

ALTI 2021 Course Description/Abstract:

AC Power, Grounding, and Shielding

By Bill Whitlock of Whitlock Consulting

Bill Whitlock of Whitlock Consulting shares results of his own peer-reviewed research and 30 years of experience at solving system noise issues for thousands of Jensen customers. He'll debunk common myths and pseudoscience by explaining, in simple "electronics 101" language, the physics underlying hum and buzz in audio systems and "random" misbehavior in digital systems. You'll learn relevant aspects of National Electrical Code and what normal AC power is and how it indirectly causes noise problems. You'll discover why light dimmers are so notorious for causing "buzz" in sound systems and what simple steps can be taken in new systems to avoid the problems altogether. For existing systems, a simple no-instruments troubleshooting method teaches how to use observation, system controls, and simple logic to pinpoint the exact cause and location of a noise issue. A variety of solution strategies and devices will be compared with respect to performance, cost, and safety, including why some so-called "solutions" actually put your customer's life at risk – and expose you to lawsuits. Attending this course will not only make you smarter but you'll avoid the embarrassment and expense of recalls to fix the system ... your hard-earned reputation is at stake!

Bill Whitlock Bio



Bill Whitlock has been designing analog electronics since 1972 and was chief electronics engineer for Capitol Records from 1981-1988 prior to becoming owner and chief engineer of Jensen Transformers 1989-2014. Through his research at Jensen, he's become a widely-recognized expert on AC power, grounding, and signal interfaces. His seminars and lectures at trade shows and universities, including an invited lecture at MIT in 2007, have helped thousands unravel the mysteries of noise and misbehavior in AV and other electronic systems. His writings include numerous AES papers, dozens of magazine articles and white papers, as well as several chapters in Glen Ballou's "Handbook for Sound Engineers." He's a CEDIA-certified instructor, and was voted technical instructor of the year by NSCA students in 2010 and 2011. His five patents include the InGenius® balanced input circuit IC and the ExactPower® high-speed AC voltage regulator. He's a Life Fellow of the Audio Engineering Society and a Life Senior Member of the Institute of Electrical and Electronic Engineers. Bill currently does free-lance consulting from his Ventura, California office.

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