

# Josh Stoller

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## PRINCIPAL ACOUSTIC & AUDIO SYSTEMS ENGINEER

Audio Systems | Acoustics | DSP | Embedded Systems | System Architecture

Acoustic and audio systems engineer with 8+ years of experience designing and delivering end-to-end sound systems across conferencing, mobile, and MEMS platforms. Expertise in electroacoustics, microphone and transducer systems, and real-time DSP, with a strong track record of defining system-level performance, tuning acoustic behavior, and driving products from concept through deployment. Proven leader in cross-functional engineering environments, translating sound quality goals into scalable, production-ready systems.

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## CORE COMPETENCIES

- Acoustic System Design & Electroacoustics
  - Loudspeaker & Microphone System Integration
  - Audio System Architecture (End-to-End Signal Chain)
  - Real-Time DSP & Audio Processing Pipelines
  - Acoustic Modeling, Measurement & Validation
  - Embedded Audio Systems
  - Cross-Functional Engineering Leadership
  - Root Cause Analysis & System Optimization
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## PROFESSIONAL EXPERIENCE

### Owl Labs – Senior Audio Engineer

2025 – 2026

- **Led acoustic system architecture and tuning of multi-microphone beamforming systems**, optimizing speech intelligibility and perceived audio quality across real-world environments
- **Owned end-to-end audio performance (transducers to DSP to system output)**, integrating and tuning beamforming, echo cancellation, noise suppression, and gain control
- **Defined and executed system-level acoustic validation and tuning strategies**, driving Microsoft Teams certification recovery from failure to compliance within 6 months
- **Directed redesign of microphone/transducer architecture**, balancing acoustic performance, hardware constraints, and DSP tradeoffs
- **Led cross-domain debugging (acoustic, electrical, DSP)** to resolve critical system issues and improve product reliability and test efficiency (~50%)

### Qualcomm – Audio Systems Engineer

2022 – 2025

- **Architected and developed MEMS-based audio system platforms**, enabling real-time evaluation of transducer performance across USB, I2S, and PDM interfaces
- Redefined system architecture to reduce cost by >90% while maintaining acoustic and latency performance, enabling scalable deployment
- Drove system-level validation and reliability improvements (10% → 95%), resolving issues across hardware, firmware, and signal chain
- **Led customer-facing technical enablement**, supporting engineers in evaluating acoustic system performance and integrating solutions into products

### Vesper MEMS – Systems Engineer

2020 – 2022

- **Led development of MEMS microphone (transducer) evaluation platforms**, enabling integration into TWS, AR/VR, and mobile acoustic systems
  - **Delivered complete acoustic system solutions (hardware + workflows + validation)**, reducing customer integration time by ~10x
  - **Acted as technical lead for system-level acoustic debugging**, resolving issues across transducers, enclosures, and DSP in real-world deployments
  - **Drove adoption of new acoustic technologies**, directly influencing customer design wins across global markets
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## AUDIO & LIVE SOUND ENGINEERING EXPERIENCE

- **Designed, deployed, and operated live audio systems for concerts and theater productions** (including large-scale events such as B96 Summer Bash and venues such as Buddy Guy's Legends), ensuring reliable performance in real-time, high-pressure environments
  - **Led system setup, tuning, and live troubleshooting under no-failure conditions**, rapidly diagnosing and resolving issues during performances to maintain uninterrupted operation
  - **Collaborated with non-technical stakeholders (directors, performers, production teams)** to translate creative goals into technical system designs, balancing acoustic constraints with overall production requirements
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## SKILLS

- **Acoustic Measurement & Test Systems** – Audio Precision (APx500), Listen SoundCheck, HATS, Brüel & Kjær (B&K), GRAS microphones, anechoic/semi-anechoic testing, SPL calibration, frequency response & distortion analysis
  - **Electroacoustic & Hardware Development** – MEMS microphone prototyping, transducer integration, DSP systems, analog/digital audio design, PCB design (Altium, Eagle), electrical troubleshooting, 3D printing
  - **Simulation, Modeling & Design Tools** – MATLAB, SolidWorks, Fusion 360, PSpice
  - **Embedded & Signal Processing Systems** – Python, LabVIEW, real-time DSP tuning, beamforming, echo cancellation, audio pipeline optimization
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## LEADERSHIP & ORGANIZATIONAL IMPACT

### South End Tech Center – Board Member

2023–Present

- **Modernized nonprofit operations and governance**, implementing centralized systems and structured workflows to improve board execution and collaboration