The DXARTS Sound Lab hosts advanced software and hardware for the reproduction of 3-D audio at high fidelity. A 24.4-channel speaker array in a full spherical layout projects sound from around, above and below listeners and is suitable for use in a variety of soundfield synthesis techniques. The Lab serves as a resource for playback, artistic experimentation, and performance as well as ongoing research in the fields of spatial audio, acoustics, and psychoacoustics. A neighboring studio features a 10.1-channel speaker array in a dome layout for critical listening mixing and mastering of 3-D audio. Both rooms benefit from physical as well as digital acoustic treatments to optimize soundfield reconstruction. Users may reconfigure the routing and decoding systems as well as choose the degree of digital acoustic correction through a custom software interface. Each facility includes a host computer featuring advanced software for work in spatial audio. The studios are complimented by an isolation booth for recording.

**SPATIAL SOUND CAPTURE FOR STUDENTS**

An [MH Acoustics Eigenmike](https://www.mhacoustics.com/eigenmike) is available for student use. The microphone captures high order ambisonic soundfields. Please note this microphone is a research grade device and requires special training for use. In contrast to most "plug and play" microphones, this full system involves a dedicated microphone, processor, and laptop computer to conduct recordings. This microphone was funded by [Student Technology Fee](https://www.washington.edu/students/fees/scholarship/).

**Related Links:**
- [Ambisonics and 3-D Audio Playback Systems](https://www.dxarts.washington.edu/resources/ambisonics-and-3-d-audio-playback-systems)

**Facility Type:** Lab Space

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