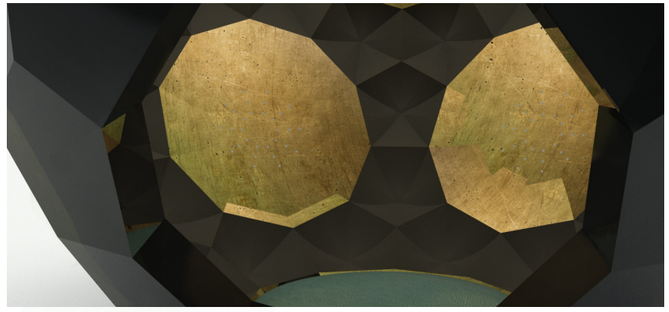
# Lev; An Acoustic Levitation Chamber

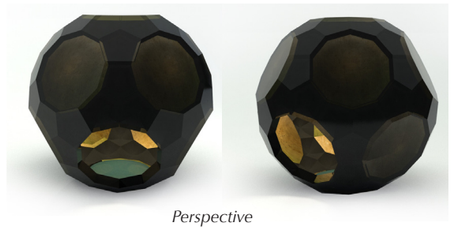
This thesis integrates the study of sacred geometry with the science of acoustic frequency manipulation. Through the realization that resonance is the underlying principle in sacred geomtry, further research resulted in the design of an acoustic levitation chamber.

There are several componennts needed to create an acoustic levitation chamber. A transducer (vibrating surface that makes sound), a reflector (bounces off sound), a water element, magnetic field, and magnets.

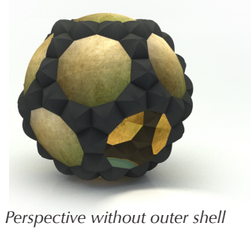
The design for this chamber was created by deducing the necessary components for levitation. The solid used is called a truncated triakis icosahedron. There are speakers embedded in concave sheet steel. The speakers will play audio frequency and the concave sheet steel acts as transducer and reflector. There are water pods in the top and bototm of the chamber, where the water can sit still and absorb the frequencies from the speakers and reverberate. The user sits on the lower water pod. There is a magnetic sheet elements to increase the magnetic field in order to incur the possibility of levitating a body.

Once the speakers are turned on, this piece will emit a buzzing and humming at multiple frequencies, increased by the magnetic field, creating a fully healing and possibly levitating experience.

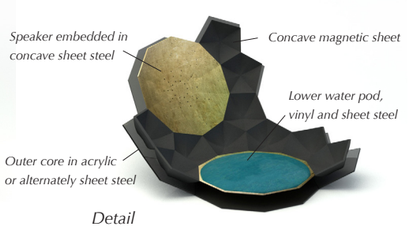




*Perspective*



*Perspective without outer shell*



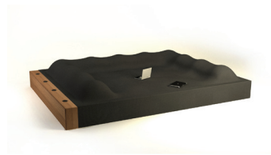

*Detail*



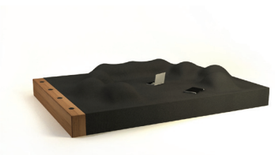
# Cyma Matt

This sofa design was inspired by the study of cymatics; forms generated by sound. By using sound waves to excite liquids and solids, beautifully strange patterns emerge and transform, constantly shifting between states of order and chaos.

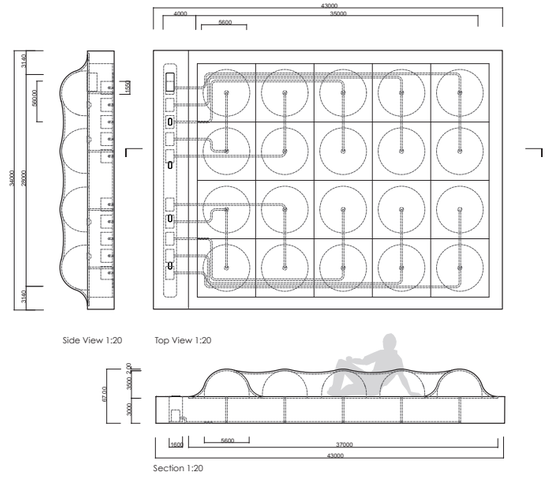
Here, a surface is articulated in order to accomodate a variety of seating patterns. Embedded with a system of pumps and inflatable balls, this cymatic matt enables a dynamic surface for sitting, reclining, and laying in a variety of configurations. The user has control over what seating pattern suits their current activity.

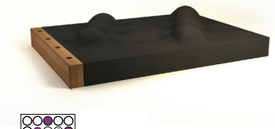


*a. Conversation*



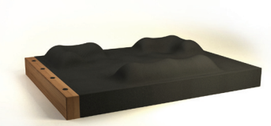
*b. Couple*



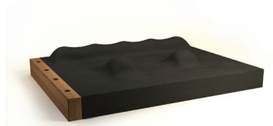



*c. Relaxing*

*d. Solo*



*e. Group*



*f. Movie*