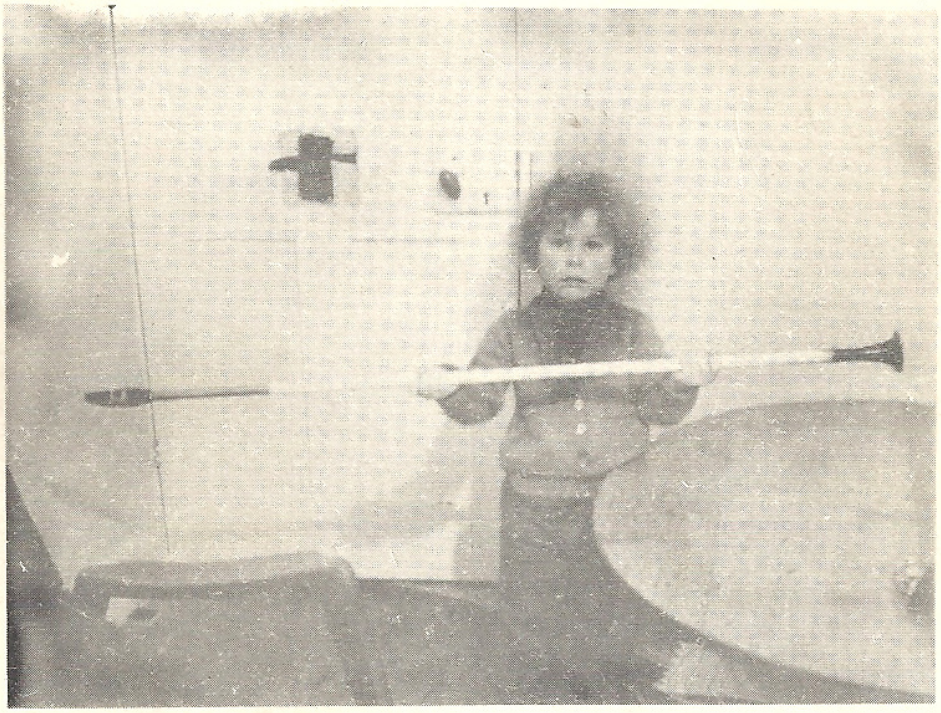
NEW/REDISCOVERED MUSICAL INSTRUMENTS
volume 1

Hugh Davies
Paul Burwell
Max Eastley

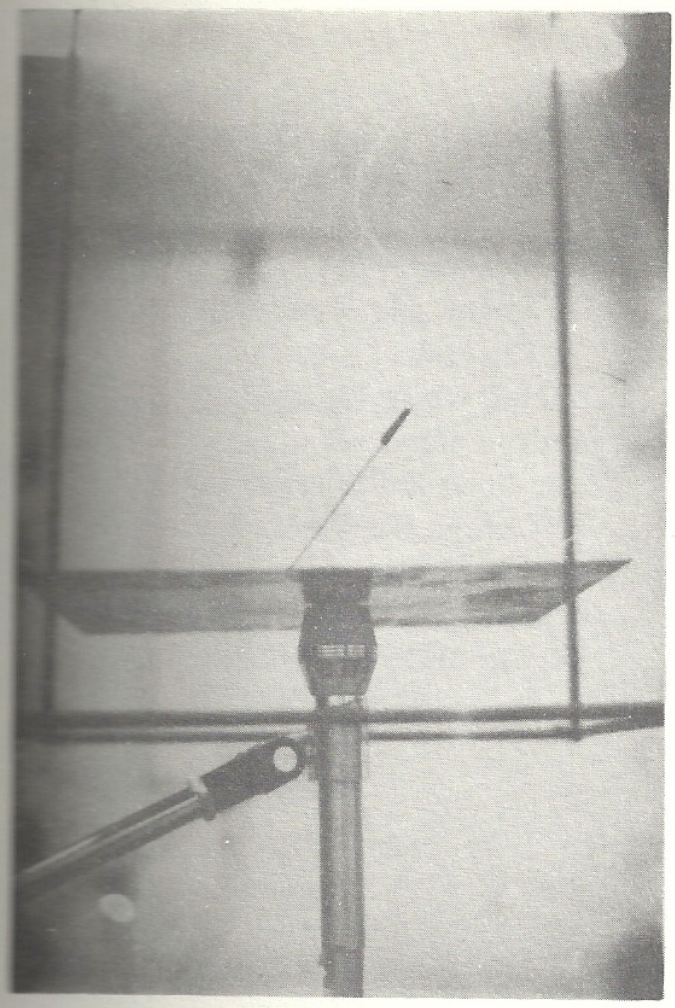
Evan Parker
Paul Lytton
David Toop



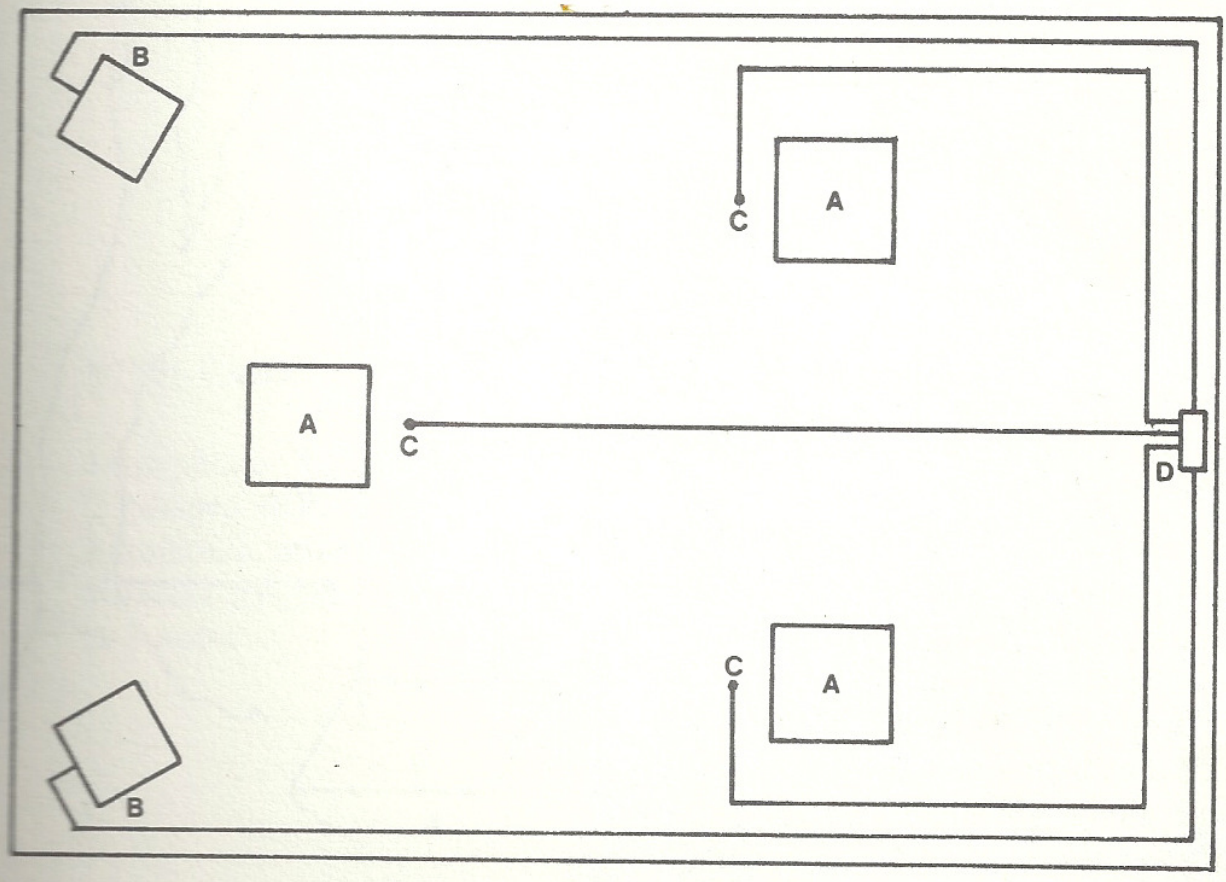
For the visual artist who attempts to use sound the problems are formidable. For example, sound has a tangible speed, as opposed to light which is of such a high frequency that for all practical purposes it is instantaneous. There is the problem of materials. Some are visually fascinating while acoustically they are (as far as the human ear is concerned) inert. Conversely, if the composer should decide to attempt something which is sculptural he may find the inertia of the material he chooses too cumbersome to realise his conception. Lastly, the Musical Instrument Maker, who has been aware of these problems for some time, finds the conflict between appearances and performance increasingly difficult to resolve as the technology of sound advances.

The work I am involved in is an attempt to resolve these problems. The word I have temporarily chosen to designate my work is: SONURGY (from the Latin SON - meaning Sound and from the Greek OURGOS - meaning Working). It is a synthesis of the simultaneous study of Kinetic Art, Music and Musical Instruments. These are my sources. What proceeds is neither one nor the other. My aim is perfect synthesis and emancipation of these elements into a new form. This aim led me to adopt three catagories of device.

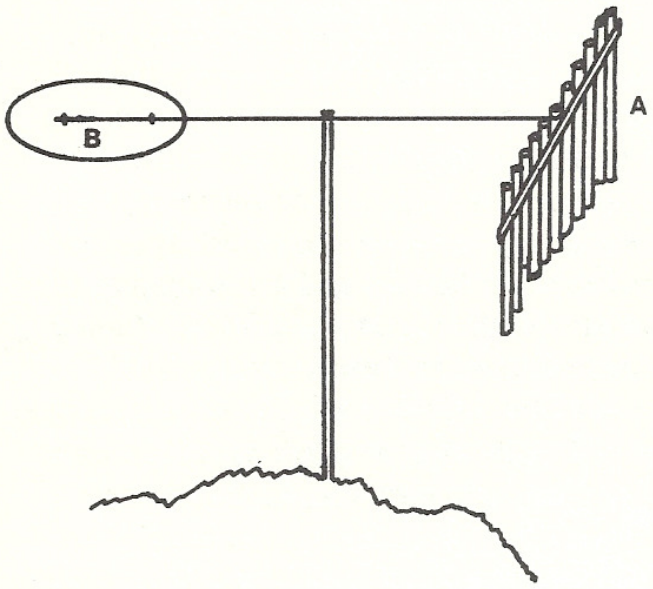
AEOLOPHONES: devices that use wind
HYDROPHONES: devices that use water
HYDROAEOLOPHONES: devices that use both wind and water



Centriphones: a Centriphone uses the principle of centrifugal force. It consists of a motor and, in the case of percussion, a nylon filament with a beater attached. When the motor is set in motion the filament is wound up and then released. This causes the beater to strike any object within near proximity, in this case (see left) a square metal plate. The result is a continuous roll of notes, the speed of which can be changed by adjusting the flow of current to the motor. When 3 or more Centriphones are set in operation (see below) the upper partials of the steel plates combine to produce resultant pitches. The microphones shown in the illustrations are used to pick up other pitches which are amplified and passed back into the acoustic space through loudspeakers. By varying the volume of the amplification a wide range of complex illusions are created.



A. Centriphones B. Loudspeakers C. Microphones D. Mixer/Amplifier



left: AEOLIAN SYRINX

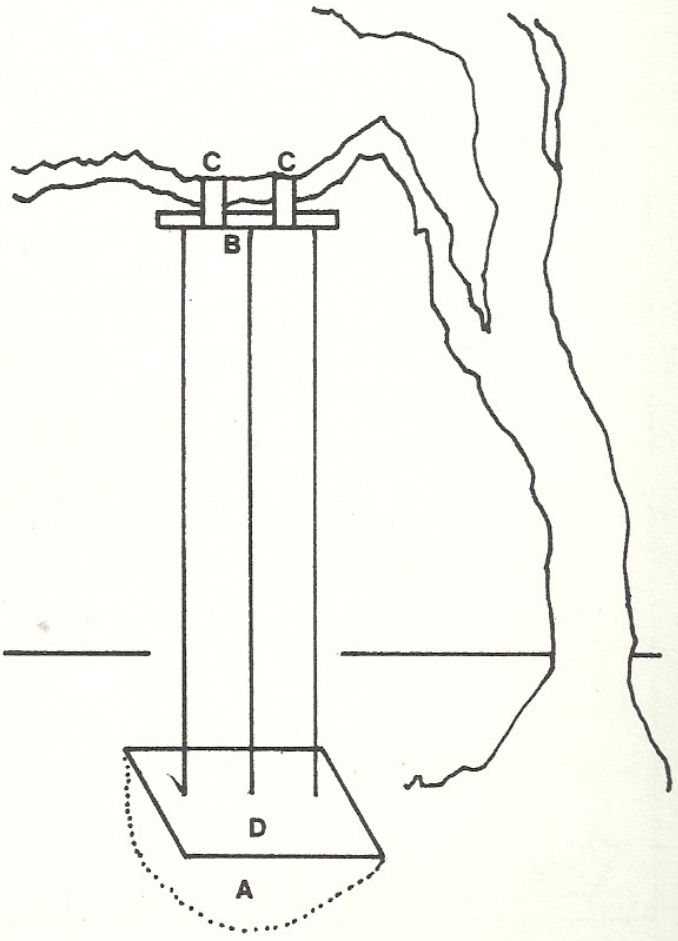
A Syrinx (A) is mounted at the end of a rod of metal, which is fitted onto a stand set up in the open air. A wind vane (B) keeps the Syrinx facing into the wind, which blows across the top of the tubes producing chords.

right: AEOLIAN GROUND HARP

Below the branch of an overhanging tree a hole is dug in the ground.(A). From the branch a crossbar is suspended (B). Straps are used so that any angle can be made (C). From the crossbar strings are stretched to the board which covers the hole (D).

When the wind blows across the strings they are set in vibration and are amplified by the board over the hole which acts as a resonator.

The illustration shows a minimum number of strings for the sake of diagrammatic clarity. There is no reason why up to 300 or more strings should not be employed, tuned to a harmonic series including quarter tones.

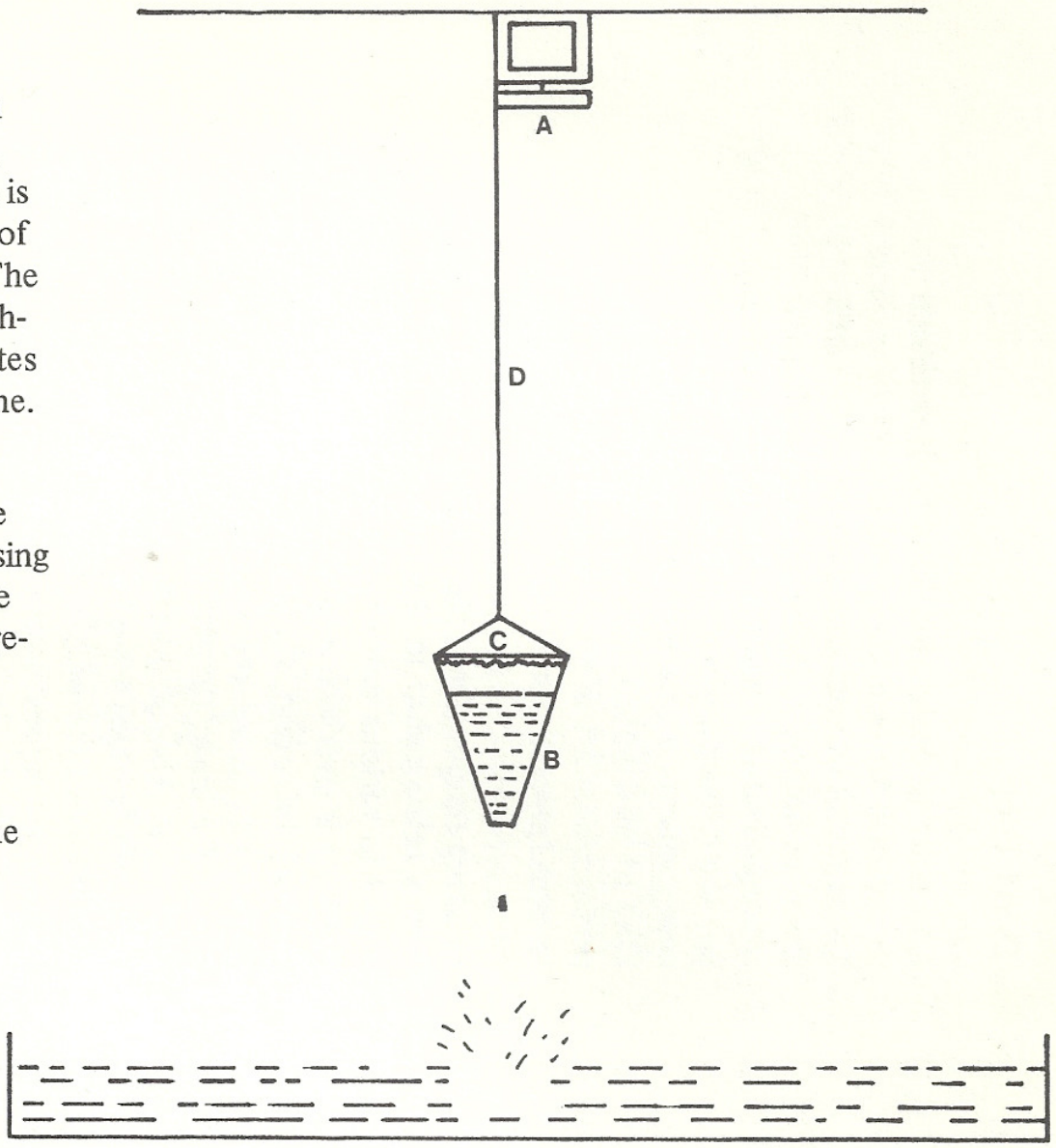


HYDRONE

A resined wheel (A) driven by a variable speed motor, touches a string (D) which is held taught by the weight of a container of water (B). The string is attached to a parchment (C). The wheel vibrates the string producing a drone.

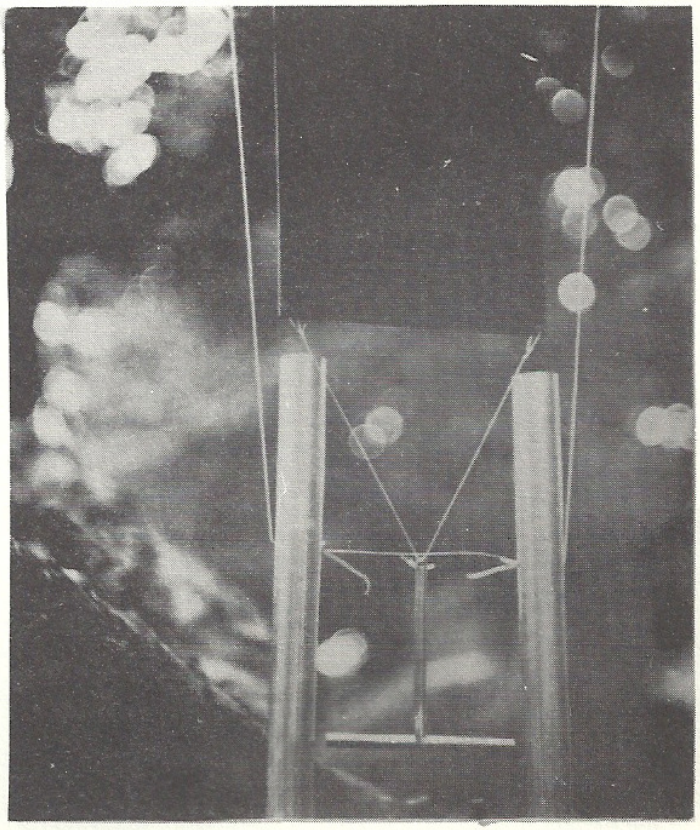
The container has a small opening through which the water slowly drips, decreasing the weight and relaxing the tension on the string. Therefore, as the performance progresses an increasingly lower pitch is produced.

The water dripping into the tray makes a rhythmic accompaniment.



WIND VANE

Aeolophone: hung in tree
'T' shaped striker
Aluminium tubes of different lengths, producing two notes



MAX EASTLEY

Max Eastley studied Fine Art at South Devon Technical College and Hornsey College of Art. Awarded National Diploma in 1972. Fellowship/Lectureship at Exeter College of Art (1972-3) Exhibited instruments during the ICES festival (London 1972). Also exhibited in one-man show in Exeter (1973). He began making instruments in 1971, the first mechanical instruments being constructed 1971/2. Publication - 'SoundSculpture' (1973).

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