

## dbx Founder David Blackmer Dies

By Barry Willis

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► **March 31, 2002** — We were saddened to learn of the death of inventor and audio engineer David Blackmer. The founder of dbx and Earthworks Audio Product inc died at his home in Wilton, NH on March 21. He was 75.



Blackmer's development of dbx expansion-compression technology in the early 1970s pushed the performance level of recording and playback systems beyond their previously accepted limits. Like his better-known colleague Ray Dolby, Blackmer found a unique way to work around the dynamic restrictions of analog tape. "His original RMS detector circuit, which was the foundation for dbx, was most elegant and original engineering," said *Stereophile* editor John Atkinson.

Blackmer also made great strides in reducing noise and distortion levels and extending the frequency response of analog electronics. He was one of a handful of audio engineers who questioned the received wisdom that there was no useful information in the audio range above the typical 20kHz limit of human hearing. He published pioneering research studies on the importance of these supra-audible frequencies—work that continues to be corroborated and expanded upon at AT&T Research, dCS, and elsewhere. He made wideband response a primary design goal of his Earthworks professional audio products. Earthworks' Sigma 6.2 "time-coherent" studio monitor has a frequency response that is essentially flat out to 40kHz; the company's highly-regarded two-channel and four-channel preamps extend to 100kHz with vanishingly low noise and "immeasurable" distortion.

Blackmer got his start in audio building radios as a schoolboy and entered the industry as a stock boy at Lafayette Radio in Boston in the early 1940s. He studied electronics in the US Navy and at Harvard University and MIT. Blackmer's career included stints at Trans-Radio Recording Studio, Epsco, Hi-Con Eastern, and Raytheon. He was also involved in design and development work on telemetry systems for the Mercury space program. Blackmer was a Life Member of the International Electrical and Electronic Engineers and a longtime fellow of the Audio Engineering Society.

He is best known as the inventor and founder of dbx. "Originally, dbx was based on the simple idea of using decibel expansion to replace the peaks lost to the limited dynamic range of magnetic tape," said Earthworks' director of sales Eric Blackmer. "It led to much more. The Blackmer VCA (voltage controlled amplifier) and RMS detector changed the world of audio, yielding the dbx noise reduction system, dbx compressors, and the dbx subsonic synthesizer . . . dbx VCAs were used in most early automated consoles and dbx processes were used in many early stereo TVs."

The lifelong innovator constantly sought better, more elegant solutions to the technical limitations that audio engineers continually bump up against. "As president and chief engineer of Earthworks Audio he developed and brought to market an astonishing string of new audio tools which are, on the whole, more accurate than anyone thought was possible," Eric Blackmer explained. "In the last years of his life he developed a new model for human hearing which includes the importance of time-domain resolution. He strove to establish new standards of sonic realism. It was his lifelong passion to improve the quality of audio equipment until it approached the sound of the original event."