

Audio Engineering Society, Adelaide Section Incorporated, c/- 128 Fullarton Road, 5067 Chairman: David Murphy 8384 3433 Secretary: Ian Tucker 8332 1111

Treasurer: Keith Taylor

## **AES MEETING NOTICE**

## **Are Stereo Headphones really Stereo?**

Graeme Cohen, Consulting Engineer, AES Member Director's Hotel 247 Gouger St Adelaide 7:30pm Tues 17<sup>th</sup> June 2014

Graeme will show and discuss various headphones and headphone amplifiers. He will refer to Blumlein's binaural patent and discuss methods of converting so-called stereo headphones into the real thing using cross-feed and aural amplitude/delay techniques

Stereo sound is customarily reproduced over two spaced apart loudspeakers. When listening through headphones instead of loudspeakers the stereophonic space is not correctly reproduced. Stereo headphones could arguably be called binaural headphones as the left sound source is heard in the left ear only, and the right in the right ear. In the live situation the human ears and brain hear sound with both ears but when using headphones the sound is different and may not have accurate location in space. By using a cross-feed of sound, left to right and right to left, it can be shown that a natural and accurate location of a sound source, such as music, noise, etc may be accomplished through headphones.

Graeme has developed a cross-feed system building on previous work by Benjamin Bauer, Jens Blauert and others. A filter and delay system has been developed using two sound level meters and computers for accurate sound source position by using controlled cross-feed of amplitude, delays etc within the frequency band being measured. The system has been trialled using live recordings as a check.

The AES Committee is having a counter tea at the **Director's Hotel at 6.00pm**, 247 Gouger Street, Adelaide, ph 8231 8484, and members and guests are welcome to join us. Please book in for the meeting by Monday 17<sup>th</sup> to: Ian Tucker [secretary]: <u>vsound@chariot.net.au</u> or 8332 1111

## **Report on Previous Meeting:**

A good number turned up at the TAFE Campus of the Adelaide College of the Arts to attend a technical presentation and tour of the facilities by students of the Technical Theatre course. We were impressed by the sound and lighting set ups, and the students gave good accounts of the purpose of each part. Our thanks to Jeanne Hurrell and Andrew Leach and Mark Shelton and the other lecturers who participated on the night.