively in toll transmission work, including telephone repeaters, program transmission and carrier telephone systems.
- F. R. Lack, B.Sc., Harvard University, 1925; Engineering Department, Western Electric Company, 1913–22; First Lieutenant, Signal Corps, A.E.F., 1917–19; Harvard University, 1922–25. Bell Tele-

phone Laboratories, 1925-. Mr. Lack has been engaged in experimental work connected with radio communication.

- W. P. Mason, B.S. in Electrical Engineering, University of Kansas, 1921; M.A., Columbia University, 1924; Ph.D., 1928. Bell Telephone Laboratories, 1921–. Dr. Mason has been engaged in investigations on carrier transmission systems and more recently in work on wave transmission networks, both electrical and mechanical.
- R. C. Mathes, B.Sc., University of Minnesota, 1912; E.E., 1913. Western Electric Company, Engineering Department, 1913–25. Bell Telephone Laboratories, 1925–. Mr. Mathes has been concerned with the early history of the repeater development program, the application of vacuum tube amplifiers in a variety of fields, and the application of voice controlled switching circuits in the toll telephone plant. As Associate Wire Transmission Research Director he carries on investigations relating to the transmission of speech over wire systems.

PIERRE MERTZ, A.B., Cornell University, 1918; Ph.D., 1926. American Telephone and Telegraph Company, Department of Development and Research, 1919–23, 1926–34. Bell Telephone Laboratories, 1934—. Dr. Mertz has been engaged in special problems in toll transmission, chiefly in telephotography, television, and cable carrier systems.

- G. W. WILLARD, B.A., University of Minnesota, 1924; M.A., 1928; Instructor in Physics, University of Kansas, 1927–28; Student and Assistant, University of Chicago, 1928–30. Bell Telephone Laboratories, 1930–. Mr. Willard's work has had to do with special problems in piezo-electric crystals for frequency control.
- S. B. Wright, M.E. in Electrical Engineering, Cornell University, 1919. Engineering Department and Department of Development and Research, American Telephone and Telegraph Company, 1919–34. Bell Telephone Laboratories, 1934—. Mr. Wright is engaged in transmission development work on voice-operated systems and wire connections to radio telephone stations.