PIANO
1980
open
for Piano solo, Electronics and magnetic fields

Piano: Polo de Haas
Technics: Hans Stibbe, James Rubery
Production: Music Program Design, Studio STEIM, Amsterdam, The Netherlands
Commissioned by „Pro Musica Nova" Bremen, Germany

My composition PIANO is ecological music, i.e. the composition shows relationships of the piano sound (microstructures) to the finite musical form.
The piano sound, a primary acoustic feature, contains a range of information, e.g. overtone series, amplitude ratios, which are made audible with the aid of electronics to determine the musical form (macrostructure) of the piece.
The composition deals with the low string "B". By applying a magnetic field (coil) to this string, the overtones of the string become audible through resonance.
of the string, which are not tuned to the correct temperament. A sequencer, a register of DC voltage levels, tuned with frequencies (see page 1, 1), changes the voltages of the magnetic field and thus causes an overtone melody of the string "B" according to a rhythmic structure, which is either freely designed by the pianist with the foot switch, or realised by fixed pulse rhythms (Tape 2) (see Technical Setup). The string "B" (actually "b", see page 1, 1) is amplified with a contact microphone 1 and reproduced in four channels.

Through a so-called voluntary resonance of the primary sound emitter (string "B"), other strings of the piano, secondary sound emitters (page 4, 1, temperament tuned), can also be made to vibrate. These 7 strings are also amplified with contact microphones (contact microphone 2 - 8). These two forms of resonance are revealed to the listener with the composition PIANO.

The spatial design of the sounds is quadrophonic. The string sound resonating through the magnetic field moves through the "rotator" rotating in space. The rotation is designed with different speeds, since the amplitude of the resonance tones, measured with the "amplitude demodulator", determines the speed (see Technical Setup). The following channel distribution was chosen:

Channel 1, front left: tape 1/1, air microphone (piano amplification), rotator, microphone 2 - 8
Channel 2, front right: tape 1/2 , air microphone, rotator, microphone 2 - 8
Channel 3, rear left: tape 1/3 , air microphone, rotator, microphone 2 - 8, sound "dis" (page 5,1)
Channel 4, back right: tape 1/4 , air microphone, rotator, microphone 2 - 8, sound "fis" (page 5,1)
The composer takes on the role of translator, translating, presenting and clarifying acoustic features to the listener.

The composition was commissioned by the "Pro Musica Nova" festival of Radio Bremen. PIANO was premiered in Bremen, Germany, on 8.5.1980.

PIANO, Polo de Haas, Dezember 1981, © A.L. van der Laaken

Technical setup:

Technischer Aufbau