

Matt Heckert

Machine Sound

After working for 8 years building machines for performances and producing soundtracks for the same I began to toy with the idea of using machines to produce some of the sound, then having them produce all the sound and in 1988 I began work on the Mechanical Sound Orchestra.

The criterion for this project were:

- to build machines that were "playable" in that each would have a variety of timbres, or rhythms they could produce
- they would be remote controlled with a computer interface
- performances would consist only of sounds produced by the machines at the time; no tapes, samples or any other auxiliary sound would be used-this was very important to me as I wanted to create a situation where all motion produces sound, and any sound could be traced to it's source at that time. I wanted live performances to have the immediacy of an improvisational situation.

In using remote controlled mechanisms there is the mystique of the intelligent machine; when a mechanical device performs a repeated task it takes on, to the casual observer, a desire or want. Thus it may appear somewhat intelligent allowing them to appear as autonomous entities. This is of course not a sound issue but one which deals with the audience/performer relationship and the audience's perception of a sort of non-verbal communication taking place.

With the machines' movements interfaced through a Mac computer running MIDI sequencing software a finer degree of control is possible than if they were controlled by manual switches and timing structures can be used that would be physically impossible. For instance I can send a servo motor from zero to full speed to zero 4 times in one beat using a 120 bpm clock. This can also be done with repeated accuracy as it is MIDI information doing the switching.

Once recorded and stored as a sequence or sub-sequence it can be used at any time with the touch of keyboard. This information is sent out instantly and the system responds much like a midi drum machine but the big differences are the delay caused by inertia and the fact that the sound comes live from machines.

The inertial delays vary from machine to machine with some smaller ones being only milli-seconds to larger machines who won't get going for 1-8 seconds. This gives a sort of push-pull feel to playing live that is more like working with a human powered band.

The other sounds present are what I refer to as auxiliary or secondary sounds. These are the various motor hums, solenoid clicks, metal creaks, air exhausts, etc. that are not the primary effects I was after in designing a particular machine but the ones that come along with its operation, as the inhale of a horn player too close to a mic or the fingers squeak on a guitar or violin neck my machines breathe and stretch in their own ways.

Having this type of control interface allows me to respond to the differences in the acoustic dynamics of a specific location as well as to be able to build new compositions real time during performances.

What I hope for it all to add up to is a greater sense of immediacy for an audience with some feeling of being inside a system or mechanism. This second condition is enhanced by the way the machines are presented to the public, not on a stage out of reach, but spread throughout the performance space so audience can be in a close proximity with the instruments.

The presentation seen on the video tape is from an installation and performance in a former salt warehouse in Hall in Tirol, Austria on August 31, 1994. The DAT tape contains a piece titled "Munich Samba" recorded at the Marstall Theater on October 7, 1994.

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About the documentation

I have included video and DAT tapes for documentary purpose for the reason that while the video is important to get some idea of the performance the sound quality on it is quite poor. The DAT recording gives a better picture of the sound.

The presentation seen on the video tape is from an installation and performance titled "As Of Now" in a former salt warehouse in Hall in Tirol, Austria on August 31, 1994 and runs 5' 37"

The DAT tape contains a piece titled "Munich Samba" recorded at the the Marstall Theater on October 7, 1994 and runs 4' 54"