

# PNW AES Meeting Notice

## The Top Ten Signal Interconnection Myths

Bill Whitlock - Jensen Transformers

November 19, 2002, 6:30pm

Mackie Designs

16220 Woodinville-Redmond Road NE, Woodinville

- **Limited space: advance registration requested.**
- **This special event is free to students and AES Members of any grade.**
- **\$25 admission for non-members.**

The AES Pacific Northwest Section is proud to sponsor this workshop with Bill Whitlock, President of Jensen Transformers, and one of the leading authorities in shielding, grounding and audio equipment interfacing.

As if the term "ground" weren't confusing enough by itself, many practices and beliefs surrounding signal interfacing in audio, video, and data systems are rooted more in myth than in science - many of them are reinforced in respectable textbooks. This presentation will examine, and hopefully dispel, some common myths on the following subjects:

1. Earth grounding
2. Zero-impedance wire,
3. Shielding unbalanced cables,
4. Which end of a balanced cable shield to ground,
5. Signal symmetry versus "balance"
6. Single op-amp balanced input "dilemma"
7. Audio cables as "transmission lines"
8. Impedance matching
9. Equipment itself causing noise problems
10. Vulnerability of digital interfaces

This classroom-style workshop will be held Tuesday, November 19, 2002 at 6:30pm at Mackie Designs in Woodinville, WA. Refreshments will be provided.

## **Bill Whitlock**

Bill Whitlock has designed pro audio and video electronics for 30 years. In 1989, after seven years with Capitol Records, he became president of Jensen Transformers. He has become a recognized expert on system interfacing issues through his writing and teaching. His paper on balanced interfaces, which appeared in the June 1995 AES Journal, has become the most popular ever printed there. Other writing includes the widely read "Clean Signals" column in S&VC magazine, three chapters for Glen Ballou's 1500-page "Handbook for Sound Engineers," as well as numerous application notes and magazine articles. Since 1994, he has helped thousands understand the mysteries of grounding and signal interfacing by teaching at trade shows, colleges, and professional organizations. Bill holds several patents including the InGenius(R) balanced input circuit and a high-speed feed-forward ac voltage regulator. He is also an active member of the Audio Engineering Society (AES) and the Institute of Electrical and Electronic Engineers (IEEE).

## **Registration Information**

The workshop is free to all AES Members and Students (AES membership not required). Non-AES members will be charged a \$25 fee payable in advance by check or via PayPal. We are expecting this to be a popular event, since the topic is so fundamental to all we do in audio and is so important for all of us to understand. Because we want access to this special workshop to be available equally to all, we have decided to try an advance registration system to guarantee your place at the event. If it is as popular as we think, when you pre-register, we will guarantee your place until 6:15pm; after that, we will open seating to all others, on a first-come-first-served basis.

Note that the starting time is **earlier than usual: 6:30PM**. The amount of material to be covered requires that we start earlier than our customary time. Due to the limited amount of space available for this special workshop and a finite number of pre-printed handouts, advance registration is strongly suggested. Registration at the door, paid or not, is subject to the availability of space.

**Understanding the presented material is dependent on hearing the entire presentation. This will be a circuit-level examination of the topic, with a fair amount of electronics and physics. At a minimum you should be able to read a one-line diagram and have some understanding of basic electronics.**

**Leave home early. Allow plenty of time for traffic. There will be no admission after 6:45PM! Doors will be locked! No amount of pounding will get you in after 6:45PM.**

Make checks payable to "PNW Section AES"  
Send snail-mail registration & checks to:

PNW Audio Engineering Society  
PO Box 75294  
Seattle, WA 98125

**Please supply the following for each attendee:**

Name  
Company or School (if applicable)  
AES Member number  
Street Address  
Email address  
daytime phone number

Email registration to:

[Rick Chinn](#)

PayPal arrangements will be sent via email as required.

[Directions to Mackie Designs](#)

**Start Time:**  
**6:30PM!**