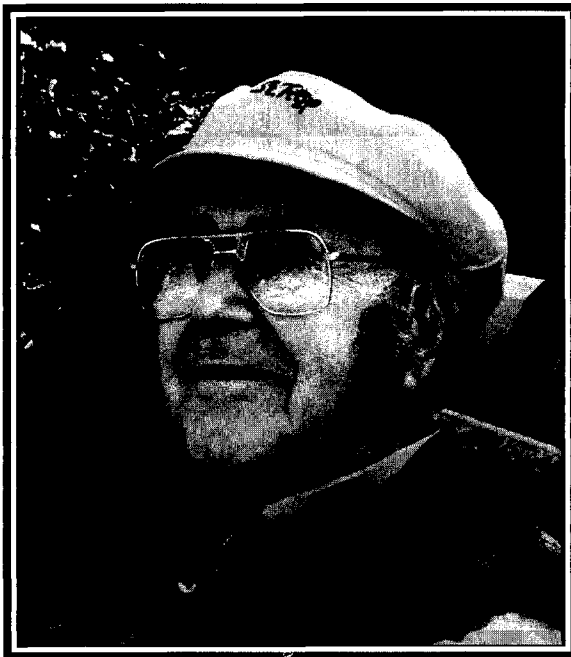


# In Memoriam

**D**onovan Ernest Lea Shorter, who died on the 6th of February, at the age of 84, was a long-serving member of the BBC's Research Department and a devoted member of our Society. His entire career was spent in the British Broadcasting Corporation, which he joined in 1932 as an operations engineer working on a transmitter in the north of England. His scientific talent was soon recognized, and he eventually moved south to London and joined the BBC Research Department, which by then had attracted an amazing assembly of first-class talent. Shorter had a penetratingly analytical scientific mind that developed swiftly under the influence of his distinguished

colleagues. He became one of Britain's most expert authorities on electroacoustic transducers and audio systems. He was granted numerous patents in transducer technology while his reports, papers and articles became legendary as models of scientific communication. His elegant prose was remarkably precise and always very clear, no matter how complex the subject matter.

Shorter was successful in virtually everything he put his mind to, but his great love was for audio technology in general and transducer development in particular. He was probably the first engineer to understand loudspeaker transient response. In the 1940s he devised an elegant means of measuring and illustrating delayed resonance effects, and despite the great difficulties associated with the semimechanical measuring method, he succeeded in plotting delayed resonance conditions in various loudspeakers, which clearly illustrated



D.E.L. Shorter

this aspect of behavior. When computerized methods of evaluation and graphical display resolved the difficulties of transient measurement 25 years later, it was gratifying to see how correct his original work had been.

Throughout the 1940s and 50s he and his team at Kingswood Warren undertook an important program of research in a quest to find reliable new monitoring loudspeakers for the BBC. Their research was probably the most penetrating, the best organized and certainly the finest reported of any overview on loudspeakers. Most of this work was written in a series of elegant internal reports, but in 1958 Shorter presented a definitive paper to the Institution of Electrical Engineers in London entitled "A Survey of Performance Criteria and Design Considerations for High-Quality Monitoring Loudspeakers." This paper was reprinted in an AES anthology on loudspeakers, Vol. 1.

It is still read and quoted 25 years after as a model of scientific communication.

In the 1960s Shorter undertook the development of a new ribbon microphone. The old AXBT microphone originating in the 1930s was no longer adequate in its performance with the inauguration of VHF FM broadcasting systems. It was necessary to investigate the influence of geometry on various magnetic structures. This proved to be impossible by direct magnetic measurements so Shorter devised a brilliant method of simulating magnetic field distribution using an electrostatic plotting method. The method proved extremely successful resulting in the PGS ribbon microphone as it is

known in the BBC—now produced commercially under licence by STC as model 4038A. To this day it remains one of the very finest microphones in commercial use; and it is still in service after 25 years.

Shorter was a keen member and supporter of the Audio Engineering Society. Even after he retired, he regularly attended British Section meetings and European conventions. He became a reviewer for the Society's *Journal* and he continued to take great interest in the development of audio right to the end. Shorter must be given great credit for his contribution to the high standards of sound quality achieved by the BBC. His influence on commercial transducer design is still effective. Those who trouble to read his many articles can learn a lot from his skilled writing style.

Shorter was a devoted family man. He is survived by his wife and four children.

Raymond E. Cooke, O.B.E.