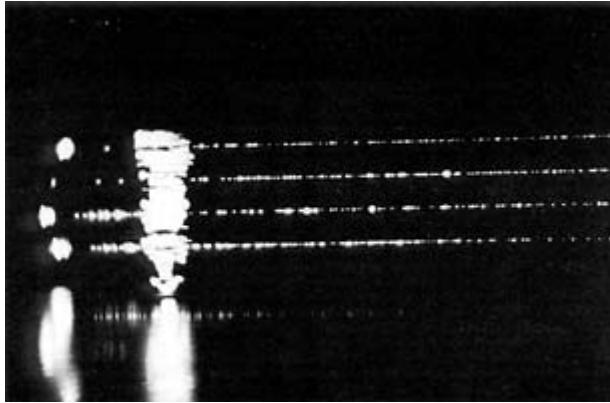


"Radial Arcs"

Ron Kuivila (Middletown)



Installation for Brucknerhaus Linz

Commissioned by Ars Electronica

Radial Arcs Ron Kuivila

Radial Arcs is a sound installation made up of ninety-eight coordinated "singing arcs". The singing arc was the first completely electronic musical instrument- it consisted of a high voltage oscillator whose pitch could be tuned. This pitch was heard by placing wires from the oscillator's outputs close enough together to induce arcing. In Radial Arcs, a large collection of singing arcs are distributed throughout the exhibition space. A microcomputer coordinates the timing and pitch of the arcs they produce, generating complex spatial patterns of both light and sound.

The physical presentation of Radial Arcs has been designed to interact with the radial scheme underlying the architectural design of the Brucknerhaus. The piece is surrounded by a low barrier that displaces the different radii that determine the placement of walls and pillars in the entrance hall. The arcs themselves are arranged in lines that converge to these radii. A low bridge oriented along a chord connecting two radii, is suspended over the piece to allow visitors to walk through of the sound field created by the arcs.

The choice of singing arcs as the material of this piece was guided by more than an interest in "original instruments". Spark gaps, unlike any other source of sound, produce a sound that propagates uniformly in all directions. This is heard in the sound of a spark as a distinctive quality of "presence". Since a spark gap is little more than two wires and some air, it is practical to use an arbitrarily large number of spark gap "speakers". This makes it possible to explore spatial phenomena that cannot be simulated.

Of course the singing arc produces a beautiful blue spark as well as sound. Radial Arcs takes advantage of this to elide its aural and visual aspects. To maintain a balance, the arcs are kept rather modest in size. They appear as patterns in space rather than as violent demonstrations of electrical phenomena. However this does not entirely free the piece from associations with violence. The domesticated violence of a "bug zapper" may be heard and the domesticated violence of a stun gun may be seen. (In fact, the piece is made from parts taken from stun guns.) These associations are not the focus of the piece, but they remain a lurking presence.