



Barry McKinnon

Memberships:

Member of National Systems Contracting Association
Member of the International Communications Industries Association
Member of the Audio Engineering Society since 1974

Positions:

- 1997 - Present** M^C Squared System Design Group, Inc. - Principal, senior systems designer and computer based sound system and performance acoustics modelling specialist.
- 1991-1997** Barron Kennedy Lyzun & Associates Ltd. - Associate Consultant, senior sound and audio/visual system designer and performance acoustics modelling specialist.
- 1978 - 1991** DSE Production Equipment & Services Ltd., Calgary - Sound system designer and Sales Manager
- 1975 - 1978** Owner of Acoustec Sound Products, Calgary

Experience:

1991 - Present

Barry brings extensive practical experience and theoretical understanding of sound and audio-visual system design and installation to the firm. He has developed system designs and specifications for venues as diverse as the Whitehorse Aquatic Centre; Surrey Aquatic Centre; Surrey Family YMCA; University of Saskatchewan College of Kinesiology; Bill Copeland Sports Complex; Duke Point Ferry Terminal; Timms Centre for the Arts at the University of Alberta; the Simon Fraser University West Mall expansion; Manitoba Hydro Video conference Facility; UBC Hebb Physics Theatre; UBC Wesbrook 100 Lecture Theatre; UBC Buchanan A200 Block; the City of Burnaby Council Chambers; City of North Vancouver Council Chambers; Prince George Council Chambers; Abbotsford Civic Centre; 1994 Victoria Commonwealth Games Sound System Performance Specifications; The Calgary Stampede Grandstand sound system upgrade. He has also been involved in sound system performance measurements and acceptance testing for numerous installations. He makes extensive use of the TEF time/frequency domain analyser for sound system evaluation.

He has made effective use of computer modelling systems for developing room geometry and acoustical treatment requirements in all types of venues. The computer modelling allows the performance of both amplified and unaided speech and music to be assessed without costly scale models. This modelling process has helped produce facilities such as the Bill Copeland Sports Complex, Timms Centre for the Arts at the University of Alberta, Alberta College Muttart Recital Hall.

His technical background in recording and sound reinforcement brings to the firm a critical ear, and an understanding of room acoustics for both speech intelligibility and musicality. He has developed the design for room acoustics for the Timms Centre for the Arts, the Muttart Recital Hall, and the Northern Alberta Institute of Technology South Learning Centre in Edmonton, the Bill Copeland Sports Complex in Burnaby, as well as remedial acoustical treatment for dozens of diverse venues such as cinemas, churches, schools, arenas and theatrical spaces.

He has worked on noise isolation for music, theatre and performance spaces. This work has included specialized work for studios, home theatres and listening and demonstration rooms in high quality audio retail sales locations.

1975-1991

He was involved in the sales, rentals, operation and installation of sound systems in Calgary. This included the design and installation of complete systems, as well as the design and construction of specialized loudspeaker systems for specific applications. He was responsible for design and construction of numerous loudspeaker systems for clients such as the Calgary Exhibition and Stampede, Theatre Calgary, CFCN Radio/TV, the University of Calgary, Famous Players Theatres, as well as loudspeaker systems for rental and sales purposes. Several years of design experience using the TEF analyser to measure loudspeaker performance have led to a solid understanding of the importance of time domain behaviour of loudspeaker systems, and the critical importance of loudspeaker interaction in large systems and its effect on speech intelligibility.

He has extensive experience in remedial sound system work, system trouble shooting and system upgrades. He designed the reconfiguration of the central loudspeaker cluster at Theatre Calgary in the Calgary Centre for the Performing Arts. This involved reducing the number of loudspeaker devices and improving the coverage and response uniformity in the process. He also designed the 1989 replacement loudspeaker system in the Calgary Stampede Grandstand, which covers 33,000 people for the evening grandstand show. The system features full high-fidelity bandwidth combined with high SPL capability.

He has many years of experience in installation of permanent and temporary sound systems in a wide variety of venues. This provides the necessary experience base for accurate price estimating of sound systems, and for the design of practical and achievable sound systems. This practical experience provides a better understanding of the user's needs and requirements during the design phase. Interaction with the electrical consultant, contractor questions and site services are able to be handled more effectively with the practical field experience.

Partial List of Presentations and Publications:

Invited lecturer presenting practical overview of room acoustics and sound systems to the University of Calgary Environmental Design faculty graduating class (1989 - 1991).

Organized and presented technical seminars for Pro Sound News and Systems Contractor News Magazine as well as the National Systems Contracting Association, at their annual US conventions on topics including; wireless microphone applications, boundary microphone applications, and loudspeaker applications (1988 - 1998).

Contributing Consultant for Systems Contractor News Magazine, regular contributor to trade publications, including: Pro Sound News, Sound & Video Contractor, Recording Engineer & Producer, Studio Sound Magazine. These technical articles were on sound systems, measurement, aural simulation, sound contractor training and certification and other issues related to sound reinforcement, sound contracting and acoustics.

McSquared System Design Group, Inc.

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