

Robert William Young Biography

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Born May 11, 1908, Mansfield Ohio, son of William Porter Young (1872-1974) and Catherine Elizabeth Whitmar (1873-1955). Married 1947, Evelyn Stratton Cross; 3 children, Conrad William, Theodore Luther, and Elizabeth Florence.

He received a B.S. (physics) from University of Ohio, Athens in 1930 and a Ph.D. (physics) from University of Washington in 1934. His doctoral dissertation is entitled, "A Study of the Standing Wave System in the Boehm Flute." He was the developer and co-inventor of the Conn Chromatic Stroboscope for measurement of musical frequencies. For decades, according

to the Acoustical Society of America, this device was the most precise method to measure the frequency of audible sounds.

From 1930-1934, Young was a Teaching fellow at the University of Washington. He was employed as a physicist, C.G. Conn, Ltd, Elkart, Indiana, 1934-1941. Starting in 1940, Young published papers in the field of architectural acoustics.

Young joined the University Of California Division Of War Research as an acoustics engineer in 1942 and his research interests shifted to underwater sound transmission and measurement of underwater noise. He headed the UCDWR Listening Section and worked closely there with Robert Gales. When UCDWR closed in 1946, he moved briefly to the Marine Physical Laboratory as a research associate. Young became head of the Sonar Division of Systems Engineering at the Naval Electronics Laboratory 1946 where he remained until his retirement 1976. NEL became the Naval Ocean Systems Center, and Young continued to be associated with it as a physicist until 1977. He was Technical Consultant to the Director of the Naval Undersea Warfare Center in San Diego from 1967 to 1969. Young's work at NEL and other naval laboratories involved overall planning of sonar systems for ships, evaluation of sonar installations and basic studies of acoustical characteristics of ships. He also furnished advisory services to administrators and technical personnel in acoustics and served as a special consultant on acoustics to the Bureau of Ships.

Young established his own consulting business beginning in 1953 with Robert Gales. Their work was largely in architectural acoustics and noise measurement and control, although they also did projects for musical instrument acoustics. Young served as a Consultant, Architectural Acoustics & Noise Communications, 1977-. He was a member of the San Diego Industry Education Council, 1967-1969, and chaired the State of California Environmental Quality Study Council Scientific Advisory Committee on Noise. In 1974 he served on the San Diego City Board of Noise Abatement and Control. During his consulting career, he worked with clients on problems of acoustics and community noise control and was involved in measurement of noise at Lindbergh Field, the Naval Air Stations at Miramar and North Island, and Helicopter Noise at MAS Miramar from the 1970's until 2000. He measured the noise of NASA shuttle landings in California.

Beginning in the 1950's, Young developed an interest in research on sonic booms propagated through the atmosphere, the transmission of sonic booms and other sounds from air into the ocean, and the measurement and analysis of aircraft sounds heard in communities around airports. He pursued this interest for the following 20 years, both as a research scientist and as an acoustics consultant. Young also played an important part in developing acoustical standards. He chaired the American Acoustical Society Committee in 1951 that developed Z24.1 American Standard Acoustical Terminology and its revision in 1960. These standards

remained unchanged until 1994, and Young worked with others on the 1994 standard. Young chaired and served on standards writing groups for several decades and he served as an American representative to numerous international standards committees and attended over 30 meetings of ISO and IEC Technical Committees beginning in 1953.

Young was active in many organizations. He was a civilian scientist with Office of Scientific Research and Development. He was a member of the Association of Physics Teachers and Associate Editor for the *American Journal of Physics* from 1954-1961. He was a member of the AAAS. He received many awards, including the Certificate of Merit from the Office of Scientific Research and Development in 1945, and a commendation for Services to the Submarine Force, Pacific in 1945.

Young joined the American Acoustical Society in 1929, the year it was founded, and was active in it for his entire life. He served on its Executive Council from 1941-1944, as Vice President 1953-1954 and President in 1960-1961. He was in charge of the patent review section of the Journal of the American Acoustical Society beginning in 1943 and served until 1977. He served on the Editorial Committee of the Journal beginning in 1946, reviewing articles on music and musical instruments for 46 years. He published extensively in its journal. Young also served as associate editor of the *U.S. Navy Journal of Underwater Acoustics* beginning in 1951.

Young published over 141 scientific papers during his career. His early publications were in musical acoustics concerned with the tuning of valved wind instruments, vibrations of piano strings, and temperature and humidity affects upon musical instruments. His later papers were on underwater ambient noise, sound propagation, and ship noise for naval applications and on community noise standards and control.

He died in Escondido, California November 24, 2002.