

Resume of Richard S. Stroud

President and Consulting Engineer: Stroud Audio Inc.

Stroud Audio Inc. provides electronic and acoustic design and consulting services to the audio industry. We provide audio engineering consulting to the automotive, consumer product and musical instrument accessories businesses.

EXPERTISE AND SERVICES

Electrical Engineer, Audio/Analog Electronics, Acoustics

Electronics: circuit design engineering, circuit performance and value optimization, circuit board layout, high value new designs, transistor and op amp circuit design, vacuum tube amplifier design, development of innovative solutions, performing analog electronics design troubleshooting, engineering training

Acoustics: loudspeaker specification and measurement, loudspeaker enclosure and system design, microphone specification and measurement, listening experiments, skilled listening instruction, automotive audio system design and tuning instruction, listening room design

FACILITIES

Audio/analog electronics workbench, loudspeaker parameter measurement systems, including Virtual Half Space system, large-signal parameter measurement system, vehicle audio design and measurement systems, reference sound systems and system evaluation methodologies.

PRINCIPAL INDUSTRIES SERVED

Automotive OEM's and suppliers, consumer audio products

EDUCATION

BSEE North Carolina State University, 1963 with Honors

HONORS AND AWARDS

General Motors "Award for Excellence in Community Activities"

Winner of Society of Automotive Engineers McFarland award for service to SAE's Audio Systems Sessions

PROFESSIONAL EXPERIENCE

President of Stroud Audio Inc., 2001-present.

Provide clients with electronic circuits design, development and prototypes, provide acoustic designs, teach automotive audio design and listening classes to automotive

suppliers and vehicle manufacturers, measure loudspeakers, evaluate design engineering organizations.

Provide electronic design and acoustics training classes, including:

- Audio System Design Seminar, for automotive audio
- Audio Circuit Design
- Skilled Listener Training
- Vehicle Tuning
- Guitar Amplifier Design

These classes are available for scheduling.

Designed and developed the SPEx large-signal speaker parameter measurement system.

Developed a new method for measuring speakers in a non-anechoic environment. An AES paper was presented on this system (see “Publications and Patents”).

Performed car sound evaluation using SAI’s Skilled Listening methodology.

Provided vehicle component optimization and tuning for OEM premium audio systems.

Built and tuned the winning vehicle at the 2010 SMWTMS Autosound Contest in Michigan

Group leader and Technical Fellow, Audio and Acoustics Development Group, Delphi Delco Electronics Corporation, Kokomo, IN, 1983-2001

Managed 14 people and five development activities. These activities included:

- Design of i.c. tone and volume and power amplifier building blocks into automobile receivers
- Design and manufacturing release of 2,8 and 12-channel analog and DSP equipped amplifiers for luxury cars and for Monsoon applications
- Acoustic development activities, including speaker development, vehicle audio system design and tuning
- Audio DSP development, including a portable equalization system for world-wide vehicle tuning and equalization
- Comprehensive Audio Testing, a subjective listening method that correlates well with customer satisfaction

Major accomplishments of this group included introduction of DSP audio into Delphi receivers and amplifiers, and the creation, tuning, manufacturing release and support of the Monsoon audio system.

Group Leader-Advanced Development Audio, Delphi Delco Electronics Corporation, Kokomo, IN, 1982-1983.

Managed design of amplifiers and sound system development.

Group leader, Delphi Delco Electronics Corporation, Kokomo, IN, 1978-1982
Managed automotive loudspeaker design and development. Worked closely with speaker manufacturing operations, including voice coil, cone and speaker assembly areas.

Design Engineer, Radio Design Group, Delphi Delco Electronics Corporation, Kokomo, IN, 1975-1978
Developed and released to production electrical design of new 1400cc receiver.

Design Engineer, New Product Development, Delphi Delco Electronics Corporation, Kokomo, IN, 1973-1975
Developed designs and prepared specifications for proposed new transportation system.

Foreman, Radio Final Alignment, Delphi Delco Electronics Corporation, Kokomo, IN, 1971-1973
Supervised 31 people providing 500-radios/day alignment and final assembly operations

Design Engineer-Automotive Electronics 1968-1971
Designed magnetic wheel speed sensors for anti-lock braking systems.

Design Engineer, Technical Section, E.I. DuPont de Nemours and Co., Seaford, Del, 1966-1968
Designed misc. temperature sensing and other small electronic circuits.

Design Engineer-Design Section E.I. DuPont de Nemours and Co., , Kinston, NC. 1964-66
Designed power and control systems.

Chief Engineer, WFVG Broadcasting Fuquay-Varina, NC, 1963-64
Served as engineer in television broadcast station

PROFESSIONAL AFFILIATIONS

Audio Engineering Society

Chairman: AES Technical Committee for Automotive Audio

Past Chairman: Paper sessions for Automotive Audio and Spatial Perception sessions

Society of Automotive Engineers (served since inception of Audio Systems session over 25 years ago)

Past Chairman: Automotive Audio session

Currently Session Organizer for Automotive Audio session

Past SAE Activity Chairman for Electrical and Electronic Systems.

Kokomo Engineering Society

Past Secretary, past Board Chairman

PUBLICATIONS AND PATENTS

Technical Papers

For the Society of Automotive Engineers

“More, the Selling of Audio”

“Masking Effects of Audio Systems with Non-Flat Frequency Response”

“Reference vs. Preference: the ‘Surround’ of Surround Sound”

“Loudness Compensation in Automobiles”

“Low-Cost Audio for Automobiles”

For the Audio Engineering Society

“Quasi-Anechoic Measurement of Loudspeakers using Notch Tuning for Impulse Shortening”

Publications

“Listening System Clarity, a Hypothesis” published in SMWTMS newsletter

Numerous internal technical “white papers” confidential to Delphi Delco Electronics

Patents Granted

Alternate Path Wheel Speed Sensor

Held Music History Circuit (with others)

Level Translator for AGC System

Audio Amplifier having Linear Gain Control

Non-Linear Noise Reduction System (with Mike McQuilling)

CIRCUIT CONTRIBUTIONS AT DELPHI DELCO ELECTRONICS

First five-band equalizer circuit at DDE

First wide-range bass and treble circuit at DDE

First true loudness circuit at DDE

Concept for noise blanker widely used in industry today

RELATED HOBBIES

Singer: Church choir, quartet

Guitar and Bass Player, Songwriter

Amateur Radio: W9KWG. Began “hamming” at age 14. Currently hold Amateur Extra Class license

STRENGTHS

Development of novel and creative electronic and acoustic designs

Knowledge of electronics, speakers, and acoustics

Technical leadership, engineering organizational development

STROUD AUDIO INC. WEBSITE

<http://www.stroudaudio.com/>

CONTACT INFORMATION

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