



Benjamin F. Baum

BENJAMIN BAUMZWEIGER BAUER

1913-1979

BY CYRIL M. HARRIS

BENJAMIN BAUMZWEIGER BAUER, formerly Vice-President and General Manager of the CBS Technology Center in Stamford, Connecticut, died in Stamford on March 31, 1979.

Mr. Bauer's distinguished forty-two-year career in acoustic instrumentation and measurement, sound recording and reproduction, and underwater sound resulted in a long list of engineering accomplishments and led to his being granted more than 100 patents.

Ben Bauer was born on June 26, 1913, in Odessa, Russia. After spending his teenage years in Cuba, he came to the United States in 1930, where he remained, becoming a citizen in 1941. He received a degree in industrial engineering from Pratt Institute in 1932 and the electrical engineering degree from the University of Cincinnati in 1937. He pursued postgraduate studies at Chicago and Northwestern universities.

Mr. Bauer's career in industry, following his graduation in 1937, started with his employment as a development engineer at Shure Brothers, Inc., in Evanston, Illinois, where he eventually became Director of Engineering and Vice-President. One of his significant contributions to the field of acoustic instrumentation was the development, at Shure Brothers, of the first unidirectional (cardioid) microphone in a single transducer, the principle of which is widely used today in microphones of this type. In addition, he made important contributions to the field of recording, including disc-cutter and

phonograph pickup designs. Another device that he perfected, the moving-coil pistonphone, was used widely in microphone calibration work.

During World War II he worked on the development of speech communication equipment for the Armed Services. One such device was the battle-announce microphone used both during and after the war by the U.S. Navy.

In 1957 he joined the CBS Laboratories in Stamford, Connecticut, where he headed audio technology development. He led a group of engineers in developments in stereo discs, magnetic recording, and other equipment leading to improvement in the quality of recorded music. His research efforts resulted in the development of a loudness-level indicator, a device currently used by the Federal Communications Commission and others in monitoring broadcast programs.

In 1970 he led a team that developed the SQ quadrasonic matrix system, which in 1977 was judged by the Federal Communications Commission Laboratory to be the best of all matrix systems tested. In 1975 Mr. Bauer was made Vice-President and General Manager of the CBS Technology Center at Stamford, where he directed research and development in areas of advanced television, high-density recording, audio systems, and audio reproduction. His outstanding work at CBS was acknowledged in 1978 by presentation of the Distinguished Service to CBS Award.

In addition to his work in recording and reproduction of sound, Ben Bauer made significant contributions to the field of underwater sound, including the development of an underwater directional communications system for divers, directional gradient hydrophones used in Navy sonobuoys, and a calibrator for hydrophones.

Among the many honors accorded Mr. Bauer were the Gold Medal Award of the Audio Engineering Society in 1963; the University of Cincinnati's Distinguished Alumni Award in 1969; the Institute of Electrical and Electronics Engineers' (IEEE's) Aerospace and Electronic Systems Group Honorary Life Member Award in 1969; the Silver Medal Award of the Acoustical Society of America in 1978; and membership in l'Ordre de Chevalerie de l'Etoile de la Paix, a Vatican-based nondenominational organization founded in

1229 and dedicated to peace. In 1974 he was elected a member of the National Academy of Engineering, and he served on the Naval Studies Board.

Ben Bauer was a prolific contributor to technical journals, with more than 100 papers to his credit, and he was the editor of a textbook on the acquisition, reduction, and analysis of acoustical data published by the U.S. Navy. He was a past President and Honorary Member of the Audio Engineering Society, a Fellow of the Acoustical Society of America and Associate Editor of its journal, and a Fellow of the IEEE and past National Chairman of its professional group on audio.

His many patents include basic inventions of directional microphones, and others in the fields of sound transmission and processing for recording and broadcasting, acoustic measurements and calibration, sound recording and reproduction, and quadrasonic disc technology.

He is survived by his wife, Ida, and two sons, Dr. Philip J. Bauer of Stamford and Dr. William E. Bauer of Studio City, California.