

# MANDALA

unfolding layers in sound, space and meaning  
D.FYANS 2013

## Concept:

***A mandala is a map, a model of the world, a model of the mind, and a powerful visual device to invoke specific consciousness states. Like sigils and symbols, mandalas touch the deeper layers of the mind.***

***[...]  
Mandala building is a method that can be found in many traditions. A mandala can be seen as a 'sacred alignment', a description of the inner and outer universe (made perfect), a prayer in visual form.***

***When we lay out a Magick circle or decorate the altar, we are creating such a map of the inner and outer universe. In a ritual circle, each item represents an aspect of ourselves. The tools of our working are not simply tossed into a heap near the altar, they are laid out with care and consideration, so that the altar decoration itself is a map for the self-aspects which will join in the working. (Jan Fries)***

'Mandala' is a work comprising of audio, a graphical score and sculptural elements.

In various spiritual traditions, mandalas are used to focus attention, to establish a sacred space, and as an aid to meditation and trance induction. A mandala represents the the outer world (the macrocosm) and man's inner world (the microcosm) and was thought of by Jung as a representation of the unconscious self and a tool towards 'wholeness'. The graphical element of this work is presented as both a practical device (a score) and, through repetition and rotation as a mandala. The audio which exists alongside has been composed as a form of aural meditative space and exposition of the universe.

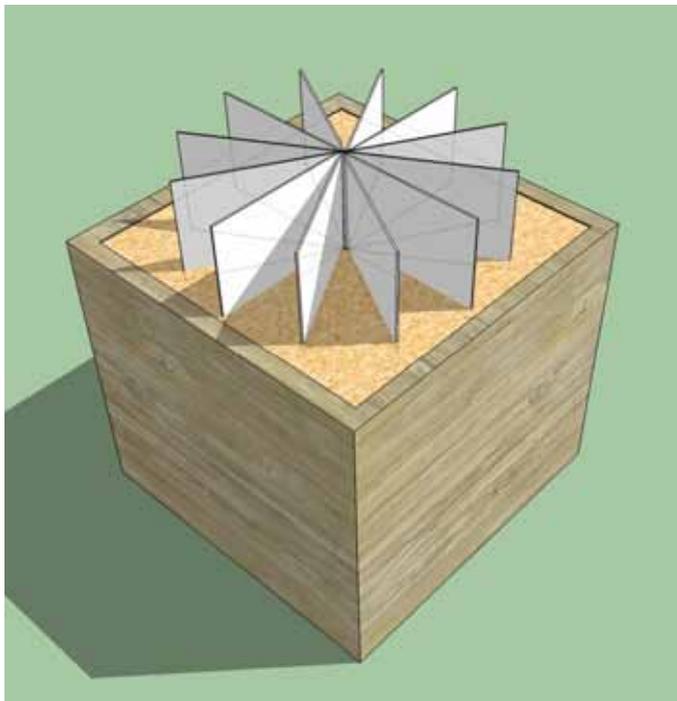
'Mandala' exists as a result of the collision of a number of discrete elements which deal with considerations both practical and conceptual in their nature. It may be seen as a work that has been produced as a result of the stochastic approach to practice that was outlined in PP3 being the natural culmination of a number of colliding concepts, methods and practical considerations that were allowed to percolate and interpenetrate each other.

The original concept was to produce a sculptural work, presenting audio along with a graphical score which was to explore and visualise the relationship between sound, space and time and present this to the viewer in a manner that allowed them to draw their own conclusion of the relationships between the aural and visual elements of the piece.

It should be noted that the that the initial motivation for the piece as was as a smaller scale investigation into materials and modes of presentation in relation to the as yet unrealised piece 'Clock' (see the section titled 'Clock' for more details).

Having previously worked with transparent materials and enjoyed the slightly ethereal quality resulting from delineated absences or marks suspended in air, 2mm acrylic seemed to be an obvious choice as the primary material.

I was uncertain of the method of fixing the acrylic sheets into the piece and, for a while was considering using plaster as I had imagined the piece having the appearance of a surface with the sheets protruding from it. This has been achieved by fixing the acrylic sheets with dressed 2x1 batons that are then covered by the sand.



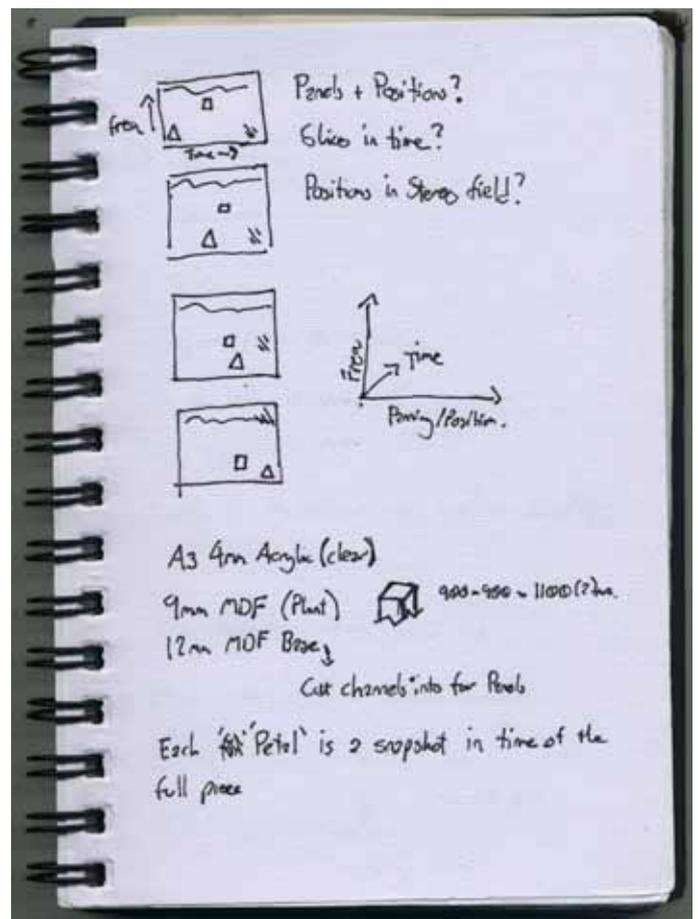
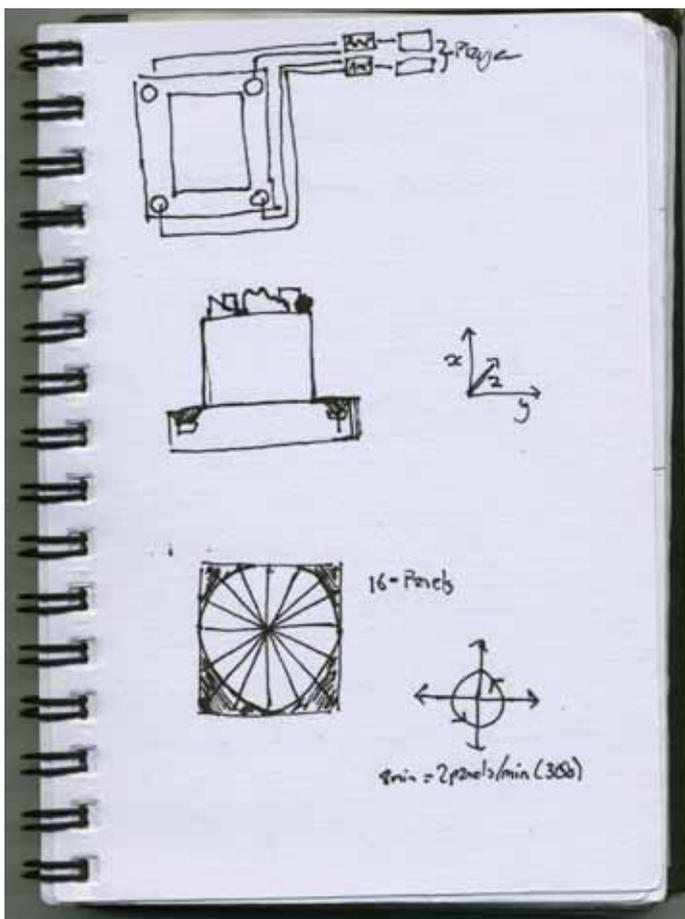
## Clock

The original iteration of 'Mandala' (and a work still to come) is the piece 'Clock' which explores a sculptural representation of a graphical score through time. 5D all of time.

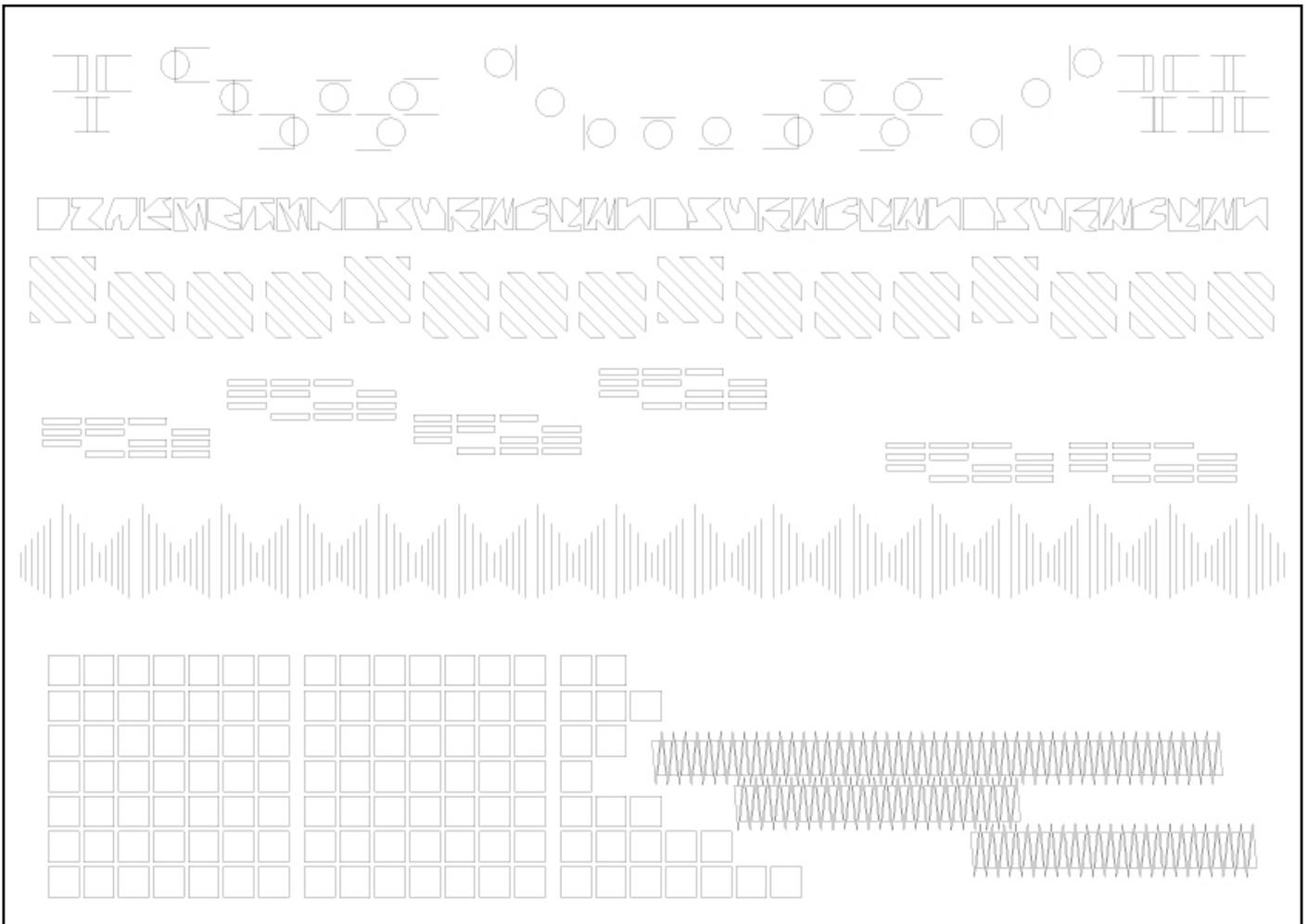
12x A3 sized panels of transparent acrylic are arranged in a circular manner with each joining at the centre of the structure.

Each panel represents a timed section and has elements of the score laser etched into the surface. As the soundpiece moves through linear time, the plan is to use 4x speakers to produce a quadrophonic mix that focusses the sound at the physical location on the score of the events that are taking place allowing the viewer to be drawn to that area and form an understanding of the relationship between sound, visual depiction and physical location.

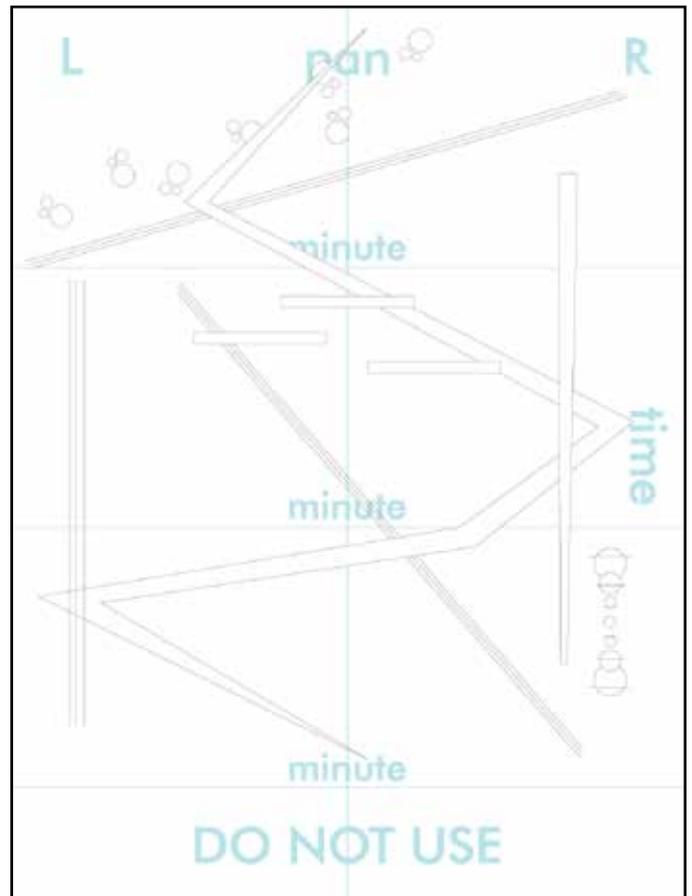
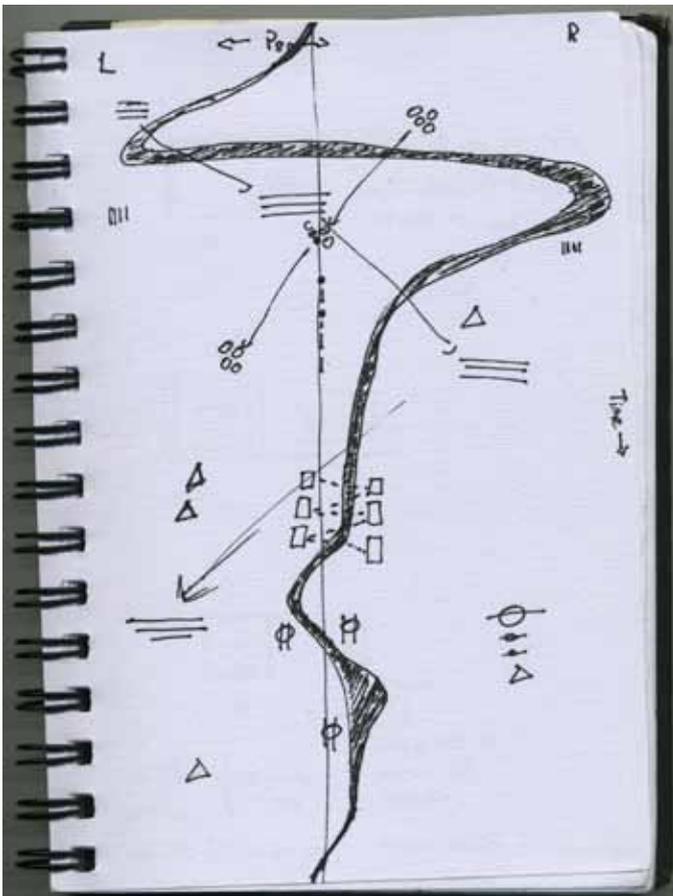
Although the score has not yet been realised for this piece, much of the maths and logistics involved have taken place. Working out the various axes (the horizontal and vertical information along with spatial and temporal details) and the ways in which time can be divided across the panels has been formalised.



One of the key problems with the piece at this stage was material cost and the feasibility of some of the elements. I had never used acrylic and was unsure of the final results of the laser cutting and fixing methods. The sheets alone were due to cost over £100 so I decided it would be prudent to downscale, although making an exact mockette would be almost as costly as well as taking as much time so an alternative approach was taken which expanded to become Mandala.



Examples of some test score objects that would be viable using the laser cutter and possible layouts and considerations for the piece. Below shows a variation where time and spatial position form the main axes.

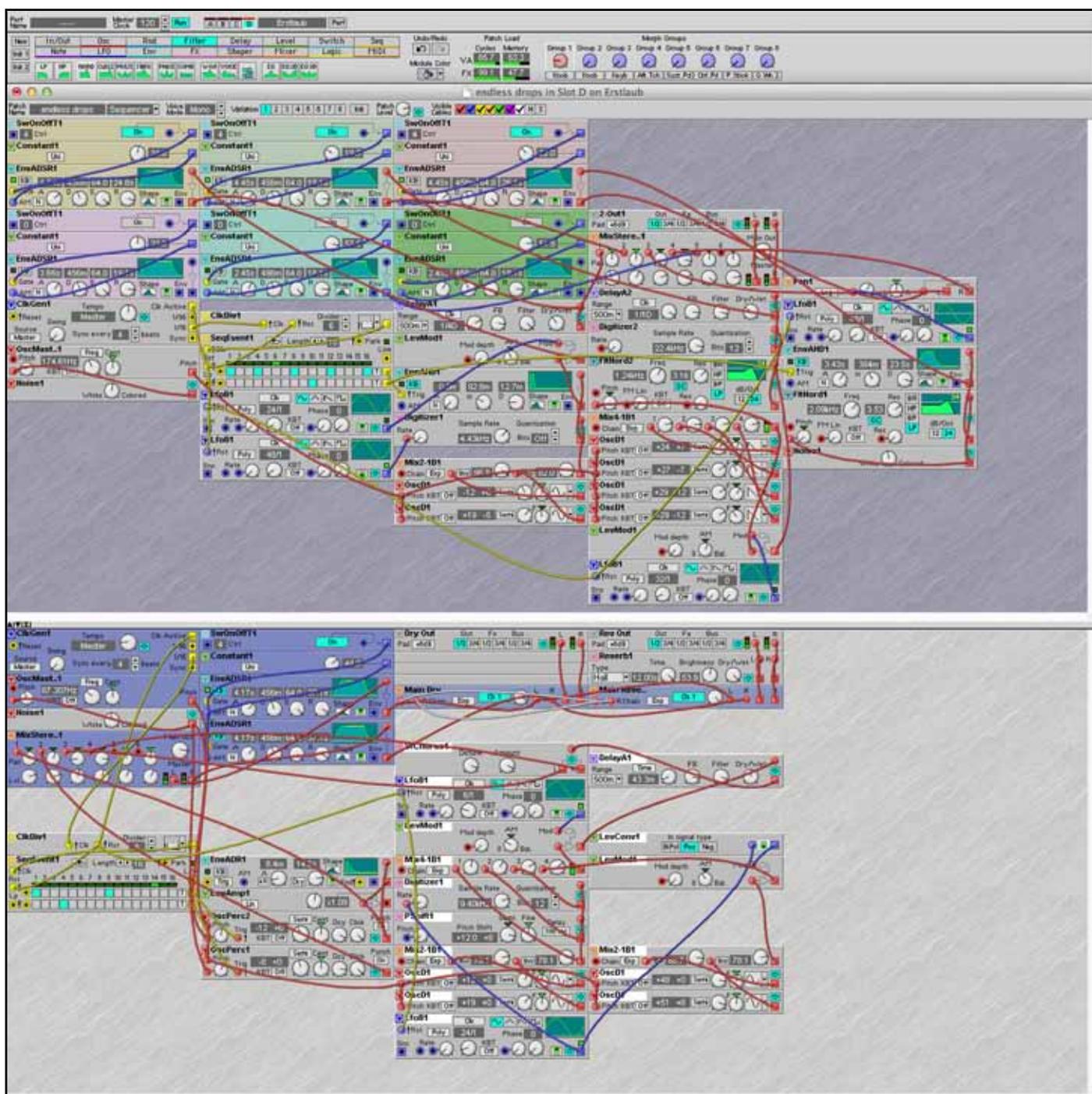


## Composition

The audio piece around which 'Mandala' centres was composed using modular synthesis, itself an embodiment of a rhizomatic system or assemblage. The piece is structurally inspired by Buddhist meditation and the notion of focussed listening giving way to an awareness of 'holy gaps' or subtle textural and rhythmic elements in the field of hearing.

The use of widely spaced out percussive elements, expanding outwards through use of reverb invokes an infinite space with sound moving through it and fading away while textural interplay between other facets fill in modal detail and texture in the 'foreground'.

The piece has been composed with the notion of a Buddhist temple garden in mind, the rhythmical element references a shishiodoshi, a device, made of bamboo and wood, designed to scare away birds. As the bamboo tube fills with water, it clacks against a stone, empties, then fills with water again. The use of droning sustained series of harmonics/noise suggesting the metallic properties of gongs and singing bowls while formant filtering has been used to create a sound similar to the human voice singing or chanting.



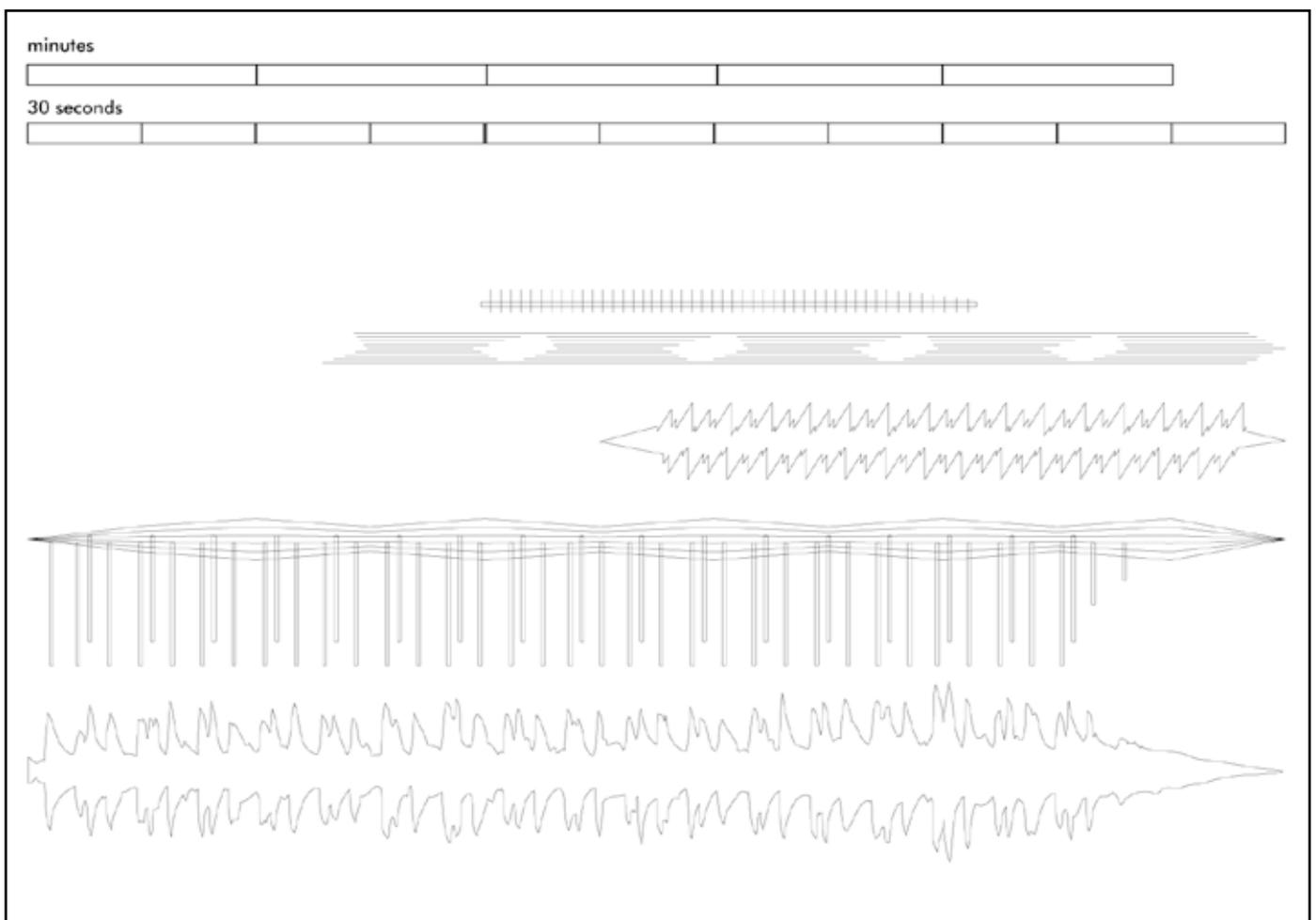
## Scoring

The decision to use the laser cutter led to the score needing to be realised within certain parameters ie. linewidth, .25mm thick, no use of solids or gradients to impart textural information. With this set of limitations in mind, I started to consider the ways in which information such as pitch, texture and duration could be communicated visually and as an exercise, set about making marks which could become elements within the score.

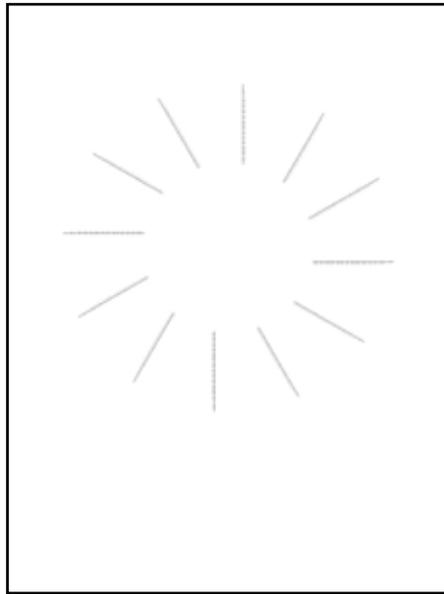
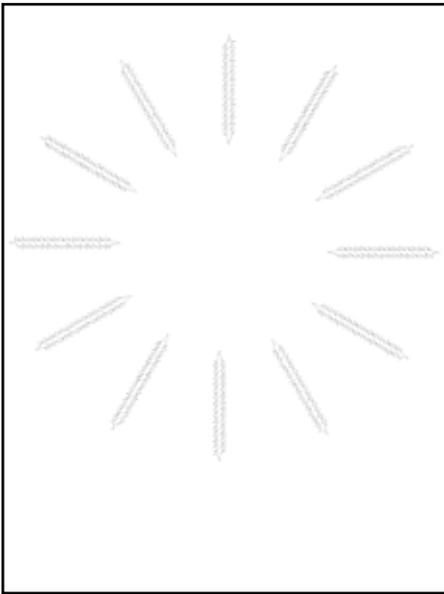
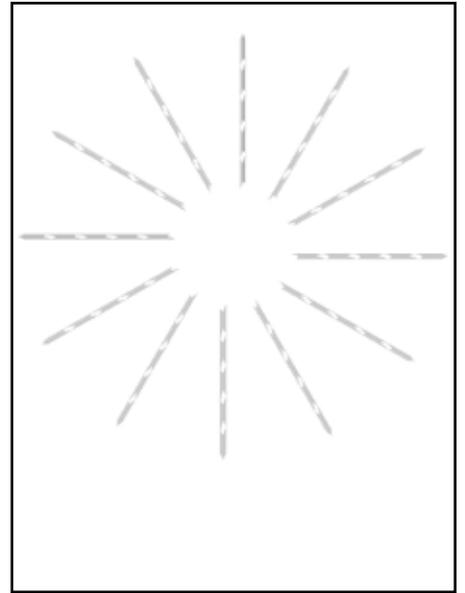
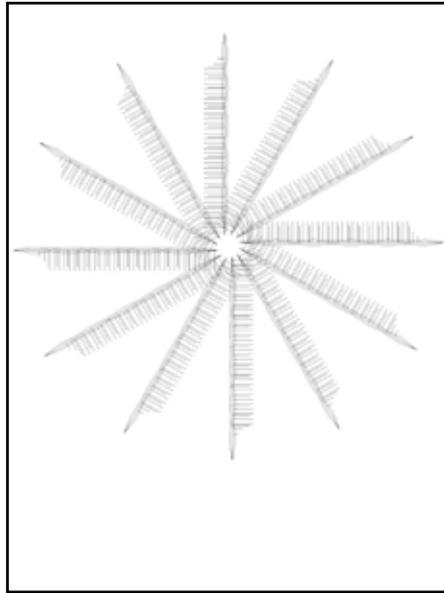
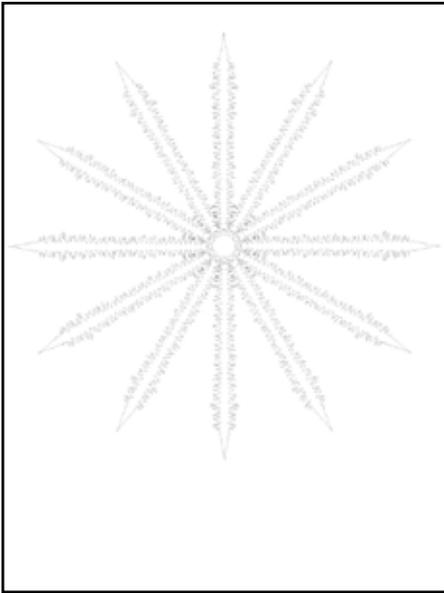
Below is an image showing the separate elements that make up the finished score along with some blocks which were used to assist in the spatial positioning of marks and audio events.

The bottom section shows a vectorised rendering of the audio waveform for the piece which was included as it acts as a bridge between the physics/maths based representation of sound and the more interpretive score elements when overlaid.

The four interpretive score elements above that are arranged visually in accord to the frequencies they correspond with, low to high. Rhythmical parts are shown with vertical marks cutting through time while tonal elements are embodied with horizontal marks.

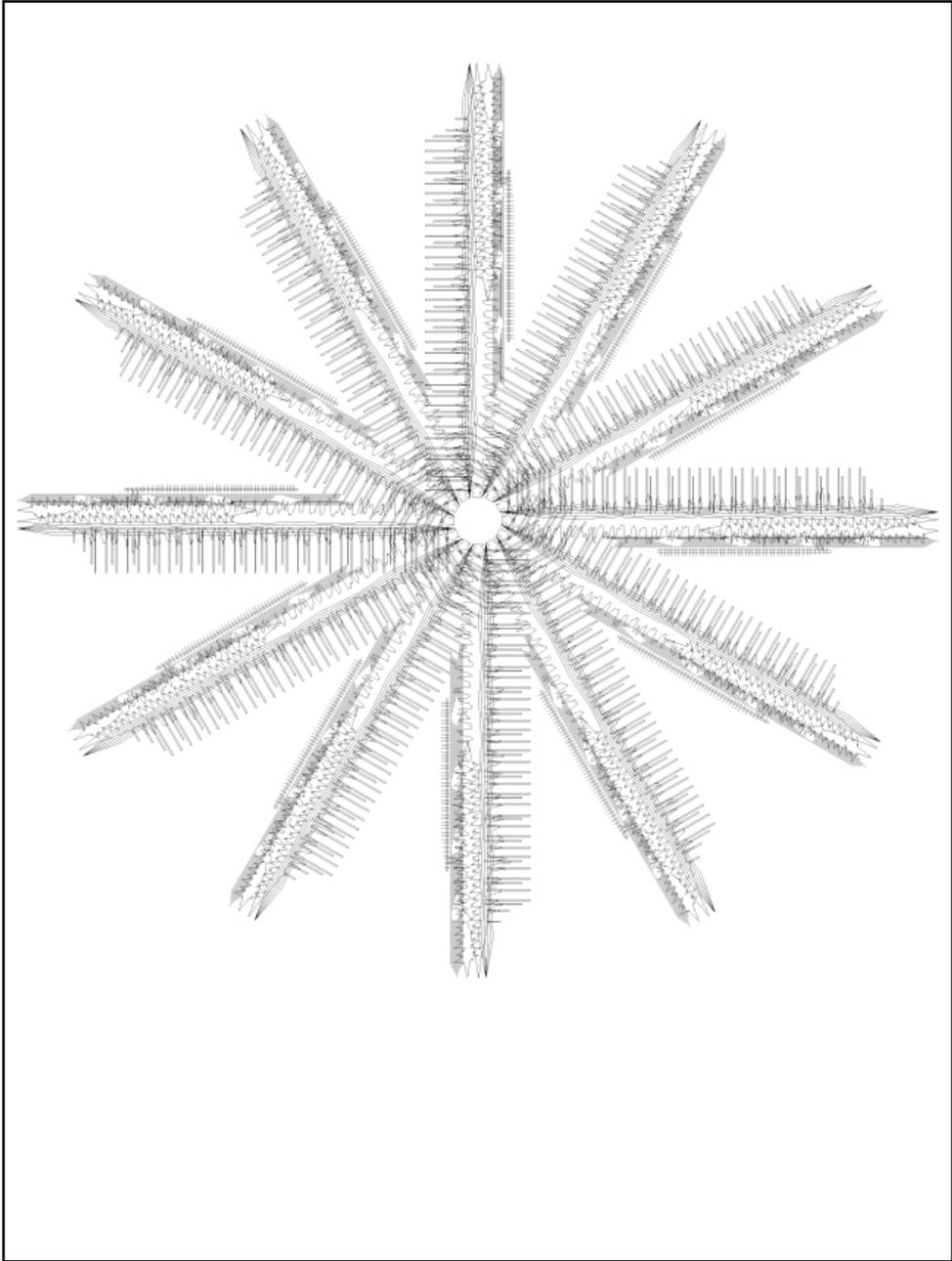


These separate sets of visual data were then arranged onto separate layers and repeated and rotated twelve times to form a mandala. (12 being our standard visual relationship with time through the clockface).



The five separate layers which were laser cut into acrylic and below, an image showing the cut sheets fixed together using magnets.





## Sand

In discussing my artistic process, I often use the metaphor of excavation of an idea, fingers digging in sand, feeling edges and unearthing a clearer definition of a concealed object that already exists, fully formed in the mind. It seemed apposite to bring this metaphor into a more literal space with the score emerging from the surface of the sand.

To me, sand can also be thought of as a metaphysical embodiment of movement in time. A material in a state of entropy, having been worn down across time by processes both external and internal, a material result of flux.

The ripples made in the sand reference Li symmetries, a form of interference pattern that is prevalent in the natural world and a result of interaction between processes and materials.

*'Li symmetries are so familiar to us that we almost don't notice them. They surround and pervade the natural world, but it was only in the 1950s that enigmatic forms of symmetry began to be understood as self-organising through the pioneering work of Alan Turing.*

*The Chinese however been studying them for millennia, and it is from them that they get Li Symmetries may be distinguished from static symmetries in that they are primarily caused by the interaction between processes and materials.*

*For instance the repeated action of wind over sand produces the familiar ribbing of sand dunes, a symmetry which can occur at different scales.'* (Lundy, 2010)

## Other Objects And Placement

Several pieces of stone and a piece of wood are present in the work as found objects. These are placed as a tribute to the natural world, notions of self-similarity on different scales and of the movements of time.

The objects themselves hold personal significance to me as important ritual objects, imbued with psychic energy from the time and location of their collection.

The stones are arranged in a form that is suggestive of the rhythm held in the audio.

The branch, reminiscent of a bonsai, is a piece of heather. When looking at a cutting of organic material, we may take the object as a self contained continuum of time, although it exists now in a latent state, we can see the beginning and the ends of the object and may choose to focus on any particular point within that span of time.

The combination of Li symmetry and the found objects and their interactions with the five acrylic panels create an interesting series of reflections, ghost images and repetitions implying dimensions unseen, just outside of the presented reality.





## Presentation

Following discussion with regards to presentation and physical qualities of materials, thermalite blocks seemed to be the most affordable and practical solution to constructing a plinth. While a solid concrete base may have been an interesting counterpoint to the ephemerality of the score component, it would be impossible to test out the feel of such a solid material.

By building a scale 3D model of the piece and a standard block in Sketchup, I could test out various configurations of blocks and establish how many I would require.

Once I received the blocks, several layouts were tried out, the one I have chosen allows the speakers to be housed inside the plinth while remaining clearly audible yet gives the feeling of weight and solidity to the base of the structure.

In ideal circumstances, a spotlight would be used to highlight the detail and cast a shadow of the score onto the surface of the sand. This was not a suitable option at this stage so a halogen light is instead fixed above and behind the piece which is best viewed with all the studio lights off.

