

Composing in an Ambisonic Environment

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Background

- ▶ Research Conducted for my Independent Scholarship Module during my MA Music Production course.
- ▶ Purpose was to determine whether an Ambisonic environment could contribute in some way to the listeners perceptions of a musical composition.
- ▶ Led to the creation of 5 original music compositions which used the Ambisonic environment as a compositional medium.
- ▶ Experiment was conducted to assess the Ambisonic environments contribution.

Experiment Design

- ▶ 5 Original Pieces in different styles, to allow for different contributions to different styles.
- ▶ Basic Techniques such as Height, Space, and Motion.
- ▶ Comparison between a Ambisonic Mixed version, and a down mixed Stereo version (Describes as Version A, Version B) to assess contribution.
- ▶ Participants were a mix of musical and non musical listeners. No mention of ambisonics or surround sound in the experiment.
- ▶ Questionnaire given to participants with questions relating to pieces on the whole and individual pieces.
- ▶ Question examples: *" Which version did you prefer" , " What stood out as something you liked from your preferred version" , " For Song 1, which way did you prefer to face in order to get the sound, you preferred?"*

Experiment Design

- ▶ Experiment was conducted at The University of Derby Ambisonics Room MS216.



Incorporated Research

- ▶ Some of the songs created for this project incorporated the Guitars with Ambisonic Spatial Performance (G.A.S.P) research by Duncan Werner.
- ▶ A specially designed Multichannel guitar was used to record parts for certain songs to fully utilise the Ambisonic environment for the compositions.



Experiment Findings

- ▶ Clear distinction between Stereo and Ambisonics
- ▶ Ambisonics version was favored for every song by 96% of participants.
- ▶ Ambisonics version described as "*Clearer*", "*brought the song to life*", and "*Bigger and more interesting*".
- ▶ Height aspect of Ambisonics was not necessarily communicated effectively with a 50% of participants
- ▶ Varying response for preferred direction to face when listening to Song 1, most preferring to face at 270 degrees.

Demonstration

The background features abstract, overlapping geometric shapes in various shades of green, ranging from light lime to dark forest green. These shapes are primarily located on the left and right sides of the frame, leaving a large white central area. The shapes are composed of triangles and polygons, some of which are semi-transparent, creating a layered effect.

Thank you