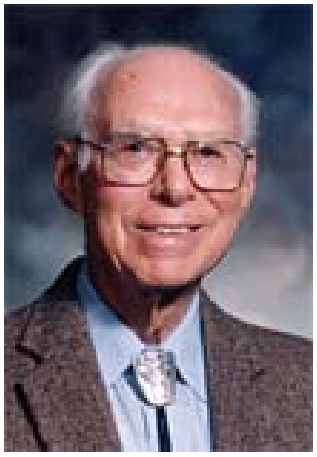
John Robinson Pierce

Born March 27, 1910, Des Moines, Iowa; aka science fiction author J. J. Coupling, Bell Telephone Laboratories namer of the transistor and early promoter of communications satellites.



Education: BS, California Institute of Technology, 1933; MS, California Institute of Technology, 1934; PhD, California Institute of Technology, 1936.

Professional Experience: Bell Telephone Laboratories: member, technical staff, 1936-1952; director, electronics research, 1952-1955; director of research, Electronic Communications, 1955-1958; director of research, Communications Principles, 1958-1961; executive director, 1961-1963, executive director of research, Communications Principles and Systems Division, 1962-1965, executive director of research, Communications Science Division, 1961-1963; California Institute of Technology: professor of engineering, 1971-1980, emeritus professor of engineering, 1980-present; chief technologist, jet Propulsion Laboratory, 1979-1982.

Honors and Awards: Morris Liebman Memorial Prize, Institute of Radio Engineers, 1947; Stuart Ballantine Medal, Franklin Institute, 1960; H.H. Arnold Trophy, Aerospace Man of the Year, Air Force Association, 1962; Golden Plate Award, Academy of Achievement, 1962; General Hoyt S. Vandenberg Trophy, Arnold Air Society, 1963; National Medal of Science, 1963; Edison Medal, Institute of Electrical Engineers, 1963; Valdemar Poulsen Gold Medal, 1963; H.T. Cedergren Medal, 1964; John Scott Award, Franklin Institute, 1974; Marconi Award, 1974; Medal of Honor, Institute of Electrical and Electronics Engineers, 1975; Founders Award, National Academy of Engineering, 1977; Marconi International Fellowship, 1979; Microwave Career Award, Microwave Theory and Techniques of IEEE, 1984; Japan Prize, 1985; Arthur C. Clarke Award, 1987; International Telemetering Conference, Pioneer Award, 1990.

Honorary Degrees: DEng, Newark College of Engineering, 1961; DSc, Northwestern University, 1961; DSc, Yale University, 1963; DSc, Polytechnic Institute of Brooklyn, 1967; DSc, Columbia University, 1965; ED, Carnegie Institute of Technology, 1964 ; DSc, University of Nevada, 1970; LLD, University of Pennsylvania, 1974; DEng, University of Bologna (Italy), 1974; DSc, University of Southern California, 1978.

As executive director, Research, Communication Sciences Division at Bell Telephone Laboratories, Dr. Pierce was in charge of work on mathematics and statistics, speech and hearing, behavioral science, electronics, radio, and guided waves. His chief work was in electronic devices, especially traveling wave tubes, microwaves, and various aspects of communication.

He proposed unmanned passive and active communication satellites in 1954. The Echo I satellite launched in 1960 embodied his ideas; he was instrumental in initiating the Echo program, and the East Coast ground station was constructed in his division. Telstar resulted from satellite work that he had initiated.

At Cal Tech he was concerned with energy consumption in personal transportation, satellite systems, synthetic aperture radar, quantum effects in communication, and auditory perception.

At Stanford he has been concerned with a new musical scale (in collaboration with M.V. Mathews), and with various aspects of musical sound and perception.

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Significant Publications

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Pierce, John Robinson, *The Science of Musical Sound,* Scientific American Library, San Francisco, 1983.

Pierce, John Robinson, *Theory and Design of Electron Beams,* 2nd ed., Van Nostrand, New York, 1954.

Pierce, John Robinson, *Theory and Design of Electron Beams,* Van Nostrand, New York, 1949.

UPDATES

John Pierce died April 2, 2002 (MRW, 2013)

Portrait added (MRW, 2013)