

# Dan White

447 N 9<sup>th</sup> St. Seward NE 68434, (402) 890-4049

[danwhite@engineer.com](mailto:danwhite@engineer.com)

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## EDUCATION

### Doctor of Philosophy in Electrical Engineering

Present

*University of Nebraska-Lincoln*

- Energy harvesting in self-powered embedded systems
- MEMS and IC integration

### Master of Science in Electrical Engineering

December 2006

*University of Nebraska-Lincoln*

Thesis: "Self-Oscillating CMOS Class D Amplifier Optimized for Low Output Power"

AES 121<sup>st</sup> Convention presentation, preprint #6859

- Design complete 4-channel class-D amplifier in 0.25um CMOS optimized for driving headphones

*Areas of Study:*

- Data Compression: Lossless audio codec based on adaptive signal estimation
- Adaptive DSP – Adaptive room correction
- DSP: Audio effects unit
- Psychology of Hearing – Amplitude discrimination hearing test protocol

### Bachelor of Science in Electrical Engineering

May 2005

*University of Nebraska-Lincoln*

- Minor in Music Performance (French horn)
- Capstone project: 1kW 97% efficient class-D amplifier with Bluetooth-controlled DSP
- Emphases: Circuit design, DSP, Communication systems

## PROGRAMMING

- Author of **pyspice**, a SPICE preprocessor in Python for faster IC simulation
- Embedded Architectures: TI C55x, TI MSP430, ARM7
- Languages: C, C++, MATLAB, assembly, Python, Perl, Bash, others
- UNIX/Linux system administration
- Oversee independent study course designing VST plugins in C++
- Modifications to open-source software for local use

## PROFESSIONAL EXPERIENCE

### Teaching: EE Department, University of Nebraska-Lincoln

- Instructor of Record for “Advanced Electronic Circuits” undergraduate course
- Teaching assistant for undergraduate labs
- Provide a link from coursework to real-world engineering problems
- Design FPGA evaluation board for department and lab use
- Write and modernize lab experiments to current technology
- Ad hoc instruction for new teaching assistants

### Design, Repair, Consulting: White Audio

- Design Focus Mastering's signal wiring
- Recondition Sound Workshop 34c
- Upgrade, restore Neotek Series 1e
- Redeploy Trident 65 for The Faint
- Track ground loops in large systems
- Solve Studer A810 intermittent dropout
- Retrofit PA system for large church
- Service Auditronics 740 console
- Repair RME Fireface 800 output stage
- Modify Sony C37p microphone

#### Primary technician for:

Focus Mastering 2 regional live sound providers  
Studio B Ltd Simple Grace Ministries  
Omaha's Sokol Auditorium Dana Murray Productions

## PROFESSIONAL AFFILIATIONS

- Audio Engineering Society (founding member of Heartland chapter)
- IEEE Graduate Student Member
- Tau Beta Pi chapter Corresponding Secretary