



Jeff Keith

Senior Product Design Engineer,
Audio Processing
Wheatstone

Forty-nine years ago, while still in high school in Pennsylvania, Jeff Keith entered the radio business after being offered a part-

time engineering job by local station WTRN's owner—if he agreed to shut down the homebuilt 200 watt AM pirate station he'd been operating for two years. Jeff had built numerous audio, RF and test equipment devices. By high school's end he had four years of formal study in electronic technology under his belt, a decided advantage when he enlisted in the U.S. Air Force, where he attended the USAF School of Applied Aerospace Sciences (his instructors were from MIT's Lincoln Laboratories). While there he received his Second Class FCC license, and after service went on to acquire his First Class license and return to radio on a full-time basis.

Over the following decades he built or rebuilt more than a dozen studios and transmitter sites. Around 1974, Jeff began designing custom "secret" audio processing devices for the stations where he worked. It was in 1980 in Pittsburgh, while helping rebuild Nationwide Communications' WSHH transmitter site and studios, that he designed the prototype of his first FM stereo enhancer. This is also where he got the nickname "Keithkit" from Bud Aiello (then chief engineer at WJOL), because every time Bud visited he'd find Jeff building something at his workbench.

In 1989 Nationwide moved Jeff to WBJW AM/FM in Orlando, Fla., and during his seven years there he rebuilt its five-tower AM directional array, created a new FM transmitter site, and completely redesigned its studio facilities. In both 1995 and 1996 Jeff won Central Florida SBE Chapter 42's Engineer of the Year award. He became Nationwide's chief engineer of the newly acquired WKZL-FM in Winston-Salem, N.C., and it was there that he designed his Stereo Modulation Optimizer, the

first FM stereo enhancement device to take into account, and attempt to mitigate, multipath.

Nationwide next moved Jeff to WMJI in Cleveland, Ohio, and in the fall of 1998, when Jacor purchased all of Nationwide's radio facilities, they elevated him to director of engineering for Jacor's six-station Cleveland market. During his tenure at WMJI he designed and built the Mono Compatibility Controller, a device designed to mitigate FM stereo receivers' blend-induced multipath distortion.

In May of 1999 Jeff left radio broadcast to join Telos Systems and was soon promoted to project manager for the Omnia product line. During his eight years there he was involved in production of the original Omnia and design of hardware and user interfaces for subsequent Omnia processors right on up to the OmniaOne. It was also during this period that he got his first taste of DSP audio.

In 2007 Jeff joined Wheatstone Corp. to head up their new audio processing division, where he has made major contributions to hardware, DSP processing algorithms and user interface design. It was here that his Mono Compatibility Controller from WMJI days was ported over to DSP and incorporated into all Wheatstone FM processor products. Jeff's latest FM clipper technology and built-in FM/HD time alignment are now key features in Wheatstone's newest model AirAura X4.

Jeff has achieved multiple industry recognitions, including Master RF Engineer Certification from the National Association of Radio and Telecommunications Engineers, Professional Broadcast Engineer certification from the Society of Broadcast Engineers, Novell Networks Network Administrator certification, and has twice served on the Society of Broadcast Engineers' Board of Directors and as Committee Chair of the Bylaws and Mentoring Programs, as well as SBE chapter secretary and frequency coordinator.

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